Flora of the Sudan-Uganda border area east of the Nile

I. Catalogue of vascular plants, 1st part

By IB FRIIS and KAJ VOLLESEN

Biologiske Skrifter **51:1**

Det Kongelige Danske Videnskabernes Selskab
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Synopsis

The study area includes the mountain massifs and adjacent lowlands along the border between the Sudan and Uganda to the east of the Nile. In the Sudan, the study area extends approximately from 32° to 34° E, and from the border with Uganda to approximately 5° N; in Uganda the southern slopes and foothills of the Imatong Mountains as far south as Madi Opei are included in the study area, but not the mountainous areas on the Uganda side further to the east. The mountains in the study area all belong to the crystalline basement complex and rise on the Sudan side abruptly from the Nile Valley plains at 500-700 m., and on the Uganda side from the East African Plateau at 1000-1500 m.; the mountain massifs have plateaux, crests and peaks reaching altitudes between 2000 and 3200 m., and are for the purpose of this work classified in three principal mountain groups with surrounding lowlands: (1) the Imatong Mountains group, (2) the Lafit, Dongotona and Nangeya Mountains, and (3) the Didinga Mountains. The vascular plant flora of these mountains and the surrounding lowlands is recorded on the basis of the authors' own field studies and on material collected by others, revised according to modern taxonomic treatments, and catalogued in this and a coming volume which will also include a revised qualitative description of the vegetation of the study area and an analysis of the phytogeographical composition of the flora. In this volume 110 species of ferns and fern allies, 4 species of gymnosperms, and 1145 species of flowering plants have been recorded (including insufficiently known taxa). The Afromontane part of the mountains can be considered a minor centre of endemism with floristic similarity both to the mountains of Ethiopia and the East African Highlands, while the lowland areas overlap with both the Sudanian and the Somalia-Masai floristic regions. The study area also has small enclaves of peripheral semi-deciduous rain forest of Guineo-Congolian type forming the northernmost extension of the row of discontinuous forest patches in western Uganda.

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I. General Introduction

(1) Topography

Near the border between Uganda and the Sudan, to the east of the Nile, there are a number of mountain massifs with plateaux, crests and peaks reaching altitudes between 2000 and 3187 m. When approached from the north, the Sudan side, these mountains rise rather abruptly from the almost level Nile Valley plains at 500-700 m. However, when approached from the south, the Uganda side, they rise from a low plateau at altitudes between 1000 and 1500 m., which is the average altitude of the East African Plateau in Uganda. Further to the south and east, there are a number of isolated mountains, most of them situated in the very dry country known as the Karamoja Region which stretches along the border between Uganda and Kenya. The mountain massifs studied in this work represent the highest northernmost outliers of these scattered mountains.

The massifs along the Sudan-Uganda border, and the isolated mountains in Karamoja, all consist of rocks belonging to the crystalline basement complex. They are remains of mountains much older than the large volcanic Ethiopian Highlands to the north and east and the volcanic East African Highlands around the Albertine Rift and the Great Rift Valley in Uganda and Kenya. The three principal mountain complexes on the Sudan-Uganda border are in this work referred to as (A) the Imatong Mountains group, (B) the Lafit, Dongotona and Nangeya Mountains, and (C) the Didinga Mountains. These three mountain groups are separated by plains with an altitude between 500 and 1000 m. Due to the varied topography with large altitudinal contrasts the study area contains a wide range of habitats within very short horizontal distances. The map reproduced here as Fig. 1 gives a survey of the mountains, rivers, towns and other topographical features of the study area.

The published topographical maps of the area are often contradictory, especially with regard to the place names used. Together, the map shown in Fig. 1 and the following topographical description of the area should define most of the topographical features mentioned in the catalogue.

(a) The Imatong Mountains group

The Imatong Mountains group is the most extensive and highest of the three groups. It is situated between 3° 40' and 4° 20' N and 32° 30' and 33° 10' E, rising to a maximum height of 3187 m. in the peak of Mount Kinyeti. The group is divided by the border between the Sudan and Uganda. The highest part of the Imatong Mountains group lies in the south-eastern section of the central massif, and consists of high ground of an altitude between 2500 and 2700 m. with peaks rising to approximately 3000 m., the highest being Mount Kinyeti. Parts of the group of high mountains around Mount Kinyeti are sometimes referred to as the Lomariti or Lolibai Mountains, and one of the southern peaks in this part, sometimes known as Mount Lomwaga, forms a boundary marker on the Sudan-Uganda border. The high central part of the group on the Uganda side is sometimes known as the Lomwaga Mountains. The natural vegetation of most of the high ground in the group is montane forest, evergreen bushland or grassland; a high-level plateau in the south-eastern part of the Imatong Mountains group known as Kipia is covered with extensive

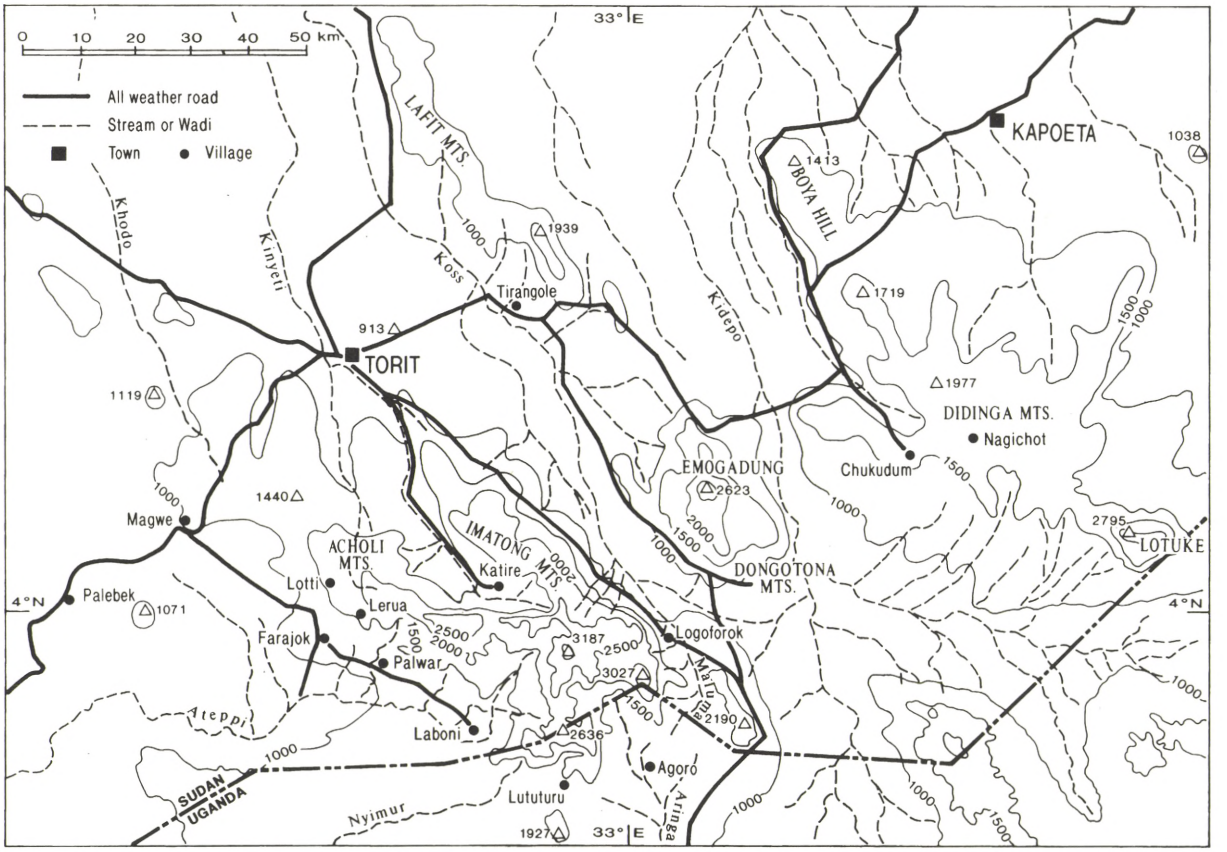

Fig. 1. Map of the border area between the Sudan and Uganda to the east of the Nile, showing political boundaries, topographical features, towns, villages and roads.

areas of moist montane grassland and swamps.

From the high mountain-massif around Mount Kinyeti lower ranges run in three directions: towards the north-west, towards the west, and towards south-west. The north-western chain is known as the Imatong Mountains in the strict sense; it culminates with the two c. 2500 m. high peaks of Mount Garia and Mount Konoro situated above the villages of Gilo (ca. 1800 m. a.s.l.) and Katire (ca. 1000 m a.s.l.). Near Gilo is an approximately 2200 m. high peak overlooking the upper part of the Kinyeti Valley and known to the British foresters of Gilo as the Observation Hill. Between this hill and the main massif of the group are the ranges known as Bushbuck Hill and Dumuso. In the area around Gilo a prominent tributary of the Kinyeti River is known as the Ngairigi River. On the western side of the Kinyeti Valley, towards the Acholi Mountains, the village of Itibol is situated almost at the same altitude as Gilo, and further to the west at c. 1000 m. a.s.l. is the village of Issore, which is chiefly approached from the Ateppi Valley (see below).

The western chain is usually known as the Acholi Mountains; it has a fairly extensive central part between 2000 and 2500 m, sometimes referred to as the Upper Talanga. At the foot of the western slope of this chain are the villages or small towns of Lotti, Lerua, Farajok, Palota-

ka, Palwar, and Laboni. Further to the west towards the Nile and the border town of Nimule are a number of small towns: Opari, Arapi and Loa. A few detached peaks, the Ifoto Mts., continue the Acholi Mts. towards the north west, as do a number of smaller inselbergs west of the town of Torit.

The south-western chain is often known as the Agoro Mountains; it extends into northern Uganda and has on its south-eastern slope (in Uganda) the small towns of Lututuru and Agoro.

The Imatong Mountains and the Acholi Mountains are separated by the Kinyeti Valley, through which flow the upper reaches and tributaries of the Kinyeti River. The villages of Katire in the southern part of the Kinyeti Valley, and Imeila and Hiliu in the northern part have been much modified by development in the 1960es and 70es; in Katire by the establishment of a saw mill, and in Imeila and Hiliu by the construction of a compound and farm by the Norwegian Church Aid. In the western part of the Kinyeti Valley is one of the three remaining lowland forests in or near the Imatong Mountains group, the Talanga Forest.

The Acholi and the Agoro Mountains are separated by the valley of the Ateppi River, which contains the other two small patches of lowland forest of the group, the Lotti and the Laboni Forests, situated near the villages of the same names. The Aringa River flows southwards into Uganda from the Agoro Mountains and the main massif of the Imatong Mountains group (the Lolibai Mountains).

In the south-eastern part of the Imatong Mountains group is a fairly isolated massif known as the Langia Mountains, separated by the Mallumas or Shilok River, a tributary of the Koss River, from a fairly low, parallel range, the Tereteinia Mountains. Another prominent feature are the high mountains of Lomuleng near Kipia and Loyaru in the main massif. The village of Logoforok is also situated in this area, while the village of Molongori is situated near the foothills at the northern end of the Imatong Mountains proper.

The three main mountain ranges of the Imatong Mountains group have the same general topographical structure with a highest level of between 2000 and 2500 m., with peaks and isolated plateaux rising to 2500-2700 m. and valleys eroded down to 1600-1800 m. The ranges drop steeply to the surrounding plains, the average height of which varies between an altitude of approximately 600 m. at Torit to the north of the mountains and to levels somewhat over 1000 m. south of the Sudan-Uganda border, where there are isolated peaks around the small town of Madi Opei. The major part of the plains and the lower parts of the mountain slopes are covered by deciduous woodland, wooded grassland or bamboo thickets to the north and west of the group, while the areas in the rain shadow to the east and south-east have dry deciduous or semi-evergreen bushland or dry subdesert grassland dominated by annual species of grass.

Neither the low plains to the north, nor the higher plains to the south are level. They are crossed by numerous streams which are separated by low, rounded ridges. Small gneiss hills are almost everywhere frequent outliers from the main mountain masses.

The configuration of the three main levels, the highest at approximately 2700 m., the intermediate at approximately 2000 m., and the lowest at the level of the present plains causes the many streams to flow gently in their upper reaches, where they sometimes form swamps at both the highest and the middle level. Below 1800 m., however, they drop rapidly in a series of waterfalls to the plains.

The transition from mountain-slope to plains is often abrupt apart from a gently sloping detritus apron through which, in places, the streams have cut deep ravines. The many streams rising in the Imatong Mountains group

provide water for a large area in the south-eastern part of the Sudan and in northern Uganda, and the protection of the catchment-areas of these rivers is of considerable importance for the ecology of the entire region.

We have based this description of the topography of the Imatong Mountains group on our field observations, the rather few detailed topographical maps, the notes of previous plant collectors, and the publications of Dawkins (1956), Jackson (1956), Jenkin et al. (1977) and Sommerlatte (1990).

(b) The Lafit, Dongotona and Nangeya Mountains

The isolated main massif of the Lafit, Dongotona and Nangeya Mountains is formed by the Dongotona Mountains proper, situated between 4° 05' N and 4° 22' N, and 33° 00' and 33° 15' E. The Dongotona Mountains form an isolated and dissected cone, of which the highest peak, Mt. Emogadung (2623 m.), is located in the central north-eastern part. Another prominent peak of the Dongotona Mountains is Mt. Aripiwa.

A north-western extension of the centrally placed cone of the Dongotona Mountains is the long and rather low range known as the Lafit Mountains, situated between 4° 30' and 5° 03' N, and 32° 30' and 32° 55' E. Mt. Lafon is an isolated northernmost peak rising from the plains north of the Lafit Mountains, while the small town of Tirangole is situated at the south end of the chain. Another similarly elongated chain of comparatively low mountains in the south-east extends into Uganda as the Nangeya Mountains (sometimes called the Nyangea, the Langera or the Langia Mountains, not to be confused with the Langia of the Imatong Mountains group), situated between 3° 30' and 3° 45' N, and 33° 30' and 33° 40' E. The highest peak of the Nangeya Mountains is Mt. Lonyili (2290 m.), an important boundary marker on the border between Sudan and Uganda.

The slopes of all these mountains fall steeply to the plains, which have the same gentle rise towards Uganda as the plains around the Imatong Mountains group. The border between the lowland areas associated with the Imatong Mountains group on the one hand and the Lafit, Dongotona and Nangeya Mountains on the other is in the northern part clearly demarcated by the Koss River, which flows towards the Nile in a north-westerly direction. Streams in the southern part of the plains may run to the Koss River or to the Kidepo River to the east of the Dongotona Mountains; for the purpose of this study a line along the lowermost part of the valley between the Imatong Mountains group and the Nangeya Mountains has been chosen as the dividing line.

The vegetation of this part of the study area is generally more arid than that of the Imatong Mountains group; the lowland vegetation resembles the vegetation to the east of the Imatong Mountains group, and in the hills of the northern mountains (the Lafit Mountains and the Dongotona Mountains) there are very limited remaining patches of montane forest and montane evergreen bushland. There is montane forest on Mt. Lonyili and a mosaic of woodland and wooded grassland on the Nangeya Mountains.

Compared with the information available on the Imatong Mountains group there are fewer published descriptions of the Lafit, Dongotona and Nangeya mountains. Jackson (1950) has in a short paper described the Dongotona Mountains, but the rest of the topography of the mountains is described on the basis of topographical maps and notes on herbarium labels.

(c) The Didinga Mountains, incl. Mt. Lotuke and the Boya Hill

The Didinga Mountains consist of a comparatively coherent and extensive central plateau at altitudes between 1500 and 2000 m., situated between c. 3° 55' and 4° 45' N (the southern

limit is defined by the Sudan-Uganda border), and 33° 12' and 34° 00' E. From this plateau a few high peaks rise; the highest of these peaks, Mount Lotuke (2795 m.), is located near the border with Uganda. A number of villages, including Nagichot, Naligede, and Chukudum, are situated in the central part of the plateau. Other, but less extensive plateaux and massifs are found in the adjacent north-eastern part of Uganda. The Kidepo River, one of the major streams in the region, rises largely on the western and southern slopes of the Didinga Mountains and the adjacent mountains in Uganda.

The Boya Hill (c. 4° 40' N, 33° 15' E; highest point 1413 m.) is an isolated north-western outpost of the Didinga Mountains. The surrounding plains have a gentle rise from very extensive, low areas to the north of the mountains towards higher plains in Uganda and Kenya. The town of Kapoeta is situated on the sandy plains to the north-east of the mountains.

The lower reaches of the Kidepo River (north of approximately 4° N) have been used here as the major boundary between the lowland areas associated with the Lafit, Dongotona and Nangeya Mountains on the one hand and the Didinga Mountains on the other. The Kidepo River has many tributaries of almost the same size in the upper reaches, and a clear boundary marker is not easily defined. For the purpose of this study the stream from the Kidepo National Park in Uganda has been considered the main stream and hence is used as the dividing line.

Extensive areas on the Didinga Mountains are covered by woodland or wooded grassland, but much natural vegetation has been replaced by cultivations. Montane forest probably still survives on Mt. Lotuke. The surrounding plains are the driest in the region, and are covered by deciduous bushland or semi-desert grassland.

Also these mountains are very little described in the literature, and the notes here are mainly based on maps and notes by collectors. Jackson (1951) has described the topography and flora of the remaining forest vegetation on Mount Lotuke.

(d) The definition of the study area

For the purpose of this work we have defined a study area which includes both the three mountain groups mentioned above and a somewhat arbitrary selection of the surrounding plains, which mostly have no clearly indefinable natural boundaries. The study area in the Sudan has been defined so that it extends approximately from 32° to 34° E, and from the border with Uganda to approximately 5° N. A few records of species characteristic of the lowland vegetation have been included from localities just outside the area. By adopting this definition we have left out on the one hand the floristically very different east bank of the Nile between Nimule and Mongalla, and on the other hand the regularly flooded, little visited and politically disputed triangular area along the Kenya-Sudan border east of Lokichokio, the "Ilemi triangle".

The Sudan-Uganda border crosses the Imatong Mountains group and divides the mountains into a "Sudan side" and a "Uganda side". The southern slopes and foothills of the Imatong Mountains as far south as the outliers of the mountains around Madi Opei are also included in the study area, but not the area in Uganda to the east of 33° 20' E, which is partly in the Kidepo National Park. Thus a roughly triangular area of Uganda, with the rather winding political border as its northern limit and its southern point just south of Madi Opei, has been included.

The study area therefore includes a large part of the old East Equatoria Province of South Sudan, and a small part of the most mountainous areas of the Acholi Province of Northern Uganda and their surrounding low-

lands. For the purpose of recording plant distributions the study area has been divided into the Imatong Mountains group, the Lafit, Dongotona and Nangeya Mountains, and the Didinga Mountains with adjacent plains; the dividing lines between the three mountain groups largely follow the Koss and the Kidepo Rivers, as discussed above.

(2) The phytogeographical interest of the study area

The study area lies near the line separating "high Africa", consisting of the old peneplane of the East African Plateau with an altitude between 1000 and 1500 m., and stretching from Uganda and Kenya south to South Africa, from "low Africa", consisting of the much lower plains in North and West Africa (see map showing the position of the study area in relation to the general topography of Africa, Fig. 2).

Moreover, the study area is divided between four major phytogeographical regions (phytochoria), as these have been defined by White (1983) in his classical study of African vegetation and phytogeography. The two phytochoria which are represented by extensive areas at the lower altitudes of the study area are: (1) the Sudanian centre of endemism to the west, and (2) the Somalia-Masai centre of endemism to

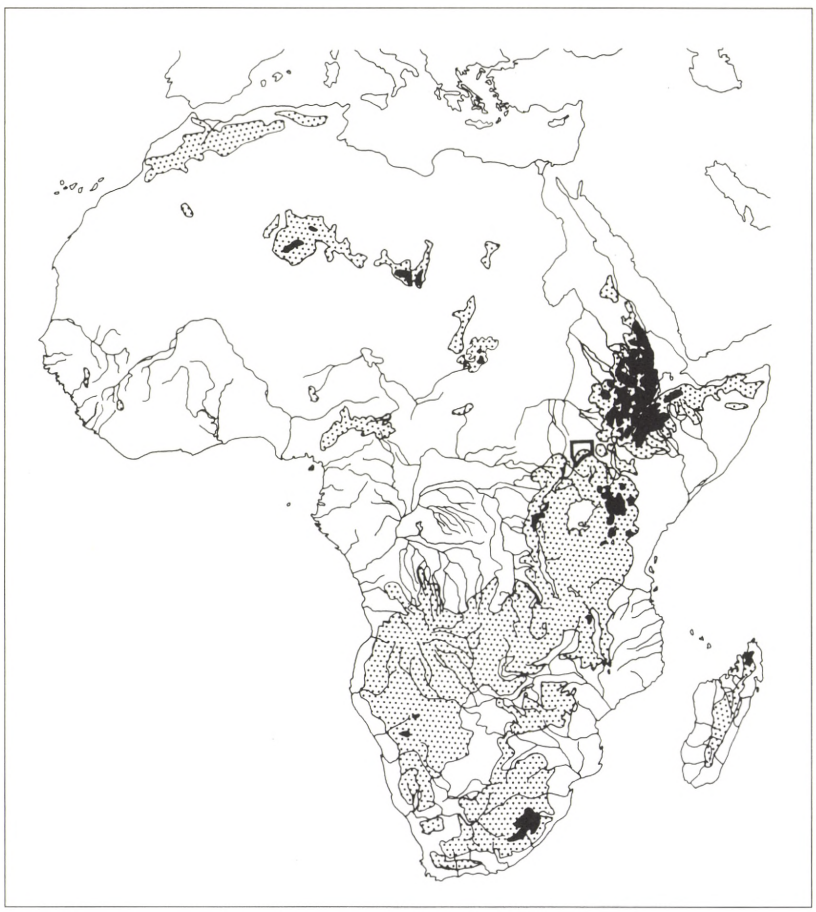

Fig. 2. Map of the position of the Study Area in relation to "high" and "low" Africa. Areas indicated with dots: between 1000 and 2000 m. above sea level. Areas indicated with black: above 2000 m. above sea level.

the east. At altitudes above approximately 1500 m. of the study area there are fairly extensive enclaves of (3) the Afromontane archipelago-like centre of endemism, and in pockets along the western slopes of the Imatong Mountains group there are (4) a few exclaves of the Guineo-Congolian centre of endemism. The position of the study area in relation to the major phytogeographical regions (phytochoria) of Africa is shown on Fig. 3.

By their position as part of the northern limit of the extensive complex of mountains in central tropical Africa, the mountain massifs of the study area form stepping stones between the highlands of Central and Eastern Africa and the vast mountain complex of Ethiopia and northern Somalia, as well as between the East African Highlands and the mountains in Cameroon and West Africa. They are therefore of considerable phytogeographical interest. They are also well known in African ecology because of the classical publication on the plant cover of the Imatong Mountains group by Jackson (1956), in which the vegetation is visualised as a complicated system of successions from grasslands to forest, with fire as a prime ecological factor.

Floristically the study area became known to international science rather late, as will appear from the historical account of the exploration

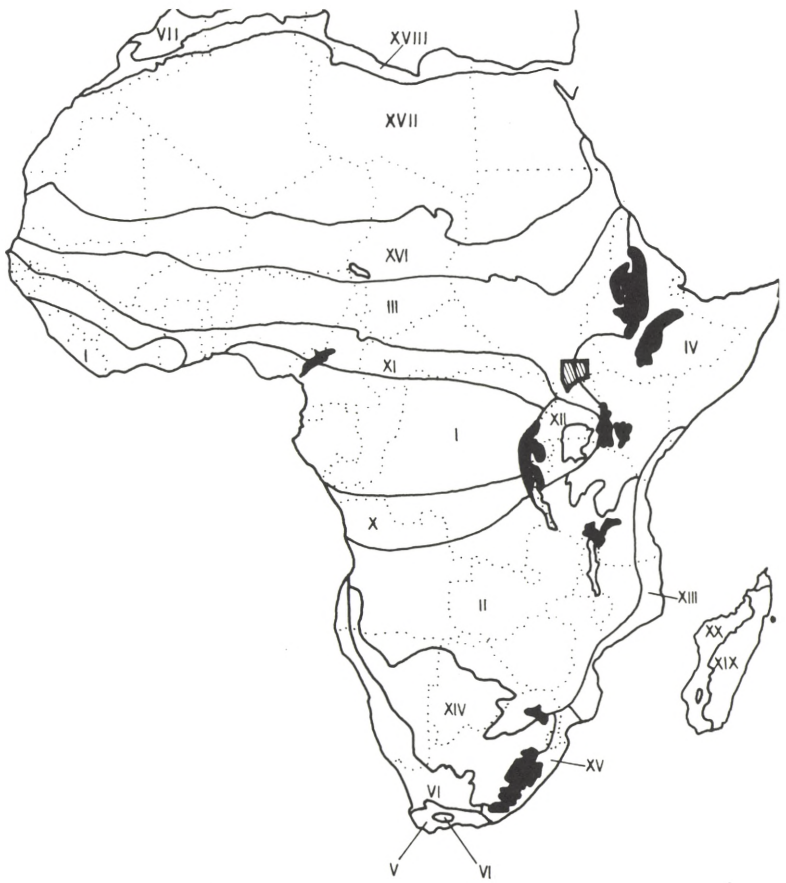

Fig. 3. Map of the position of the Study Area in relation to the phytogeographical regions (phytochoria) of Africa according to Frank White (1983). I, Guineo-Congolian regional centre of endemism. II, Zambezian regional centre of endemism. III, Sudanian regional centre of endemism. IV, Somalia-Masai regional centre of endemism. V, Cape regional centre of endemism. VI, Karoo-Namib regional centre of endemism. VII, Mediterranean regional centre of endemism. VIII, Afromontane Archipelago-like regional centre of endemism; marked with black and shown together with IX, Afroalpine archipelago-like region of extreme floristic impoverishment. X, Guinea-Congolia/Zambezia regional transition zone. XI, Guinea-Congolia/Sudania regional transition zone. XII, Lake Victoria regional mosaic. XIII, Zanzibar-Inhambane regional mosaic. XIV, Kalahari-Highveld regional transition zone. XV, Tongaland-Pondoland regional mosaic. XVI, Sahel regional transition zone. XVII, Sahara regional transition zone. XVIII, Mediterranean/Sahara regional transition zone. XIX, East Malagassy regional centre of endemism. XX, West Malagassy regional centre of endemism.

in Chapter II. The flora of the area of South Sudan to the west of the Nile, the Western Equatoria Province, had already become better known from the time of the early geographical expeditions than has the flora of the South Sudan to the east of the Nile. Probably travellers in the western parts of South Sudan had the incentive to contribute to the exploration of the watershed between the two major African river systems, that of the Nile Basin and that of the Congo Basin, and from the 1850s several explorers studied the areas of the Bahr el Ghazal, the main western tributary of the Nile, and the rivers of Uele and Congo [previously Zaire]. Several of these travellers had botanical interests, as was the case with members of the party of the Dutch lady-traveller Alexandrine Tinne (1863-64), and even more so with the expeditions of the German botanist, geographer and ethnologist Georg A. Schweinfurth (1868-71). An account of the first scientists to visit the area to the east of the Nile is given in Chapter II.

(3) The plan of the current work; material studied

The major part of the study area is covered by Andrews' three-volume flora of the flowering plants of the Sudan, published between 1950 and 1956. Papers on the fern-flora of the Imatong Mountains group were published by K.N.G. MacLeay between 1950 and 1954. The Afroalpine species found on the highest peaks were referred to in Hedberg's revision of Afroalpine vascular plants (Hedberg 1957). However, a considerable number of additional plant species have since been discovered from the area, and the study of the flora of both tropical East Africa and Ethiopia has made significant progress with regard to the description, delimitation and classification of the species. It is therefore timely with a modern account of the flora of this area which is adjacent to, but for the major part not covered by, the two monographic floras, the Flora of Ethiopia and Eritrea, and the Flora of Tropical East Africa.

The present monograph is based on field work carried out in and around the Imatong Mountains group by the two authors in 1980 and in 1982, and on subsequent work in a number of herbaria and libraries. The work on the collection of data from previous studies was begun in 1985 by Friis during a visit to the Sudan, a visit which took him to the Khartoum University Herbarium (KHU), where collections of K.N.G. MacLeay and others are deposited, to the Forest Herbarium in Soba just outside Khartoum (KHF), where collections of a number of Sudan forest botanists from both the colonial period and after are located, and to the Agricultural Research Station at Wad Medani (WM), where the main set of the specimens of F.W. Andrews is kept. In 1992-1993 Friis studied the collections in the herbarium of the Makerere University, Kampala, Uganda (MHU), and in the East African Herbarium, Kenya National Museums, Nairobi, Kenya (EA). The Ugandan and Kenyan institutions contain collections made by scientists who have been based in these two countries, and made field trips to the Sudan-Uganda border area.

Herbarium work in Great Britain was carried out by both authors in the years 1990 to 1996. This work included a search for relevant collections in the British Natural History Museum (BM), important for herbaceous collections from before 1940, in the herbarium of the Royal Botanic Gardens, Kew (K), important for collections made after 1940, and in the Forest Herbarium, Department of Plant Sciences, Oxford University (FHO), important for woody plants collected before 1940.

Duplicates of the authors' own collections and those of a few others which have been deposited in the Botanical Museum, University of Copenhagen, Denmark (C), in the herbarium of the Jardin Botanique National de Belgique,

Meise, Belgium (BR), in the Erbario Tropicale, Firenze (FT), in the Botanical Museum of the University of Uppsala (UPS), and in the African herbaria mentioned above. Collections by Prof. K. Lye and Mr. J. Kielland-Lund have been deposited in the herbarium of the Norwegian Agricultural University, Ås (NLH); these collections have also been studied and included here. All the institutions consulted are throughout the catalogue referred to by the internationally accepted herbarium abbreviations of the *Index Herbariorum*.

The catalogue lists the entire vascular plant flora known from the study area. As mentioned, the two models for this catalogue have been the works of Hedberg (1957) and Wickens (1976); however, some modifications have been made to the plans of these two works in order to incorporate more of the original notes of the collectors. This has been thought useful because the material on which this work has been based is so geographically scattered in five herbaria in three African countries, and in eight herbaria in six European countries. This material cannot be consulted again without extensive travels, the success of which will be dependent on the political climate in the three East African states where the material is kept. When we started our study, the countryside of nearly the whole of Uganda was inaccessible due to the reign of terror of Idi Amin, and the herbaria in Kampala were difficult to study, while the Sudan was comparatively peaceful; now the southern and eastern parts of Uganda are peaceful, while there is civil war in South Sudan and northern and western Uganda. Because of the obstruction that this continuously changing political climate causes to any short term repetition of our study, we have found it reasonable to quote a representative amount of data from each collection.

At the beginning of this century, when first visited by Europeans, quite extensive parts of the mountains of the study area were still sparsely populated, and even at the time when we did our field work the higher parts of the Imatong Mountains group was scarcely populated outside a few centres. The first botanical study and the first plant collections were made in 1929 in these mountains. It has been a striking feature of our preparations for this work that we have been able to meet or at least correspond with such a large proportion of all our botanist predecessors about their journeys and collections in the study area. They have generously shared their knowledge of the region or lent us their field notes for our work. Each of these colleagues is thanked individually in the acknowledgements.

Volume 1 of this work includes a short topographical introduction to the study area and its phytogeographical position, and a historical survey of its geographical and botanical exploration, especially the study of the mountain massifs. It also contains a general introduction to the catalogue, and part of the catalogue itself, including the Ferns, Gymnosperms and the Dicotyledonous families from Annonaceae to Asteraceae. Volume 2 is intended to include the catalogue of the remaining part of the Dicotyledons (Gentianaceae to Lamiaceae), the Monocotyledons, a list of the collecting localities mentioned in the work, a list of collectors, an analysis of the vegetation of the study area based on satellite imagery, a more detailed qualitative description of the habitats and their vegetation, and finally a phytogeographical analysis of the flora and the distribution of its species in order to test, on a local scale, the borders between the phytochoria of White (1983).

(4) Acknowledgements

The scientific interest of a study of the flora of the mountains of southern Sudan was first suggested to us by Dr. G.E. Wickens of the Royal Botanic Gardens, Kew (K), the author of the

botanical monograph of Jebel Marra, the other large mountain complex of the Sudan (Wickens 1976). We want to thank Dr. Wickens for this suggestion, and for introducing us to staff members of the British Overseas Development Agency, which was then responsible for British development aid to South Sudan. We are also grateful to the late Dr. Frank White, then keeper of the Forest Herbarium (FHO), Institute of Plant Sciences, University of Oxford, for his encouragement and interest in the project. W.J. Howard and Martin Johnson, project leader and project manager of the British Overseas Development Agency-supported Imatong Mountains Forestry Project, have been of invaluable help by allowing us to use a number of the facilities of the project, especially a house in Gilo, Imatong Mountains, and a four-wheel-drive car, without which our work would not have been possible. The first trip to the Imatong Mountains group in 1980 was joined by the zoologist Dr. Jens B. Rasmussen from the Zoological Museum, University of Copenhagen, and two students; we are grateful for their help and good company.

We wish to thank the Danish National Natural Science Research Council for financial support of both periods of field work and Ib Friis' visits to the herbaria in Khartoum, Soba and Wad Medani. We are grateful to the Carlsberg Foundation for support for Ib Friis' visits to the herbaria of the Makerere University, Kampala (MHU), which now includes the former Forest Herbarium from Entebbe, and the East African Herbarium, now organised as part of the Kenya National Museums, Nairobi (EA). We wish to thank Dr. Eclas Ab-del-Bari of the Khartoum University Herbarium (KHU), and the late Dr. Hamsa Mohamed El Amin of the Forest Herbarium of the Forest Research Institute in Soba (KHF), for their help and their interest in our study. We wish to thank the Institute of Geography, University of Copenhagen, for having compiled together with us and drawn the detailed map of the study area reproduced here as Fig. 1. We wish to thank Dr. Gillian Fellows-Jensen, University of Copenhagen, and Mrs. Victoria Cicely (Gordon) Friis for helping us with questions about the English language.

Finally, we are very grateful to the botanists, ecologists or foresters who have worked in the study area from the 1930s to the 1970s. Most of these have, in their retirement, taken great care when answering our questions about their work in South Sudan. It has been a unique situation to be able to communicate with a scientist who visited the study area only 6 years after the first visit ever by a botanist in 1929.

The following have personally helped us to trace data on their collections: Dr. A.S. Thomas, who visited the Sudan side of the Imatong Mountains in 1935, and the Uganda side on a number of later occasions, provided us with a complete list of his early collections from the Sudan Imatong Mountains group. Dr. W.J. Eggeling, who visited the Uganda side of the Imatong Mountains in 1938 and 1942, and on many later occasions, also provided us with data on his early collections. Professor J.W. Purseglove, who visited the Uganda side of the Imatong Mountains in 1943, answered a number of questions. Dr. J.K. Jackson, who visited all the mountain massifs on the Sudan side several times between 1948 and 1961, helped us to trace some of his records. Dr. J.M. Lock, who visited Mt. Lonyili in 1966, gave us a list of the these collections. Professor K.A. Lye, who visited the Uganda side of the Imatong Mountains in 1969, helped with label data from this trip, and gave label-data and duplicates of the collections made by the Norwegian agronomist Johan Kielland-Lund in the study area in 1983-84. Mr. A.B. Katende, who visited the Uganda side of the Imatong Mountains in 1973, 1974 and 1992, let us see his notes and helped us to trace specimens from the Uganda side of the Imatong Mountains in the Makerere Her-

barium, Kampala. Mr. W.J. Howard, who visited the Sudan side of the Imatong Mountains in 1976, helped with data and specimens. Dr. M. and Mrs. H.C. Sommerlatte, who visited the Sudan side of the Imatong Mountains between 1980 and 1984 helped with data. An account of the history of exploration of the study area is given in Chapter II, and a full list of collectors and their collecting localities will be found after the complete catalogue in Volume 2.

II. A brief history of the study area and the background of the current work

The mountains of the Sudan-Uganda border region are remote in relation to the main historical travel routes in Africa, and in general the region has been little visited. During the last hundred years the area has been ruled alternatively from Khartoum in the Sudan and from Kampala in Uganda, and it has seemed far removed from both capitals. The security situation in the area has often prevented access from both north and south. Indeed, since the authors' field work in the 1980s the area has been inaccessible because of civil war. The precise topography of the area has only been determined comparatively recently, while the first sketchy maps were published during the first quarter of this century, and there is still ambiguity and inconsistency in the way that even the various mountains and other major geographical features are named.

(a) Samuel Baker's early reports of high mountains in the study area

The first vague report of high mountains in southern Sudan to the east of the Nile were brought out from the study area by Samuel Baker, who in 1863 travelled in the country to the north-west and west of the Imatong Mountains group on his first journey to settle the hydrographic details of the Upper Nile (Baker 1866, p. 185).

Baker travelled from the Egyptian settlement of Gondokoro on the White Nile to Tirangole on the edge of the study area of this work. On his first trip he crossed the River Kanieti [the Kinyeti River] and observed that, although there had been no rain in the lowlands, the stream was very rapid and up to the girths of the horses at the ford (p. 185), indicating that the stream had a mountain origin. He later crossed the river again on his way from Tarrangolle [Tirangole] to Obbo (p. 305). During his stay at Tirangole, he observed (p. 193) the peak of Jebel Lafeet [the Lafit Mountains, the northern outliers of the Lafit, Dongotona and Nangeya Mountains], as well as other unnamed mountains to the south, assumed to be up to 2150 or 2450 m. high. He also described rainstorms on the mountains to the south-west. The journey to Obbo took him through some of these mountains, which are the northern outliers of what is now referred to as the Acholi Mountains, the western part of the Imatong Mountains group. On his map and e.g. on p. 323 he referred to all the high mountains he had seen as the Madi Mountains [the Madi Mountains of the present day are in northern Uganda, south of the Imatong Mountains group]. Near Obbo, Baker crossed the River Atabbi [the Ateppi River], which he observed (p. 325) ran from the Madi Mountains towards the White Nile, and later he traversed the country at Farajoke [Farajok] (Baker 1866, p. 327).

He crossed the Ateppi River again on his expedition in 1872, without recording new information about the mountains from which it came (Baker 1874, p. 70).

(b) Emin Pasha's journey round the foothills of the Imatong Mountains

Emin Pasha, the name which the Swiss Edouard Schnitzer was given as an employee of the Khedive of Egypt, made a trip in 1881 to the east of the regions visited by Baker. His route followed the peripheral northern and eastern foothills of the Imatong Mountains group (Emin 1882). He started his journey from his post at Gondokoro on the Nile (near present-day Juba) and arrived at the village of

Tarangole [Tirangole] on the River Koss, passing on the way a river "Ginetti oder Kaineti" [Kinyeti River]. From Tarangole Emin Pasha went south along the Koss Valley, following the north-east escarpment of the Imatong Mountains group (which his publication does not name), but he did record a "Djebel Molong oder Imotong" in the northern part of the mountain chain; in the southern part of the chain, towards the small settlement of Agoro, he recorded "Djebel Lumoga oder Lumaga" [Lomwaga]. From Agoro he passed south-west of the Acholi Mountains via Obbo to the Nile. No further details were recorded about the topography of the Imatong Mountains group, and no heights or detailed outlines of the massifs or foothills were traced.

(c) Powell-Cotton's and Leeke's journeys of the Didinga and the Dongotona Mountains

From the time of Emin's journey in 1881 and up to the journey of Powell-Cotton (1904) there seem to be no published reports of Europeans travelling in the study area. This is the period of the Mahdist state in central Sudan (see below), and the turbulent political situation seems effectively to have prevented all non-military travelling in the area. Powell-Cotton came from the Karamoja Region of East Uganda through the Didinga Mountains, from where he followed tracks in the lowlands and in the northern foothills of the Dongotona Mountains. Finally, he went north of the Imatong Mountains group towards the Nile. Powell-Cotton pointed out that although the lower northern part of the Didinga Mountains group and the lower slopes of the Dongotona were populated, Mt. Lotuke was uninhabited; he gave no information about the Imatong Mountains group, and his maps only recorded the mere outlines of the Didinga and the Dongotona Mountains.

The next report, by Leeke (1917), included maps with some topographical details of both the Didinga Mountains and the Dongotona Mountains. Leeke made brief references to the Imatong and the Acholi Mountains in the Imatong Mountains group, and remarked that he regarded them as belonging to one mountain system.

(d) The first topographical maps and the first visits by botanists

The first map which showed the Kinyeti Valley surrounded by the characteristic horseshoe-shaped form of the Imatong Mountains group was published by Pellew-Wright (1917), a District Commissioner of Uganda, after he had made a journey across the mountains from north-east to south-west. At that time, there was increasing human settlement in the eastern mountain massifs. Thus, the official British "Handbook of the Anglo-Egyptian Sudan" (1922) was able to indicate on a map the rough outlines of both the Imatong Mountains group and the Didinga Mountains group, and could indicate specific areas of settlement on the latter, but marked the Imatong Mountains group as the outline only, with the very vague inscription "Mass of high hills."

However, the Imatong Mountains group was the first of the three mountain massifs to be visited by a botanist. This was the deputy director of the Royal Botanic Gardens, Kew, T.F. Chipp, who reached the summit of the highest mountain peak, Mt. Kinyeti, in 1929, and the first paper dealing with the plants from these mountains was published in the same year (Chipp 1929). Chipp also reproduced six photographs of various aspects of the vegetation, and he published a map showing the approximate outline of major features of the Imatong Mountains group (Chipp 1929, p. 178).

Shortly after Chipp's visit, the first high quality map of the Imatong Mountains group (in 1:250.000) was produced and published by Whitehouse (1931). Although the Dongotona

and the Didinga Mountains groups were visited by general travellers and mapped before the Imatong Mountains group was, the two eastern massifs were only visited and studied by botanists from about 1940 and onwards.

(e) The area under Egyptian, Mahdist and Anglo-Egyptian rule

The study area not only made a rather late entrance into the scientific literature, it has also had a rather changeable history with regard to its government and administration. After centuries of local rule by chiefs, the areas around the Upper Nile were visited for the first time in 1841 by an Egyptian official, named Salim, who reached the settlement of Gondokoro on the Upper Nile by boat from Khartoum. From then on, ships regularly went south from Khartoum to Gondokoro, officially and with the sanction of the Khartoum government to procure ivory, but in practice also to acquire slaves for the markets in Egypt and the Middle East.

The area around the Upper Nile was formally annexed for the Khedive of Egypt by Baker in 1871, and was named the Equatoria Province. Baker's Equatoria Province reached well into what is present-day Uganda, but the official Egyptian authority rested on garrisons of soldiers supplied by steamers on the river, and Egyptian influence therefore barely reached beyond a narrow strip along the Nile, and barely south of the rapids at Nimule, the current border town between Sudan and Uganda. Certainly no strong foreign influence reached into the area of the mountain massifs studied here, although they may occasionally have been reached by small armed groups hunting ivory or slaves.

Emin Pasha, the next well known governor of Equatoria Province, ruled his territory for the Egyptian Khedive first from Gondokoro on the Nile in South Sudan, and after 1879 from Wadelai (in what is now Uganda), where he stayed on in isolation after the beginning of the Mahdists' rebellion against the Egyptian government of the Sudan in 1881. He held out in Equatoria Province without contact with Egypt until 1888, when he was finally brought to the east coast of Africa by a rescue expedition led by H.M. Stanley.

In 1890 an agreement between Britain and Germany stated that Uganda, with somewhat vaguely defined northern boundaries, should be part of the British sphere of influence in Africa, and within two years the newly established British East Africa Company had set up an effective chain of posts from Mombassa to the Nile at Lake Victoria and had evacuated the last remaining Egyptian soldiers from the garrisons of Equatoria Province.

(f) The changing positions of the Sudan-Ugandan border during colonial and Mahdist rule

In 1894 it was declared that Uganda was to become a British Protectorate directly under the control of the British government. But South Sudan, then a vaguely defined area north of the British sphere of influence and south of the part of the Sudan effectively controlled by the Mahdists, was considered an empty space by the other European powers, and in 1898, after having defeated the Mahdists at Omdourman with a British-Egyptian army, the British general Sir Herbert Kitchener confronted a small French detachment led by captain J.-B. Marchand at the village of Fashoda on the Upper Nile, a confrontation which eventually led to the withdrawal of the French from South Sudan.

From 1899, when the Anglo-Egyptian condominium of Sudan was firmly established, and up to 1914 what is now south-eastern Sudan remained under rule from the south, and to the east of the Nile the 5° parallel of northern latitude was the formally recognised northern boundary of Uganda.

In 1914 it was formally decided to transfer

the East Equatoria province back to administration from the north, and join it with Anglo-Egyptian Sudan, including areas as far south as the present day Sudan-Uganda border. However, this was only done with the exception of a small section the Imatong Mountains group and The Didinga Mountains. The section was delimited to the north by a line which ran from the peak of Madole (in the part of the Imatong Mountains group known as the Langia Mountains) in a north-easterly direction south of the Dongotona Mountains up to about 4° N, and then the border followed a line in a nearly east-west direction to the intersection with the present border just south-west of the Didinga Mountains group. This small area, which mostly includes lowlands south and south-east of the Dongotona Mountains group, the upper part of the Kidepo Valley, and the northern part of the Nangeya Mountains in the Lafit, Dongotona and Nangeya Mountains, was formally transferred to the Sudan only in 1926.

There was strong opposition among the local population to Anglo-Egyptian rule from the transfer in 1914 and at least up to 1920, which partly explains the late arrival of botanists and zoologists in the study area.

(g) The development in the colonial and post-colonial period; the recent civil war

The most comprehensive attempts at technical and large-scale economic development in the study area have been the establishment of saw mills and plantations of exotic timber. Since about 1930 the Forestry Department of the Sudanese colonial government took an interest in the mountain massifs of the study area, especially in the Imatong Mountains group, because of their sparse population and extensive natural forests, and because of a good potential for growing exotic softwoods in the mountain habitats of South Sudan. In 1940 an acute shortage of timber was felt due to the blocking of imports in the Second World War, and an extension of the activities of the Forestry Department in the Imatong Mountains group took place. A road was established in the Kinyeti Valley from Katire to Gilo, a saw-mill was established at Katire, and the *Podocarpus* timber of the Gilo area was exploited. Plantation of softwoods (especially *Cupressus lusitanica*) was begun in 1941. A forest reserve, the Imatong Central Forest Reserve, including both the planted areas and large areas of natural forest, was established in 1952 (Jenkin et al. 1977).

On the Uganda side, several forest reserves have been established in the study area or close to it. The Agoro-Agu Forest Reserve covers the southern slope of the Imatong Mountains, the Nangeya-Napore Forest Reserve (also called the Nyangea-Napore Forest Reserve) covers the Nangeya Mts., and just east of the study area is the Zulia Forest Reserve, including the forests on the slopes of Mt. Zulia (c. 2300 m.), covering the northernmost triangle of Uganda between Sudan and Kenya. In the general area, but outside the study area, the Kidepo National Park has been established on the Uganda side of the upper part of the Kidepo River.

In the period from almost a year before the independence of the Sudan in 1956 until the Addis Ababa agreement in 1972, there was civil disturbance in southern Sudan, and punitive military operations were carried out by the new post-colonial Khartoum-based government. The civil disturbances soon escalated into a civil war between the government and groups in the Southern Region. Shortly after the Addis Ababa agreement various development programmes started in the area, including a British-supported attempt to redevelop forestry in the Imatong Mountains Central Forest Reserve (Jenkin et al. 1977), involving extensive clearing of the remaining natural forest and replanting with fast-growing exotic conifers in the area around Gilo in the upper reach of the Kinyeti Valley.

At the same time, a large compound was established by Norwegian Church Aid near Hiliu in the lower part of Kinyeti Valley about 10 km. from Torit, together with a number of experimental farms. Smaller aid programmes and refugee camps were established by international organisations elsewhere in the study area, especially at Torit and near Chukudum.

After the gradual break-down of the Addis Ababa agreement in 1982-83 there has been a very unstable situation in the whole of southern Sudan, almost consistently amounting to civil war, and further development programmes and scientific studies of the area have not been possible.

The current situation in the mountain massifs is not known, as the few reports which the authors have received from people who have visited the region, mainly on the Ugandan side, are conflicting and probably reflect a continuously changing situation.

III. Catalogue of the vascular plants

(1) Introduction to the Catalogue

This introduction gives an account of the classification used for arranging the higher taxa, especially orders and families, the general presentation of the text, the standardised abbreviations used, and the format of the data.

(a) The sequence of taxa

The sequence of the orders and families of ferns and fern allies follows the system used in the Flora Zambesiaca (Schelpe 1970). This is the latest full account of regions with a pteridophyte flora comparable to that of the study area. The sequence is only slightly different from the sequence used by Johns (1991) in his preliminary account of the pteridophytes of Tropical East Africa, where the fern allies are placed after the ferns.

The sequence of the orders and families of flowering plants follows that used by Hutchinson (1926, 1934) in his first review of the families of flowering plants of the world. This choice is in agreement with the systematic sequence in most works on the flora of the Sudan and other English-speaking parts of tropical Africa. The classification of Hutchinson is sometimes in disagreement with modern classifications. For example are the Bombacaceae and the Malvaceae placed in two different, but adjacent orders in the Hutchinson-classification, while they are placed next to each other in the same order, or sometimes completely united, in modern classifications. However, for the particular purpose of this work, where the evolutionary aspect does not represent the most prominent interest, we have chosen to follow the widely used classification by Hutchinson. The only exception is seen in the Liliopsida (Monocotyledons), where we have followed modern usage and split the Liliaceae into a number of families. While the sequence of orders and families thus follow Hutchinson's early system closely, we have chosen to correct the nomenclature he used for taxa at these two ranks. Since Hutchinson (1926, 1934) much work has been done in order to establish the correct names for taxa above the rank of genus, and it would be outdated to use his nomenclature for families and orders without corrections.

The genera and species are both arranged alphabetically according to accepted names; a few generic synonyms are included in the sequence with reference to where the accepted name for the taxon is treated. A full index of accepted names and synonyms will appear at the end of Volume 2.

(b) The taxonomic concepts, synonymy, and references to other regional taxonomic or floristic works

In the catalogue the concepts of families, genera, species and infraspecific taxa follow as closely as possible that of the monographic floras of the region. Synonyms are quoted when they have been used in the regularly cited tropical African floras. A few synonyms used in herbaria, but not mentioned in the floras cited here, have occasionally been quoted. Misapplied names ("misidentifications") are indicated in square brackets with reference to the place where the name has been misapplied. The authorities for the scientific names have been indicated by author-abbreviations which follow, as far as it has been possible, the system proposed in Brummitt & Powell (1992). Full authority for and place and

date of publication of the quoted names and synonyms have not been included, as such information can readily be found in the monographic floras. The floras are referred to by abbreviations as follows (in alphabetical order):

FAC Flore d'Afrique Centrale, (1967-), in fascicles of one family (or part of one) each, edited and written by various. Published by Jardin botanique national de Belgique, Bruxelles. The abbreviation is followed by reference to fascicle by family name, page and year of publication. It covers families not treated in the numbered volumes of FCB – Flore du Congo [Belge], et du Rwanda-Urundi, *q.v.* The first fascicles with a family in each have still the same title as the numbered volumes.

FC Flore du Cameroun, Vol. 1- , (1963-), edited and written by various. First published by Muséum National d'Histoire Naturelle, Laboratoire de Phanérogamie, Paris, later by Délégation Générale a la Recherche Scientifique et Technique, Yaoundé (Cameroun). The abbreviation is followed by reference to volume number, page and year of publication.

FCap Flora Capensis, Vol. 1-7, (1860-1933), edited and partly written by W.H. Harvey & O.W. Sonder (Vol. 1-3) and W.T. Thiselton-Dyer (Vol. 4-7), except the supplement to Vol. 5(2), which was edited by A.W. Hill. Various publishers, including I.C. Juta, Capetown, Hodges, Smith & Co., Dublin, and L. Reeve & Co., London and Ashford. The abbreviation is followed by reference to volume number, page and year of publication.

FCB Flore du Congo [Belge], et du Rwanda-Urundi, Spermatophytes, Vol. 1-10, (1948-1963), edited and written by various. Published by L'Institut National pour l'Étude Agronomique du Congo (I.N.É.A.C.), Bruxelles. The abbreviation is followed by reference to volume number, page and year of publication. The taxonomic coverage of this work is incomplete, but it is succeeded by the Flore d'Afrique Centrale, *q.v.*

FE Flora of Ethiopia [after 1992 Flora of Ethiopia and Eritrea], Vol. 1- , (1989-), edited by S. Edwards, I. Hedberg and others. Published by the National Herbarium, Addis Ababa, and University of Uppsala, Uppsala. The abbreviation is followed by reference to volume number, page and year of publication.

FG Flore du Gabon, Vol. 1- , (1961-), edited and written by various. Published by Muséum National d'Histoire Naturelle, Laboratoire de Phanérogamie, Paris. The abbreviation is followed by reference to volume number, page and year of publication.

FPNA Flore des Spermatophytes du Parc National Albert, Vol. 1-3 (1947-1955), by W. Robyns. Published by the Institut des Parcs Nationaux du Congo Belge, Bruxelles. The abbreviation is followed by reference to volume number, page and year of publication.

FPS Flowering Plants of the (Anglo-Egyptian) Sudan, Vol. 1-3, (1950-1956), by F.W. Andrews. Published for the Sudan Government by T. Buncle & Co., Arbroath. The abbreviation is followed by reference to volume number, page and year of publication. Indication of records relevant to the study area are quoted in curly brackets.

FS Flora of the Sudan, (1929), by A.F. Broun & R.E. Massey. Published for the Sudan Government Office by T. Murby & Co., London. The abbreviation is followed by reference to page number and year of publication.

FSo Flora of Somalia, Vol. 1- , (1993-), edited by M. Thulin. Published by the Royal Botanic Gardens, Kew. The abbreviation is followed by reference to volume number, page, and year of publication.

FTA Flora of Tropical Africa, vol. 1-10, (1868-1937), edited by D. Oliver and various others. Published by L. Reeve & Co, London and Ashford. The abbreviation is followed by reference to volume number, page and year of publication.

FTEA Flora of Tropical East Africa, (1952-), in fascicles of one family (or part of one) each, edited by E. Milne-Redhead [1952-1971] and R.M. Polhill. Published first on behalf of the East African Community by the Crown Agent, London, later on behalf of the East African Governments by A.A. Balkema, Rotterdam. The abbreviation is followed by reference to fascicle by family name, page and year of publication.

FWTA Flora of West Tropical Africa, 2. edition, vol. 1 by R. W. J. Keay, Vol. 2 & 3 by F. N. Hepper, (1954-1972). Published on behalf of the governments of Nigeria, the Gold Coast (later Ghana), Sierra Leone and the Gambia, by the Crown Agent, London. The abbreviation is followed by reference to volume number, page and year of publication.

FZ Flora Zambesiaca, Vol. 1- , (1960-), edited by A.W. Exell & H. Wild and various others. Published first on behalf of the governments of Portugal, the Federation of Rhodesia and Nyasaland and the United Kingdom by the Crown Agent, London, later by the Managing Committee on behalf of the contributors to Flora Zambesiaca, London. The abbreviation is followed by reference to volume number, page and year of publication.

HYF A Handbook of the Yemen Flora (1997), written by J.R.I. Wood. Published by the Royal Botanic Gardens, Kew. The abbreviation is followed by reference to page number and year of publication.

ITU Indigenous Trees of Uganda, 2. edition, (1952), by W.J. Eggeling and I.R. Dale. Published by authority of the government of the Uganda Protectorate by the Crown Agent, London. The abbreviation is followed by reference to page number and year of publication.

KTSL Kenya Trees, Shrubs and Lianas, (1994), by H.J. Beentje. Published by the National Museums of Kenya, Nairobi. The abbreviation is followed by reference to page number and year of publication.

UKWF Upland Kenya Wild Flowers, 2. edition, (1994), by A.D.Q. and S. Agnew. Published by the East Africa Natural History Society, Nairobi. The abbreviation is followed by reference to page number and year of publication.

CHIPP 1929: – The Imatong Mountains, Sudan, (1929), by Chipp, T.F. Published in the Bulletin of Miscellaneous Information, Kew, 1929: 177-197. The reference is followed by page number; see bibliographic details in list of references. Indication of records relevant to the study area are quoted in curly brackets.

EL AMIN 1990: – Trees and Shrubs of the Sudan, (1990), by H.M. El Amin. Published by Ithaca Press, Exeter. The reference is followed by page number; see bibliographic details in list of references.

HEDBERG 1957: – Afroalpine Vascular Plants, (1957), by O. Hedberg. Published in Symbolae Botanicae Upsaliensis 15:1; Arbeten från Botaniska Institutionerna i Uppsala by A.B. Lundequistska Bok-

handeln, Uppsala. The reference is followed by page number. See bibliographic details in list of references.

JACKSON 1950, 1951 (OR) 1956: – References to the various publications on floristic composition of vegetation on Dongotona, Didinga and Imatong Mountains by J.K. Jackson. The reference is followed by page number. See for further bibliographic details on these two publications in the list of references. Indication of records relevant to the study area are quoted in curly brackets.

SOMMERLATTE 1990: – A Field Guide to the Trees and Shrubs of the Imatong Mountains, Southern Sudan, (1990), by H. & M. Sommerlatte. Published by Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), Nairobi. The reference is followed by page number. See further bibliographic details in list of references. Indication of records relevant to the study area are quoted in curly brackets.

WICKENS 1976: – Flora of Jebel Marra (Sudan Republic), and its geographical affinities, (1976), by G.E. Wickens. Published for the Royal Botanic Gardens, Kew, as Kew Bulletin Additional Series, Vol. 5, by Her Majesty's Stationery Office, London. The reference is followed by page number. See further bibliographic details in list of references.

Occasional references are also made to the non-tropical African floras:

FSA Flora of Southern Africa, Vol. 1- , (1963-). Published by the National Botanical Garden, Pretoria. The abbreviation is followed by reference to volume number, page and year of publication.

FM Flore du Madagascar, Fascicle 1- , (1937-). Published by Muséum National d'Histoire Naturelle, Laboratoire de Phanérogamie, Paris [some published in Tananarive]. The abbreviation is followed by reference to a numbered sequence of families (representing fascicles or volumes), page number and year of publication.

The sequence of the fern families is the same as the one used in the two first mentioned of the following works:

FWTA, Suppl..: – Flora of West Tropical Africa, 2. edition, Ferns and fern allies, (1959), by A.H.G. Alston. Published on behalf of the governments of Nigeria, the Gold Coast (later Ghana), Sierra Leone and the Gambia, by the Crown Agent, London. The abbreviation is followed by page number and year of publication.

FZ, Pteridoph.: – Flora Zambesiaca, Pteridophyta, (1970), by E.A.C.L.E. Schelpe. Published by the Managing Committee on behalf of the contributors to Flora Zambesiaca, Portugal, Malawi, Zambia and Southern Rhodesia, by the Crown Agent, London. The abbreviation is followed by page number and year of publication.

MACLEAY 1953 (OR) 1955: – Reference in the section on ferns and fern allies is also made to two publications on the ferns of the Imatong Mountains by MacLeay. The reference is followed by page number. See further on these two publications in the list of references. Indication of records relevant to the study area are quoted in curly brackets.

JOHNS 1991: – Pteridophytes of Tropical East Africa. A Preliminary Check-List of the Species, (1991), by R.J. Johns. Published by the Royal Botanic Gardens,

Kew. The reference is followed by page number.

Two unpublished manuscripts have been consulted in Khartoum. They are:

G. Aylmer: A list of trees and shrubs of the Sudan collected and identified when he was Conservator of Forest in 1937. The work of G. Aylmer is briefly described in the Annual Report of the Department of Agriculture and Forests, Sudan Government (1937, p. 26), and in the introduction to Vol. 1 of FPS. See further about the work of G. Aylmer in the list of collectors in Vol. 2 of this work.

J. G. Myer: Field diaries, entitled "Plant Ecological Survey of Equatoria Province I-VII", which have been typed and kept at KHU. Lists of collections of various collectors have been consulted at K and MHU. See further about the work of J.G. Myer in the list of collectors in Vol. 2 of this work.

In the many cases where there is conflict between the taxonomy or nomenclature of these works we have tried to form our own opinion on the basis of material available; the taxonomy will in such cases appear from the cited synonymy, or it may be commented upon in notes.

(c) The geographical sequence of observations; the format of data

The observations represented by herbarium specimens and records quoted from the literature are arranged by mountain groups, referred to in blocks of records arranged in a sequence from west to east; the collections from the Sudanese side are cited before the collections from the Uganda side. The text is labelled as follows: The *Imatong Mountains group, Sudan side.* The *Imatong Mountains group, Uganda side.* The *Lafit, Dongotona and Nangeya Mountains.* The *Didinga Mountains.* Within these blocks, the collections are arranged according to mountain chains or other major geographical feature, within which the records are cited in order of increasing altitude, with the records from the lowest altitudes first.

For collections with well defined locality, but without a precise indication of altitude, an approximate position has been allocated, based on our knowledge of the topography of the study area. Records with only the mountain group known as place of origin are indicated as collections "without further locality"; these are placed at the beginning of the list for each mountain group.

For each collection, a short indication of the collecting locality is stated first, followed by altitude, a short indication of habitat, date, collector, and the number of the collection. The herbaria in which the collection has been studied by us or deposited are indicated in brackets, using the standard acronyms of the internationally accepted *Index Herbariorum.* The text for each record has generally been worded by us in a short, standardised form, based on the information available on the label.

Lack of data is clearly indicated ("without further locality", "no alt.", "no date", etc.). All indications of altitude have been converted to meters, and the converted figure rounded off to nearest 10 m. interval.

The range of habitats in which the species can be found has been indicated under the heading: *General habitat range.* The information is based partly on the available literature cited under the accepted name and in the synonymy, partly on our search for material from other parts of the total area of distribution at the Herbarium of the Royal Botanic Gardens, Kew (K). The same sources have been used for the distributional information given under the heading: *General distribution.*

The tropical African countries from which the taxon has been recorded are indicated by

listing first the western, then the eastern limit of distribution, and then the southern limit of the range; the distribution outside tropical and southern Africa is also indicated. Where necessary, we have had to use our taxonomic judgement; this judgement is sometimes explained in a small separate section at the end, headed: *Note*. In the notes we have also given additional floristic information, indication of previous identification of cited material and other information which could not easily fit under the other headings.

The botanists who have worked on the flora of the study area are often both collectors of specimens and authors of published works. This is for example the case with T.F. Chipp, F.W. Andrews, H.C. Dawkins, K.N.G. MacLeay, W.J. Eggeling, J.K. Jackson, K.A. Lye, H. & M. Sommerlatte, and the authors of the current work. We have distinguished between these two roles played by the same people by referring to the collectors in italics and the authors in small capital letters.

(2) Catalogue

Pteridophytes (**Pteridophyta** Engl.)

Order 1. **Lycopodiales** Dumort.

Fam. 1. **Lycopodiaceae** Reichb.

Lycopodiella Holub

Lycopodiella cernua (L.) Pichi Serm.
FAC, Lycopodiac.: 18 (1989); JOHNS 1991: 107; UKWF: 38 (1994).
Syn.: *Lycopodium cernuum* L.: FWTA, Suppl.: 12 (1959); FC 3: 16 (1964); FG 8: 10 (1964); FZ, Pteridoph.: 20 (1970).
Imatong Mountains group, Sudan side: Gilo to Mt. Konoro, 1850 m., seepage meadow on edge between upland rain forest with *Albizia schimperiana*, *Macaranga capensis*, *Croton macrostachyus*, and *Ocotea kenyensis* and grassland with *Loudetia arundinacea*, 18.11.1980, *Friis & Vollesen* 312 (C).
General habitat range: in medium-altitude and montane wet grassland and forest, especially at edges and in clearings.
General distribution: Gambia to Ethiopia, south to South Africa; also widespread in tropical Asia and America. First record from the Sudan.

Lycopodium L.

Lycopodium clavatum L.
CHIPP 1929: 187; MACLEAY 1955: 590; FWTA, Suppl.: 12 (1959); FC 3: 16 (1964); FAC, Lycopodiac.: 13 (1989); JOHNS 1991: 107; UKWF: 38 (1994).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, no alt., 8.2.1961, *Firman* 1440 (KHF); Dumuso to Kipia, 2440 m., on streambank in *Podocarpus latifolius* forest, 3.7.1947, *MacLeay* 126 (BM, KHU); near Kipia, 2900 m., in mountain ravines, 11.2.1929, *Chipp* 90 (K); Mt. Kinyeti, at path towards Issore, 2950 m., edge of forest, 1.1939, *MacDonald* 81 (BM); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 58' N, 32° 54' E), 3000 m., in upper elfin forest belt, 10.6.1984, *Kielland-Lund* 907 (C, NLH); ridge leading to summit of Mt. Kinyeti, 3000 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, common in sheltered places, 22.3.1982, *Friis & Vollesen* 1283 (C, K); Mt. Kinyeti, near summit, 3200 m., 17.6.1953, *Osman* 354 (KHU).
General habitat range: in mountain grassland, bushland and forest, usually in places with open soil.
General distribution: Nigeria to Ethiopia, south to South Africa; almost cosmopolitan.

Huperzia Bernh.

Huperzia dacrydioides (Bak.) Pichi Serm.
FAC, Lycopodiac.: 5 (1989); JOHNS 1991: 104; UKWF: 38 (1994).
Syn.: *Lycopodium dacrydioides* Bak.: MACLEAY 1955: 590; FZ, Pteridoph.: 18 (1970). [*Lycopodium mildbraedii* auct., non Herter: FWTA, Suppl.: 11 (1959)].
Imatong Mountains group, Sudan side: Acholi Mts., above Lerua Mission, 1600 m., epiphytic in forest, 6.1.1950, *MacLeay* 491 (KHU); Mt. Baghanj, 1830-2140 m., epiphyte in *Podocarpus latifolius* forest, 14.6.1939, *Andrews* 1934 (K); Itibol, 1920 m., 11.1.1940, *Myers* 13,123 (K); Gilo, at bridge on Ngairigi River, 1750 m., up-

land rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* epiphyte in forest, 9.11.1980, *Friis & Vollesen* 84 (BR, C, K, KHF); Gilo, 1830 m., in montane forest, 24.6.1947, *MacLeay* 47 (BM, K, KHU); Dumuso, 2500 m., in forest, 2.1.1950, *MacLeay* 492 (KHU); Mt. Kinyeti, lower slope, 2600 m., epiphytic on *Podocarpus latifolius,* 17.6.1953, *Osman* 356 (BM, KHU); Mt. Kinyeti, 2800 m., near upper limit of *Podocarpus latifolius-Dombeya torrida* forest, 17.6.1953, *Osman* 352 (BM); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 59' N, 32° 53' E), 2800 m., epiphytic in forest, 9.6.1984, *Kielland-Lund* 899 (C, NLH).

General habitat range: epiphyte in medium-altitude and montane forest.

General distribution: Sierra Leone to Ethiopia, south to South Africa.

Huperzia ophioglossoides (Lam.) Rothm.

JOHNS 1991: 106; UKWF: 38 (1994).

Syn.: *Lycopodium ophioglossoides* Lam.: FWTA, Suppl.: 12 (1959); FC 3: 12 (1964).

Imatong Mountains group, Sudan side: Bushbuck Hill to Mt. Konoro, 2400 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum,* epiphytic, 23.2.1982, *Friis & Vollesen* 1013 (C, K, KHF); Mt. Kinyeti, 2500 m., epiphyte in *Podocarpus latifolius* forest, 17.6.1953, *Osman* 355 (KHU).

General habitat range: epiphyte in montane forest.

General distribution: Cameroon to Ethiopia, south to South Africa. First record from the Sudan.

Order 2. **Selaginellales** Prantl

Fam. 2. **Selaginellaceae** Mett.

Selaginella P. Beauv.

Selaginella abyssinica Spring.

MACLEAY 1955: 590; FWTA, Suppl.: 16 (1959); FC 3: 31 (1964); FZ, Pteridoph.: 27 (1970); JOHNS 1991: 108; UKWF: 39 (1994).

Syn.: *Selaginella goudotiana* Spring. var. *abyssinica* Spring: FAC, Selaginellac.: 34 (1985); HYF: 55 (1997).

Imatong Mountains group, Sudan side: Gilo, 1830 m., in montane forest, 24.6.1947, *MacLeay* 48 (BM, K, KHU); Gilo, 1830 m., road bank, 26.5.1950, *Ali* 24 (KHU); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 8.11.1980, *Friis & Vollesen* 21 (BR, C, K, KHF); Gilo, 2100 m., in rock crevices, 13.5.1953, *Prowse* 240 (KHU).

General habitat range: in medium-altitude and montane forest, often in rocky places.

General distribution: Ghana and Nigeria to Ethiopia, south to Zimbabwe.

Selaginella caffrorum (Milde) Hieron.

FAC, Selaginellac.: 8 (1985); JOHNS 1991: 108; UKWF: 39 (1994).

Syn.: *Selaginella njamnjamensis* sensu MACLEAY 1955: 590, pro parte; FZ, Pteridoph.: 23 (1970), pro parte.

Imatong Mountains group, Sudan side: Gilo, 1980 m., on rocks, 28.6.1947, *MacLeay* 114 (BM, KHU); Gilo to Mt. Konoro, 2000 m., *Loudetia arundinacea* grassland with scattered trees, on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 16.11.1980, *Friis & Vollesen* 267 (BR, C, K, KHF).

Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., near Mt. Aripiwa, 1980 m., on rocks, 24.1.1950, *Jackson* 1116 (BM, KHU).

General habitat range: in medium-altitude and montane grassland and bushland, often as a pioneer species in rocky places.

General distribution: South Sudan and Ethiopia, through eastern Africa south to South Africa.

Selaginella kraussiana (Kunze) A. Br.
MacLeay 1955: 590; FWTA, Suppl.: 16 (1959); FC 3: 31 (1964); FZ, Pteridoph: 26 (1970); FAC, Selaginellac.: 31 (1985); Johns 1991: 108; UKWF: 39 (1994).
Imatong Mountains group, Sudan side: Dumuso, 2440 m., on forest floor, 29.2.1948, *Williams* 11/48 (K, KHU); Dumuso, 2620 m., on wet floor in *Podocarpus latifolius-Dombeya torrida* forest, 29.2.1948, *MacLeay* 270 (BM); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 59' N, 32° 53' E), 2600 m., 9.6.1984, *Kielland-Lund* 895 (C, NLH); Mt. Kinyeti, 2800 m., on forest floor, 17.6.1953, *Osman* 357 (KHU); Mt. Kinyeti, 2950 m., in ravine forest, 30.12.1935, *Thomas* 1865 (BM, K); Kipia, 2890 m., common on floor in cloud forest, no date, *MacDonald* 16 (BM).
Imatong Mountains group, Uganda side: Aringa River head-waters, 2540 m., streambank in *Podocarpus latifolius-Syzygium* forest, 7.4.1945, *Greenway & Hummel* 7305 (K).
General habitat range: in medium-altitude and montane forest.
General distribution: Sierra Leone and Cameroon to Ethiopia, south to South Africa. Also on the Canary Islands and Madeira.

Selaginella mittenii Bak.
MacLeay 1955: 590; FZ, Pteridoph.: 26 (1970); FAC, Selaginellac.: 28 (1985); Johns 1991: 108.
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* on large boulders on forest floor, 1.12.1980, *Friis & Vollesen* 611 (BR, C, FT, K, KHF); Talanga, 1000 m., on mossy rocks in stream-bed of Locholi River, 4.1.1950, *MacLeay* 428 (BM, K, KHU); Talanga, 1000 m., on rocks in bed of the Locholi River, in forest, 18.6.1953, *Osman* 372 (KHU); Ibahin, 2130 m., in shade of rocks above camp, 18.12.1935, *Thomas* 1671 (BM); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 59' N, 32° 53' E), 2200 m., 9.6.1984, *Kielland-Lund* 894 (C, NLH); north-eastern side of the mountains, just north of Molongori, 750 m., almost bare rocky slope with *Boswellia papyrifera, Terminalia brownii, Lannea fulva, Euphorbia magnicapsula, Xerophyta simulans,* etc., under boulder, 10.3.1982, *Friis & Vollesen* 1155 (BR, C, K, KHF).
General habitat range: in lowland, medium-altitude and montane forest, often in rocky places or in shaded and wet places in open vegetation.
General distribution: South Sudan to Ethiopia, through eastern Africa south to South Africa. Also in India.

Selaginella molliceps Spring.
FWTA, Suppl.: 17 (1959); FC 3: 41 (1964); FG 8: 24 (1964); FAC, Sellaginellac.: 49 (1985); Johns 1991: 108.
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* on forest floor, 29.11.1980, *Friis & Vollesen* 519 (BR, C, FT, K, KHF).
General habitat range: in lowland and medium-altitude forest.
General distribution: Liberia to South West Ethiopia, south to Uganda, also in Angola. First record from the Sudan.

Selaginella njamnjamensis Hieron.
MacLeay 1955: 590; FWTA, Suppl.: 15 (1959), as "*njam-njamensis*"; FZ, Pteridoph.: 23 (1970), as "*njam-njamensis*"; FAC, Selaginellac.: 10 (1985); Johns 1991: 108.
Imatong Mountains group, Sudan side: Kinyeti Valley, hills near the junction between roads to Ngarama and Katire north of Hiliu, 650 m., 11.12.1983, *Kielland-Lund* 306 (C, NLH); Londunyari, near Logire, north-eastern side of the Imatong Mountains, 770 m., on rounded gneiss outcrop in grassland, 15.1.1950, *Jackson* 1045 (BM).

General habitat range: in medium-altitude dry bushland, often on rocks.
General distribution: Mali, Benin and Nigeria to South Sudan and (?) Ethiopia, south to Zimbabwe.

Selaginella phillipsiana (Hieron.) Alston
JOHNS 1991: 109; FSo 1: 5 (1993); UKWF: 39 (1994).
Imatong Mountains group, Uganda side: 3-5 km. south-east of Lututuru, 1400 m., soil cushions over rocks, 17.2.1969, *Lye* 2116 (EA, K, MHU, NLH, UPS).
General habitat range: in medium-altitude and montane grassland and bushland, often on rocky outcrops.
General distribution: South Sudan to Ethiopia and Somalia, south to Tanzania.
Selaginella sp.
Imatong Mountains group, Sudan side: Lomaru, no alt., locally abundant, 1935, *Thomas* 1766 (?K, not traced).

Order 3. **Ophioglossales** Newman

Fam. 3. **Ophioglossaceae** Presl

Botrychium Sw.

Botrychium chamaeconium Bitter & Hieron.
FWTA, Suppl.: 19 (1959); FC 3: 47 (1964); JOHNS 1991: 8.
Imatong Mountains group, Sudan side: Gilo, swampy ground in deep shade in *Podocarpus latifolius* forest, 2000 m., 25.6.1947, *MacLeay* 55 (KHU).
General habitat range: in moist places in montane forest.
General distribution: Cameroon, South Sudan, South West Ethiopia and Uganda.
Note. The species is known only from 4 collections, one from each of the countries mentioned above.

Ophioglossum L.

Ophioglossum costatum R. Br.
FWTA, Suppl.: 18 (1959); FC 3: 44 (1964); FZ, Pteridoph.: 38 (1970); WICKENS 1976: 188; JOHNS 1991: 8.
Imatong Mountains group, Sudan side: Itibol, 2000 m., damp ground in forest clearing, 19.6.1953, *Prowse* 369A (KHU).
General habitat range: in damp areas in lowland, medium-altitude and montane grassland, woodland and forest, often on rocky outcrops.
General distribution: Mali and Sierra Leone to West Ethiopia, south to Botswana; also in Madagascar, India and the West Indies.

Ophioglossum reticulatum L.
FWTA, Suppl.: 19 (1959); FC 3: 45 (1964); FG 8: 30 (1964); FZ, Pteridoph.: 37 (1970); WICKENS 1976: 189; JOHNS 1991: 10; UKWF: 16 (1994).
Imatong Mountains group, Sudan side: Itibol, 2000 m., damp ground among grass in secondary forest, very local, 19.5.1953, *Prowse* 369 (KHU).
Imatong Mountains group, Uganda side: ridge above Aringa Valley, 2290 m., in grassland, 6.1942, *Eggeling* 5060 (EA).
General habitat range: in damp places in medium-altitude and montane grassland, woodland and forest, often on rocky outcrops.
General distribution: Cape Verde Islands to Ethiopia, south to South Africa; also widespread in tropical Asia and tropical America.

Order 4. **Marattiales** Prantl

Fam. 4. **Marattiaceae** Kaulf.

Marattia Sw.

Marattia fraxinea Sm. ex J.F. Gmel.
MACLEAY 1955: 591; FWTA, Suppl.: 20 (1959);

FC 3: 50 (1964); FG 8: 32 (1964); JOHNS 1991: 10; UKWF: 16 (1994).
Syn.: *Marattia fraxinea* J.F. Gmel. var. *salicifolia* (Schrad.) C. Chr.: FZ, Pteridoph.: 40 (1970).
Imatong Mountains group, Sudan side: Gilo, on banks of Ngairigi River and tributaries and in swampy ground in montane forest, 1740 m., locally common, 27.1.1947, *MacLeay* 87 (BM, KHU); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 15.11. 1980, *Friis & Vollesen* 225 (C, K, KHF); Gilo, 1860 m., swampy ground below Gilo, 5.3.1948, *Williams* 29/48 (KHU); Gilo, 1970 m., swampy places in *Podocarpus latifolius* forest, 5.3.1948, *MacLeay* 258 (BM); Gilo, 2000 m., edge of river, 28.12.1951, *Tothill* 14 (KHU); Gilo, 2000 m., damp ground in mountain forest, 19.6.1953, *Prowse* 377 (KHU).
General habitat range: in swampy places in medium-altitude and montane forest and on riverbanks.
General distribution: Guinée to South West Ethiopia, south to South Africa; also in Madagascar and India.

Order 5. **Osmundales** Bromhead

Fam. 5. **Osmundaceae** R. Br.

Osmunda L.

Osmunda regalis L.
MACLEAY 1955: 592; FWTA, Suppl.: 20 (1959); FC 3: 58 (1964); FAC, Osmundac.: 2 (1973); JOHNS 1991: 11; UKWF: 16 (1994).
Syn.: *Osmunda regalis* L. var. *abyssinica* (Kuhn) Pichi Serm.
Imatong Mountains group, Sudan side: above bridge across Ngairigi River, 1620 m., between stones in river-bed and on river-bank, 3.1.1950, *MacLeay* 424 (K, KHU).
General habitat range: in a variety of lowland, medium-altitude and montane habitats.
General distribution: Guinée to Ethiopia, south to South Africa; also in Madagascar; widespread in all tropical, subtropical and temperate regions of the world.

Order 6. **Polypodiales** A.B. Frank
(*Filicales* Dumort., nom. illeg.)

Fam. 6. **Cyatheaceae** Reichb.

Cyathea Sm.

Cyathea camerooniana Hook.
FWTA, Suppl.: 27 (1959); FC 3: 66 (1964); FG 8: 51 (1964); HOLTTUM 1981: 478.
var. **ugandensis** Holttum
HOLTTUM 1981: 481; JOHNS 1991: 49.
Syn.: *Cyathea sp. aff. Cyathea holstii* Hieron: MACLEAY 1955: 592.
Imatong Mountains group, Sudan side: Gilo, 1800 m., swampy ground in montane forest, local, only once recorded, 27.6.1947, *MacLeay* 92 (KHU).
General habitat range: in swampy places in medium-altitude and montane forest.
General distribution: Uganda; other varieties range from Sierra Leone to Central Tanzania.
Note. This record has been identified by Holttum in 1983; see note under next species.

Cyathea deckenii Kuhn
ITU: 103 (1952); HOLTTUM 1981: 471; JOHNS 1991: 51.
Imatong Mountains group, Sudan side: Dumuso, mountain ravine, 1680 m., in stream-bed in forest, 1950, *MacLeay* 432 (KHU); slope of Mt. Kinyeti, 2300 m., damp ground in *Podocarpus latifolius* forest, 17.6.1953, *Prowse* 348 (KHU).
General habitat range: in swampy places in montane forest.
General distribution: according to HOLTTUM 1981 only in Tanzania, Congo [previously Zaire] and Mozambique.

Note. These two records have been named *C. deckenii* by Holttum in 1983; it is possible that these, as well as the specimen cited under the preceding species, represent misidentifications of specimens of *Cyathea manniana.*

Cyathea dregei Kunze
ITU: 103 (1952); FWTA, Suppl.: 29 (1959); FC 3: 12 (1964); HOLTTUM 1981: 473; FZ, Pteridoph.: 74 (1970); JOHNS 1991: 51; UKWF: 24 (1994); KTSL: 39 (1994).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* in swamps along the river, 20.11.1980, *Friis & Vollesen* 351 (BR, C, K, KHF).
General habitat range: in swampy places in medium-altitude and montane forest.
General distribution: Sierra Leone to South Sudan, south to South Africa; also in Madagascar.

Cyathea manniana Hook.
FWTA, Suppl.: 29 (1959); FC 3: 70 (1964); FG 8: 52 (1964); HOLTTUM 1981: 472; SOMMERLATTE 1990: 334; JOHNS 1991: 51; UKWF: 24 (1994); KTSL: 39 (1994).
Syn.: [*Cyathea deckenii* auct., non Kuhn: MACLEAY 1955: 592].
Imatong Mountains group, Sudan side: Gilo, below rest-house, 1800-2500 m., swampy ground beside streams in montane forest, 27.6.1947, *MacLeay* 86 (BM, KHU); at path from Gilo to Mt. Garia, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* in ravine with *Pouteria adolfi-friederici,* 19.3.1982, *Friis & Vollesen* 1257 (BR, C, K, KHF).
General habitat range: in swampy places in medium-altitude and montane forest, and on moist slopes in the forest. According to SOMMERLATTE 1990 it occurs in the Imatong Mountains as a small tree, usually in groups, near water and in swampy places in mixed *Podocarpus latifolius* and *Albizia* forest.
General distribution: Liberia to Ethiopia, south to Mozambique and Zimbabwe.

Fam. 7. **Hymenophyllaceae** Gaudich.

Trichomanes L.

Trichomanes pyxidiferum L.
FZ, Pteridoph.: 76 (1970); JOHNS 1991: 37.
var. **melanotrichum** (Schlechtend.) Schelpe
FZ, Pteridoph.: 78 (1970).
Syn.: *Trichomanes melanotrichum* Schlechtend.: MACLEAY 1955: 592; FC 3: 86 (1964); UKWF: 22 (1994). *Trichomanes africanum* Christ: FWTA, Suppl.: 31 (1959); FG 8: 63 (1964).
Imatong Mountains group, Sudan side: Lotti, 910 m., in forest, epiphytic on species of *Ficus,* 9.1.1950, *MacLeay* 463 (K, KHU); Lotti, 1000 m., epiphyte on tree trunks in forest, 24.6. 1953, *Prowse* 385 & 386 (KHU); Talanga, 1000 m., epilithic on rocks near stream in forest, 8.6.1953, *Prowse* 371 (KHU); Gilo, 1400 m., near bridge across Ngairigi River, on tree trunks, 15.6.1953, *Osman* 293 (KHU); below Gilo, 1500 m., on trunks of *Podocarpus latifolius,* 13.6.1953, *Prowse* 239 (KHU); at Kinyeti River below Gilo, no alt., 15.6.1939, *Andrews* 2019 (BM, KHU); Gilo, 1800 m., on trunks in damp *Podocarpus latifolius* forest, 28.6.1947, *MacLeay* 113 (BM); Gilo, 1800 m., on trunk of *Acacia abyssinica,* 12.6.1953, *Prowse* 232 (KHU); Gilo, at bridge on Ngairigi River, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* epiphytic, 13.11.1980, *Friis & Vollesen* 210 (BR, C, K, KHF); Gilo, 1950 m., epiphytic on *Podocarpus latifolius,* 25.6.1947, *MacLeay* 54 (KHU); Gilo, 2200 m., on trunk of *Podocarpus latifolius,* 14.6.1953, *Prowse* 269 (KHU).
General habitat range: in lowland, medium-altitude and montane forest.
General distribution: Liberia to Ethiopia, south to South Africa; also in Madagascar. Species as a whole also in tropical America.

Fam. 8. **Dennstaedtiaceae** Ching.

Microlepia C. Presl

Microlepia speluncae (L.) Moore
FWTA, Suppl.: 33 (1959); FC 3: 94 (1964); FG 8: 68 (1964); FZ, Pteridoph.: 89 (1970); JOHNS 1991: 52; UKWF: 24 (1994).
Imatong Mountains group, Sudan side: Laboni, 1220 m., at stream in forest, 4.6.1950, *Ali* 53 & 56 (BM, KHU); Lotti, near Lerua mission, 910 m., in rain forest, 9.1.1950, *MacLeay* 474 (BM, KHU); Talanga, at the Locholi River, 910 m., damp soil along stream in forest, 4.1.1950, *MacLeay* 437 (BM, K, KHU); Talanga, 910 m., at stream-side in forest, 15.5.1950, *Ali* 13 (KHU); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* in small forest swamp along brook, 1.12.1980, *Friis & Vollesen* 617 (BR, C, K, KHF); Lora, 1850 m., in forest swamp, 13.2.1951, *Jackson* 1686 (BM, KHU).
General habitat range: in deep shade or swampy places in lowland and medium-altitude forest.
General distribution: Sierra Leone to Ethiopia, south to South Africa; pantropical.

Pteridium Scop.

Pteridium aquilinum (L.) Kuhn
CHIPP 1929: 187; MacLeay 1953: 290 & 1955: 594; FWTA, Suppl.: 33 (1959); FC 3: 96 (1964); FG 8: 71 (1964); FZ, Pteridoph.: 88 (1970); WICKENS 1976: 189; JOHNS 1991: 54; UKWF: 24 (1994); HYF: 59 (1997).
Imatong Mountains group, Sudan side: Odouro, from 1520 m. upwards, a ground fern in tall fire-swept wooded *Loudetia* grassland, 7.2.1929, *Chipp* 28 (K, KHU); Gilo, 1860 m., at forest edges and in mountain grassland, 26.6.1947, *MacLeay* 64 (BM, KHU).
General habitat range: in a large variety of habitats in lowland, medium-altitude, montane and high montane vegetation.
General distribution: widespread in Africa, and almost cosmopolitan.

Fam. 9. **Vittariaceae** Presl.

Vittaria Sm.

Vittaria volkensii Hieron.
MACLEAY 1955: 598; JOHNS 1991: 28; UKWF: 20 (1994).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* epiphyte, 13.11.1980, *Friis & Vollesen* 214 (C); Gilo, 1950 m., epiphyte in mountain woodland, 24.6.1947, *MacLeay* 49 (BM, KHU); Gilo, 2000 m., epiphyte in forest, 14.16.1953, *Prowse* 271 (KHU); at trail from Kinyeti River towards Issore, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* epiphytic, 9.3.1982, *Friis & Vollesen* 1140 (BR, C, KHF); Itibol, 2100 m., in *Podocarpus latifolius* forest, epiphytic, 19.12.1935, *Thomas* 1700 (BM, K).
General habitat range: in medium-altitude and montane forest.
General distribution: South Sudan and South West Ethiopia through eastern Africa to Mozambique and Zimbabwe.

Vittaria sp. cf. V. guineensis Desv.
Imatong Mountains group, Sudan side: Lotti, 1000 m., at edge of riverine forest, 24.6.1953, *Osman* 391 (KHU).
Note. Collection insufficient for exact determination.

Fam. 10. **Adiantaceae** Presl

Actiniopteris Link

Actiniopteris radiata (Sw.) Link
MACLEAY 1955: 595; FWTA, Suppl.: 44 (1959); FC 3: 150 (1964); FAC, Actiniopteridac.: 3 (1969); FZ, Pteridoph.: 138 (1970); WICKENS 1976: 187; JOHNS 1991: 15; FSo 1: 10 (1993); UKWF: 17 (1994); HYF: 58 (1997).
Imatong Mountains group, Sudan side: without further locality, 1939, *Andrews* 1809 (BM); Kinyeti Valley, hill 3 km. south of Hiliu, 700 m., stony hillside, 6.12.1983, *Kielland-Lund* 222 (C, NLH); south west of Hiliu (4° 16' N, 32° 48' E), no alt., small ravine, 25.5.1984, *Kielland-Lund* 728 (C, NLH); north-eastern side of the mountains, just north of Molongori, 750 m., almost bare rocky slope with *Boswellia papyrifera, Terminalia brownii, Lannea fulva, Euphorbia magnicapsula, Xerophyta simulans,* etc., under boulders, 10.3.1982, *Friis & Vollesen* 1151 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: on arid hill at Agoro, no date, *Eggeling* 832 (K); Ukuti, rocky outcrop, no alt., 12.1935, *Eggeling* 2414 (K).
General habitat range: in dry lowland and medium-altitude bushland, usually on rocky hills.
General distribution: Cape Verde Islands to Ethiopia and Somalia, south to South Africa; also in tropical Arabia, India and Sri Lanka.

Actiniopteris semiflabellata Pichi Serm.
FAC, Actiniopteridac.: 3 (1969); WICKENS 1976: 187; JOHNS 1991: 15; FSo 1: 9 (1993); UKWF: 17 (1994); HYF: 58 (1997).
Syn.: [*Actiniopteris australis* auct., non (L. f.) Link: MACLEAY 1953: 290 & 1955: 595].
Imatong Mountains group, Sudan side: without further locality, no alt., 1950, *MacLeay* 490 (KHU); Katire, 1070 m., in rock crevices, 23.6. 1947, *MacLeay* 41 (KHU); Molongori, above rest house, 1200 m., under boulders in *Terminalia brownii* woodland, 3.1951, *Jackson* 1802 (KHU).
General habitat range: in lowland and medium-altitude bushland, often in rock cervices.
General distribution: Nigeria to Ethiopia and Somalia, north to Egypt, south to Tanzania; also in tropical Arabia and Nepal.

Adiantum L.

Adiantum incisum Forssk.
MACLEAY 1955: 596; FWTA, Suppl.: 39 (1959); FG 8: 106 (1964); FZ, Pteridoph.: 108 (1970); JOHNS 1991: 24; FSo 1: 12 (1993); UKWF: 19 (1994); HYF: 57 (1997).
Imatong Mountains group, Sudan side: Talanga, 910 m., on streambank in forest, 4.1.1950, *MacLeay* 434 (KHU); Talanga, 1000 m., edge of forest, 8.6.1955, *Omar* 8 (KHU); Kinyeti Valley, hill 3 km. south of Hiliu, 700 m., shallow soil on boulders in shade of shrubs on hillslope, 6.12.1983, *Kielland-Lund* 217 (C, NLH); Katire, 1000 m., on rocky outcrop by Kinyeti River, 15.1.1952, *Tothill* 9 (KHU).
General habitat range: in lowland and medium-altitude forest, often on riverbanks and rocky outcrops.
General distribution: Cape Verde Islands to Ethiopia and Somalia, south to South Africa; also in tropical Arabia and India.

Adiantum patens Willd.
FZ, Pteridoph.: 111 (1970).
subsp. **oatesii** (Bak.) Schelpe
FZ, Pteridoph.: 111 (1970); JOHNS 1991: 25.
Syn.: *Adiantum oatesii* Bak.: MACLEAY 1955: 596; FWTA, Suppl.: 39 (1959); FC 3: 147 (1964).
Imatong Mountains group, Sudan side: Lotti, no alt., forest, 1939, *Andrews* 1714 (BM, KHU); Lotti, 910 m., dry bank along stream in forest, 9.1.1950, *MacLeay* 465 (BM, K, KHU); Talanga, 910 m., on vertical stream bank in forest, 1.1.1950, *MacLeay* 379 (BM, KHU); Laboni,

1220 m., on moist soil in forest, 4.6.1950, *Ali* 59 (KHU).
General habitat range: in lowland and medium-altitude forest, often on riverbanks and on rocky outcrops.
General distribution: Mali and Nigeria to South Sudan, south to Zimbabwe; species as a whole pantropical.

Adiantum philippense L.
MACLEAY 1955: 596; FWTA, Suppl.: 39 (1959); FC 3: 143 (1964); FZ, Pteridoph.: 110 (1970); WICKENS 1976: 187; JOHNS 1991: 25.
Imatong Mountains group, Sudan side: Talanga, 910 m., on soil in forest, 25.5.1950, *Ali* 6 (KHU); Talanga, 910 m., forest, 1.1.1950, *MacLeay* 382 (KHU); Talanga, 910 m., on wet bank in forest, 4.1.1950, *MacLeay* 439 (BM) & 439A (BM, KHU); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 26.11.1980, *Friis & Vollesen* 460 (C, K, KHF); Talanga, towards Katire, 970 m., at forest edge on termite hill, 16.12.1935, *Thomas* 1589 (BM, K); Katire, 900 m., on mossy bank, 10.1948, *Jackson* 395 (BM); Katire, at Kinyeti River, 1070 m., near river, 14.7.1947, *MacLeay* 233 (BM, KHU).
Didinga Mountains: north of Naperatang Valley (4° 19' N, 33° 30' E), 1700 m., 18.12.1983, *Kielland-Lund* 387 (C, NLH).
General habitat range: in lowland and medium-altitude forest.
General distribution: Cape Verde Islands to Ethiopia, south to Zimbabwe; also widespread in tropical Asia and America.

Adiantum poiretii Wikstr.
MACLEAY 1953: 290 & 1955: 596; FWTA, Suppl.: 39 (1959); FC 3: 148 (1964); FZ, Pteridoph.: 112 (1970); WICKENS 1976: 187; UKWF: 19 (1994); HYF: 58 (1997).
Syn.: *Adiantum thalictroides* Schlecht.: PICHI SERMOLLI 1957: 687.
Imatong Mountains group, Sudan side: along road from Katire to Gilo, 1200 m., 5.11.1952, *Rubridge* 5A (KHU); Katire, along road to Gilo, 1300 m., roadside, 18.6.1952, *du Bois* 23 (KHU); Gilo, 1600 m., roadside in forest, 12.6.1953, *Prowse* 223 & 226 (KHU); Gilo, 1830 m., on forest floor, 12.7.1947, *MacLeay* 217 (BM, KHU); Gilo, 1920 m., forest, 26.5.1950, *Ali* 23 & 27 (KHU); Gilo, 1970 m., on forest floor, 5.3.1948, *MacLeay* 259 (BM); Gilo, 2100 m., under rocks, 7.11.1952, *Rubridge* 5 (KHU); Loyaru, 2490 m., edge of forest, 29.12.1935, *Thomas* 1784 (BM, K); Dumuso, 2590 m., on forest floor in *Podocarpus latifolius-Olea capensis* forest, 29.2.1948, *Williams* 4/48 (KHU); Dumuso, 2620 m., on forest floor in *Podocarpus latifolius-Olea capensis* forest, 28.2.1948, *MacLeay* 253 (BM); Kipia, 2890 m., in *Podocarpus latifolius*-bamboo forest, 1.1939, *MacDonald* 46 (BM).
Imatong Mountains group, Uganda side: Agoro, 1830 m., clefts in rocks, no date, *Eggeling* 811 (K).
General habitat range: in medium-altitude and montane forest.
General distribution: Cameroon to Ethiopia and Somalia, south to South Africa; also in Madagascar, tropical Arabia, India and South America.

Ceratopteris Brongn.

Ceratopteris thalictroides (L.) Brongn.
FZ, Pteridoph.: 102 (1970); JOHNS 1970: 15; FSo 1: 8 (1993).
Syn.: *Ceratopteris cornuta* (P. Beauv.) Le Prieur: FWTA, Suppl.: 38 (1959); FC 3: 129 (1964); WICKENS 1976: 188.
Imatong Mountains group, Sudan side: 3 km. south of Torit, at Iyedo River (4° 23' N, 32° 36' E), 650 m., 13.12.1983, *Kielland-Lund* 317 (C, NLH).
General habitat range: in lowland and medium-altitude wet or aquatic habitats, either free-

floating on the surface of water or rooted in mud along slow-flowing streams or in marshes.
General distribution: Throughout tropical Africa, in Madagascar, and widespread in tropical Asia.

Cheilanthes Sw.

Cheilanthes farinosa (Forssk.) Kaulf.
MacLeay 1953: 190 & 1955: 596; FWTA, Suppl.: 43 (1959); FC 3: 136 (1964); FZ, Pteridoph.: 122 (1970); Wickens 1976: 188; Johns 1991: 16; UKWF: 17 (1994); HYF: 57 (1997).
Imatong Mountains group, Sudan side: Talanga, 1070 m., in forest, 1.1.1950, *MacLeay* 381 (KHU); Katire, 1100 m., river bank in forest, 7.2.1952, *Tothill* 24 (KHU); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, on moist slope along trail, 9.11.1980, *Friis & Vollesen* 98 (C, K, KHF); Gilo, at Ngairigi River, 1830 m., 26.6.1947, *MacLeay* 82 (KHU); hill behind Gilo, 1890 m., in rock crevices, 13.6.1953, *Prowse* 236 (KHU); Gilo, 1920 m., road bank in forest, 26.5.1950, *Ali* 16 & 22 (KHU); Gilo, 1980 m., on rocks in grassland, 26.6.1947, *MacLeay* 68 (K, KHU); near summit of Mt. Kinyeti, 3000 m., in shaded rock crevice, 24.4.1950, *Jackson* 1420 (KHU).
General habitat range: in medium-altitude and montane forest, often on river banks and rocks.
General distribution: Guinée to Ethiopia and Somalia, south to Zimbabwe; also in tropical Arabia, tropical America and Asia.

Cheilanthes inaequalis (Kunze) Mett.
FZ, Pteridoph.: 126 (1970); Johns 1991: 17; UKWF: 17 (1994).
var. **inaequalis**
FZ, Pteridoph.: 126 (1970); Johns 1991: 17.
Syn.: *Notholaena inaequalis* Kunze.: MacLeay 1955: 597.
Imatong Mountains group, Sudan side: Gilo, 1980 m., grassland, 26.6.1947, *MacLeay* 67 (BM, KHU); Gilo, Observation Hill, 2100 m., in rock crevices, 13.6.1953, *Prowse* 235 (KHU); at path from Bushbuck Hill to Mt. Konoro, 2300 m., rocky outcrop in *Loudetia* grassland, 5.3.1982, *Friis & Vollesen* 1103 (BR, C, K, KHF); Lomuleng, 2620 m., in clefts of rocks, 30.12.1935, *Thomas* 1886 (BM, K).
Didinga Mountains: Mt. Latoki [this is presumably Mt. Lotuke in the Didinga Mts.], no alt., 12.6.1939, *Andrews* 1847 (BM, KHU).
General habitat range: in medium-altitude and montane grassland, often on rocky outcrops.
General distribution: Mali and Nigeria to South Sudan, south to South Africa.

Cheilanthes multifida (Sw.) Sw.
MacLeay 1955: 597; FZ, Pteridoph.: 123 (19770); Johns 1991: 17; UKWF: 17 (1994).
Didinga Mountains: Iwowa, 1900 m., shaded bank of deep khor in montane forest, 22.4.1939, *Myers* 11,038 (K).
General habitat range: in medium-altitude and montane forest, often in rocky places.
General distribution: South Sudan and South West Ethiopia through eastern Africa to South Africa; also in Madagascar.

Doryopteris J. Sm.

Doryopteris concolor (Langsd. & Fisch.) Kuhn
MacLeay 1955: 597.
var. **nicklesii** (Tardieu) Schelpe
FZ, Pteridoph.: 121 (1970); Johns 1991: 22.
Syn.: *Doryopteris nicklesii* Tardieu: FWTA, Suppl.: 43 (1959); UKWF: 19 (1994).
Imatong Mountains group, Sudan side: Lotti, no alt., forest, 9.6.1939, *Andrews* 1747 (BM, K, KHU); Lotti 980 m., edge of forest, 4.6.1950, *Ali* 67 (KHU); Talanga, 910 m., at stream-side in forest, 25.5.1950, *Ali* 11 (KHU); Talanga, 950 m., lowland rain forest with *Chrysophyllum*

albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa and *Milicia excelsa* on forest floor, 26.11.1980, *Friis & Vollesen* 477 (C); Talanga, 980 m., on grassy banks in forest, 14.7.1947, *MacLeay* 228 (BM, K); Talanga, 1070 m., grassy forest edge, 1.1.1950, *MacLeay* 383 (KHU).

General habitat range: in lowland and medium-altitude forest, often on banks with almost bare soil.

General distribution: Nigeria to Ethiopia, south to South Africa; species as a whole pantropical.

Pellaea Link

Pellaea doniana Hook.

MacLeay 1955: 597; FWTA, Suppl.: 43 (1959); FC 3: 140 (1964); FZ, Pteridoph.: 129 (1970); Johns 1991: 20; UKWF: 18 (1994).

Imatong Mountains group, Sudan side: Talanga, 910 m., streambank, 25.5.1950, *Ali* 12 & 15 (KHU); Talanga, 1070 m., on rocks in bed of Locholi River under forest cover, 4.1.1950, *MacLeay* 432 (BM, KHU); Katire, 1000 m., rocky outcrop on bank of Kinyeti River, 15.1.1952, *Tothill* 10 (KHU); Katire, 1070 m., on rocky banks of Kinyeti River, 14.7.1947, *MacLeay* 229 (KHU) & 230 (BM, KHU); Gilo, at bridge on Ngairigi River, 1800 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, forest edge, terrestrial, 19.11.1980, *Friis & Vollesen* 346 (BR, C, K, KHF).

General habitat range: in lowland and medium-altitude forest, often on rocky outcrops.

General distribution: Sierra Leone to Ethiopia, south to Zimbabwe; also in Madagascar.

Pellaea longipilosa Bonap.

MacLeay 1955: 597; FZ, Pteridoph.: 129 (1970); Johns 1991: 20; FSo 1: 12 (1993); UKWF: 18 (1994).

Imatong Mountains group, Sudan side: base of 'Mt. Imatong', no alt., 11.6.1939, *Andrews* 1806 (BM, KHU); Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees, on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 30.11.1980, *Friis & Vollesen* 568 (C, KHF).

General habitat range: on rocky outcrops in lowland and medium-altitude woodland.

General distribution: South Sudan to South Ethiopia and South Somalia, through eastern Africa to Zimbabwe.

Pellaea quadripinnata (Forssk.) Prantl

MacLeay 1955: 597; FWTA, Suppl.: 44 (1959); FC 3: 142 (1964); FZ, Pteridoph.: 133 (1970); Johns 1991: 21; UKWF: 18 (1994); HYF: 57 (1997).

Imatong Mountains group, Sudan side: Gilo, 1830 m., open ground in mountain forest, 10.7. 1947, *MacLeay* 196 (BM, KHU); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, forest edge, 8.11.1980, *Friis & Vollesen* 48 (C); Gilo, 2000 m., in forest, 14.6.1953, *Prowse* 270 (KHU), 273 (BM, KHU) & 274 (KHU).

General habitat range: in medium-altitude and montane forest and grassland.

General distribution: Cameroon to Ethiopia, south to South Africa; also in tropical Arabia and Madagascar.

Pellaea schweinfurthii Hieron.

MacLeay 1955: 597; FWTA, Suppl.: 44 (1959); Johns 1991: 21; UKWF: 18 (1994).

Imatong Mountains group, Sudan side: Talanga, 1000 m., on rocks in forest, 18.6.1953, *Osman* 358 (BM); above Talanga, towards Lerua mission, 1220 m., on rocks in mountain grassland, 9.1.1950, *MacLeay* 479 (BM, KHU); Gilo, 1500 m., on rocks, 6.1.1950, *MacLeay* s.n. (KHU); Gilo, 1530 m., on rocks above Ngairigi River, 3.1.1950, *MacLeay* 425 (BM, K); Ibahin, 2130 m., in cracks of rocks in grassland, 18.12.1935, *Thomas* 1674 (BM, K); Mt. Kinyeti, 2700 m.,

among rocks on bare hillside, 30.12.1935, *Thomas* 1864 (K).
Imatong Mountains group, Uganda side: Agoro, no alt., among rocks, no date, *Eggeling* 2398 (K) & 2412 (K); 2 km. east of Lututuru, near a rivulet, 1400 m., in open woodland, 17.2.1969, *Lye* 2120B (MHU).
Didinga Mountains: Mt. Lotoki [this is presumably Mt. Lotuke], no alt., 12.6.1939, *Andrews* 1849 (BM).
General habitat range: in medium-altitude and montane grassland, often on rocky outcrops.
General distribution: Nigeria to Ethiopia, south to Tanzania.

Pellaea viridis (Forssk.) Prantl
MacLeay 1955: 597; FZ, Pteridoph.: 133 (1970); Johns 1991: 21; FSo 1: 12 (1993); UKWF: 18 (1994); HYF: 57 (1997).
Imatong Mountains group, Sudan side: Kinyeti Valley, hill 3 km. south of Hiliu, 700 m., stony hillside, 6.12.1983, *Kielland-Lund* 215 (C, NLH); Katire, 1000 m., at wall in garden, 15.1.1952, *Tothill* 20 (KHU); Katire, 1070 m., at forester's house, 14.7.1947, *MacLeay* 231 (KHU); Mt. Lulir, no alt., on dry banks in forest, 12.6.1939, *Andrews* 1820 (BM, KHU); Gilo, 2000 m., near forest nursery, 15.6.1953, *Prowse* 302 & 311 (KHU).
General habitat range: in lowland to montane grassland and woodland, usually among rocks.
General distribution: South Sudan to Ethiopia and Somalia, south to South Africa; also in Madagascar, tropical Arabia and Sri Lanka.

Pteris L.

Pteris atrovirens Willd.
MacLeay 1955: 594; FWTA, Suppl.: 42 (1959); FC 3: 166 (1964); FG 8: 113 (1964); Johns 1991: 29.
Syn: *Pteris spinulifera* Schum.: MacLeay 1955: 595. *Pteris acanthoneura* Alston: MacLeay 1955: 594.
Imatong Mountains group, Sudan side: Lotti, near Lerua mission, 1000 m., forest, 9.1.1950, *MacLeay* 470 (BM, KHU); Talanga, 980 m., forest undergrowth, 4.1.1950, *MacLeay* 442 (BM, KHU).
General habitat range: in lowland and medium-altitude forest.
General distribution: Sierra Leone to South Sudan, south to Tanzania.
Note. *MacLeay* 442 is wrongly cited as "422" in MacLeay 1955: l.c.

Pteris catoptera Kunze
FZ, Pteridoph.: 118 (1970); Johns 1991: 29; HYF: 58 (1997).
Syn.: [*Pteris biaurita* auct., non L.: MacLeay 1955: 594. *Pteris quadriaurita* auct., non Retz.: MacLeay 1955: 594. *Pteris prolifera* auct., non Hieron.: MacLeay 1955: 594; FWTA, Suppl.: 40 (1959)].
Imatong Mountains group, Sudan side: Lotti, 980 m., forest undergrowth, 1950, *MacLeay* 471 (BM, KHU); Lotti, 980 m., in forest, 4.6.1950, *Ali* 61 (KHU); Talanga, no alt., forest, 1950, *MacLeay* 471A (KHU); Talanga, 910 m., forest floor, 25.5.1950, *Ali* 10 (KHU); Talanga, 980 m., in small forest stream, 8.3.1950, *Jackson* 1197 (BM, KHU); Talanga, 980 m., forest, 1.1.1950, *MacLeay* 377 (BM); Talanga, 980 m., forest undergrowth, 4.1.1950, *MacLeay* 441 (BM); Katire, 910 m., riverine forest, 24.5.1950, *Ali* 3 (KHU); Talanga, 1070 m., 1.1.1950, *MacLeay* 377 (KHU); Katire, 1100 m., edge of channel, 9.2.1952, *Tothill* 26 & 27 (KHU); Imeila forest, 850 m., gallery forest near stream, 5.6.1950, *Omar* 5A (KHU); Gilo, 1580 m., forest, 3.1.1950, *MacLeay* 427 (BM, KHU); Gilo, 1830 m., forest, 3.3.1948, *Williams* 22/48 (KHU); Gilo, 1800 m., damp forest bank, 3.3.1948, *MacLeay* 255 (BM) & 257 (BM); Gilo, 1980 m., *Podocarpus latifolius-Olea capensis* forest, 29.12.1951, *Tothill* 16 (KHU); Gilo, 2000

m., in forest, 13.6.1953, *Prowse* 265 (KHU); Gomia, 2000 m., in secondary scrub, 12.2.1951, *Jackson* 1697 (KHU); Ameila [Imeila] forest near Gilo, 2000 m., in forest, 6.6.1950, *Omar* 2, 14 (KHU); Itibol, 2000 m., forest, 19.12.1935, *Thomas* 1687 (BM, K); Bushbuck Hill, 2150 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, 10.11.1980, *Friis & Vollesen* 107 (C, K, KHF); Dumuso, 2440 m., *Podocarpus latifolius* forest, 3.3.1948, *Williams* 5/48 (KHU); Dumuso, 2620 m., *Podocarpus latifolius-Dombeya torrida* forest, 3.3.1948, *MacLeay* 268 (BM); Lomuleng, 2620 m., forest, 29.12.1935, *Thomas* 1791 (BM, K); Kipia, 2750 m., *Podocarpus latifolius* forest, 29.2.1948, *Williams* 20/48 (K); Kipia, 2950 m., *Podocarpus latifolius* forest, 29.2.1948, *MacLeay* 266 (BM); Kipia, 2890 m., forest, 1.1939, *MacDonald* 47 (BM) & 67 (BM); Dumuso, 3000 m., at path to summit of Mt. Kinyeti, 9.11.1952, *Rubridge* 10 (KHU).

Imatong Mountains group, Uganda side: Agoro, no alt., no date, *Eggeling* 2403 (K).

General habitat range: in lowland, medium-altitude and montane forest.

General distribution: Gambia and Senegal to Ethiopia, south to South Africa; also in tropical Arabia.

Note. Some of this material has frequently been named *P. quadriaurita* Retz. by MacLeay and others, but all seems to be *P. catoptera.*

Pteris cretica L.

FZ, Pteridoph.: 116 (1970); JOHNS 1991: 30; UKWF: 20 (1994); HYF: 58 (1997).

Imatong Mountains group, Sudan side: below summit of Mt. Kinyeti, on the north-western side of the peak, 2600 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, with open glades and patches of mountain bamboo and *Hagenia abyssinica* and *Hypericum revolutum* woodland, on forest floor, 23.3.1982, *Friis & Vollesen* 1293 (C).

General habitat range: in medium-altitude and montane forest.

General distribution: South Sudan to Ethiopia, south to South Africa; also in Madagascar, South Europe and tropical Asia, including tropical Arabia. First record from the Sudan.

Pteris pteridioides (Hook.) F. Ballard

MACLEAY 1955: 594; FWTA, Suppl.: 42 (1959); FC 3: 170 (1964); FZ, Pteridoph.: 117 (1970); JOHNS 1991: 30; UKWF: 20 (1994).

Imatong Mountains group, Sudan side: Iyedo River, 1800 m., on slope, 12.2.1951, *Jackson* 1694 (KHU); Gilo, 1710 m., in forest, 7.1.1950, *MacLeay* 456 (KHU); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, 15.11.1980, *Friis & Vollesen* 238 (C, K, KHF). Gilo, at the Ngairigi River, 1830 m., in forest, 28.6.1947, *MacLeay* 98 (KHU); Ibahin, 2030 m., terrestrial in montane forest, very local, 18.12.1935, *Thomas* 1664 (BM, K).

General habitat range: in medium-altitude and montane forest.

General distribution: Liberia to Ethiopia, south to Zambia and Mozambique.

Pteris serrulata Forssk.

HYF: 58 (1997).

Syn.: *Pteris dentata* Forssk.: MacLeay 1953: 290 & 1955: 594; FWTA, Suppl.: 42 (1959); FZ, Pteridoph.: 117 (1970); WICKENS 1976: 189; JOHNS 1991: 30; UKWF: 20 (1994).

Imatong Mountains group, Sudan side: below summit of Mt. Kinyeti, on the north-western side of the peak, 2600 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, with open glades and patches of mountain bamboo and *Hagenia abyssinica* and *Hypericum revolutum* woodland, on forest floor, 25.3.1982, *Friis & Vollesen* 1295 (BR, C, K, KHF).

General habitat range: in lowland, medium-altitude and montane forest, along shaded streams, seepage areas on cliffs.

General distribution: on Bioko [previously Fernando Po], and from South Sudan to Ethiopia, through eastern Africa and south to South Africa; also in tropical Arabia and Madagascar.

Fam. 11. **Polypodiaceae** S.F. Gray

Drynaria (Bory) J. Sm.

Drynaria volkensii Hieron.
MacLeay 1955: 605; FWTA, Suppl.: 48 (1959); FC 3: 336 (1964); FZ, Pteridoph.: 149 (1970); Johns 1991: 41; UKWF: 22 (1994).
Syn.: [*Drynaria willdenowii* auct., non T. Moore: Chipp 1929: 188; *Drynaria "sp. nov."* sensu Alston: MacLeay 1955: 605].
Imatong Mountains group, Sudan side: Issore, no alt., fringing forest, 9.2.1929, *Chipp* 54 (K, KHU); Gilo, 1830 m., montane forest, 3.3.1948, *Williams* s.n. (KHU); Gilo, 1890 m., epiphyte on *Acacia abyssinica*, 25.6.1947, *MacLeay* 57 (K, KHU); Gilo, 1920 m., common epiphyte on *Acacia abyssinica*, 26.5.1950, *Ali* 17 (KHU); Itibol, Mt. Angargi, 2000 m., epiphyte, 14.6.1939, *Andrews* 1944 (BM, KHU); Gilo, 2000 m., epiphyte on *Acacia abyssinica*, 3.6. 1953, *Prowse* 234 (KHU); Gilo, 2000 m., montane forest, 18.6.1952, *du Bois* 25 (KHU); Gilo, 2100 m., epiphyte on *Acacia abyssinica*, 6.11. 1952, *Rubridge* 1 (KHU); Gilo, 2200 m., epiphyte on *Acacia abyssinica*, 29.12.1951, *Tothill* 5 (KHU); Dumuso, 2440 m., epiphyte on *Olea capensis* at edge of montane forest, 28.2.1948, *Williams* s.n. (KHU); Dumuso, 2620 m., *Podocarpus latifolius-Olea capensis* forest, epiphyte on *Olea capensis*, 28.2.1948, *MacLeay* 264 (BM); Lomuleng, 2620 m., forest, 31.12.1935, *Thomas* 1891 (BM, K).
General habitat range: epiphytic on trunks and large branches in medium-altitude and montane forest.
General distribution: Ghana to Ethiopia, south to North Mozambique and North Malawi.

Lepisorus (J. Smith) Ching

Lepisorus excavata (Willd.) Moore
Johns 1991: 44; UKWF: 23 (1994).
Syn.: *Pleopeltis excavata* (Willd.) Stedge: FZ, Pteridoph.: 151 (1970). *Pleopeltis preusii* (Hieron.) Tardieu: FWTA, Suppl.: 49 (1959); FC 3: 346 (1964). *Pleopeltis nicklesii* (Tardieu) Alston: FWTA, Suppl.: 49 (1959). [*Polypodium mildbraedii* auct., non Hieron.: MacLeay 1955: 605. *Polypodium phlebodes* auct., non Kunze: MacLeay 1955: 605].
Imatong Mountains group, Sudan side: Itibol, no alt., in forest, 15.6.1939, *Andrews* 2003 (BM, KHU); near Kinyeti River, no alt., 15.6.1939, *Andrews* 2031 (BM); Mt. Garia, no alt., 13.6.1939, *Andrews* 1863 (BM, KHU); Gilo, 1700 m., on rocks in forest, 12.6.1953, *Prowse* 227 (KHU); Gilo, 1730 m., on rocks in Ngairigi River, 15.6.1953, *Osman* s.n. (KHU); Gilo, 1900 m., upland rain forest, disturbed place, epiphytic on *Jacaranda*, 12.11.1980, *Friis & Vollesen* 186 (C, K, KHF); Gilo, 1920 m., epiphyte on *Acacia abyssinica*, 26.5.1950, *Ali* 19 (KHU); Gilo, 1980 m., epiphyte on *Acacia abyssinica*, 26.6.1947, *MacLeay* 71 (BM, KHU); Gilo, 2000 m., montane forest, 13.6.1953, *Prowse* 258 (KHU); Mt. Kinyeti, 3050 m., on rocky outcrop, 27.7.1939, *Myers* 11,670 (K).
General habitat range: epiphytic in medium-altitude and montane forest, epilithic in Afroalpine grassland.
General distribution: Sierra Leone to Ethiopia, south to South Africa; also in Madagascar and in tropical Asia.

Loxogramme (Blume) C. Presl

Loxogramme abyssinica (Bak.) M.G. Price
Johns 1991: 47; UKWF: 23 (1994).
Syn.: *Loxogramme lanceolata* (Sw.) Presl: MacLeay 1955: 605; FWTA, Suppl.: 48 (1959); FC 3: 344 (1964); FG 8: 205 (1964); FZ, Pteridoph.: 149 (1970); HYF: 63 (1997).

Imatong Mountains group, Sudan side: Lotti, 910 m., in forest, epiphyte on *Ficus sp.*, 9.1.1950, *MacLeay* 462 (K, KHU); Talanga, 910 m., epiphyte, 25.5.1950, *Ali* 9 (KHU); Katire, on rocks in Kinyeti River, 1100 m., 7.2.1952, *Tothill* 21 (KHU); Mt. Bugung, no alt., 13.6.1939, *Andrews* 1883 (KHU); Gilo, no alt., montane forest, 14.6.1953, *Prowse* 272 (KHU); Gilo, 1890 m., epiphyte on *Acacia abyssinica*, 25.1.1947, *MacLeay* 58 (KHU); Gilo, 1890 m., *Podocarpus latifolius* forest, 2.1.1950, *MacLeay* 391 (BM, KHU); Gilo, 1900 m., upland rain forest, 12.11.1980, *Friis & Vollesen* 184 (C); Mt. Kinyeti, 2750 m., ravine forest, 30.12.1935, *Thomas* 1866 (K).
Didinga Mountains: Mt. Lotuke, 2290 m., epiphyte in *Podocarpus latifolius* forest, 30.3.1950, *Jackson* 1349 (KHU); Mt. Lotuke, 2590 m., 18.4.1939, *Myers* 10,890 (K).
General habitat range: epiphytic in lowland, medium-altitude and montane forest.
General distribution: Guinée to Ethiopia, south to South Africa; also in Madagascar and tropical Arabia.

Platycerium Desv.

Platycerium elephantotis Schweinf.
FZ, Pteridoph.: 145 (1970); JOHNS 1991: 41; UKWF: 22 (1994).
Syn.: *Platycerium angolense* Welw. ex Bak.: CHIPP 1929: 187; MACLEAY 1955: 604; FC 3: 334 (1964); FG 8: 196 (1964); FWTA, Suppl.: 46 (1959).
Imatong Mountains group, Sudan side: Lotti, 910 m., in rain forest, epiphyte on *Khaya grandifoliola*, 9.1.1950, *MacLeay* 480 (BM, KHU); Lotti, 980 m., in forest, 4.6.1950, *Ali* 65 (KHU); Talanga, 910 m., in forest, epiphyte on *Entandophragma* by stream, 27.5.1950, *Ali* 30 (K); Talanga, 910 m., epiphyte on *Albizia* and *Cola* at edge of forest, 27.5.1950, *Ali* 40 (KHU); Talanga, 950 m., lowland forest, epiphyte on *Terminalia laxiflora* in small clearing at edge of forest, 3.12.1980, *Friis & Vollesen* 651 (C, K, KHF); Talanga, 1070 m., epiphyte in forest, 14.7.1947, *MacLeay* 222 (KHU); Odouro, 1220 m., fringing forest, 7.2.1929, *Chipp* 30 (K, KHU).
General habitat range: epiphyte on trunks in lowland and medium-altitude forest and in moist woodland.
General distribution: Sierra Leone to South West Ethiopia, south to Mozambique and Malawi.

Pleopeltis Humb. & Bonpl. ex Willd.

Pleopeltis macrocarpa (Willd.) Kaulf.
FZ, Pteridoph.: 152 (1970); JOHNS 1991: 42; UKWF: 23 (1994); HYF: 63 (1997).
Imatong Mountains group, Sudan side: Gilo, 1900 m., upland rain forest, disturbed area, epiphytic on *Jacaranda*, 12.11.1980, *Friis & Vollesen* 187 (C, K, KHF); Gilo, 2000 m., montane forest, 13.6.1953, *Prowse* 259 (KHU).
General habitat range: epiphyte on trunks in montane forest.
General distribution: Sierra Leone to Ethiopia, south to South Africa; also in Madagascar, tropical Arabia, India and tropical America.

Pyrrosia Mirb.

Pyrrosia schimperiana (Mett. ex Kuhn) Alston
FZ, Pteridoph.: 147 (1970); JOHNS 1991: 42; UKWF: 22 (1994).
Syn.: *Cyclophorus mechowii* Hieron.: MACLEAY 1955: 605. *Pyrrosia mechowii* (Hieron.) Alston: FWTA, Suppl.: 46 (1959); FC 3: 341 (1964); FG 8: 202 (1964).
Imatong Mountains group, Sudan side: Katire, 1200 m., epiphyte on *Khaya grandifoliola* in khor, 7.2.1952, *Tothill* 23 (KHU).
General habitat range: epiphyte on trunks in medium-altitude and montane forest.
General distribution: Nigeria to Ethiopia, south to South Africa.

Fam. 12. **Davalliaceae** Reichb.

Arthropteris J. Sm.

Arthropteris monocarpa (Cordem.) C. Chr.
MACLEAY 1955: 593; FWTA, Suppl.: 52 (1959); FC 3: 117 (1964); FZ, Pteridoph.: 163 (1970); JOHNS 1991: 60; UKWF: 25 (1994).
Imatong Mountains group, Sudan side: Gilo, below rest house, 1680 m., epiphyte in forest ravine, 3.1.1950, *MacLeay* 415 (KHU); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest, on moist slope along trail, 9.11.1980, *Friis & Vollesen* 96 (C, K, KHF); Gilo, 2100 m., at foot of tree trunk in *Podocarpus latifolius-Dombeya torrida* forest, 7.11.1952, *Rubridge* 15B (KHU).
General habitat range: terrestrial or low-level epiphyte on trunks in medium-altitude and montane forest.
General distribution: Guinée to Ethiopia, south to South Africa; also in Madagascar.

Arthropteris orientalis (J.F. Gmel.) Posth.
MACLEAY 1955: 593; FWTA, Suppl.: 52 (1959); FG 8: 90 (1964); FZ, Pteridoph.: 163 (1970); JOHNS 1991: 60; UKWF: 25 (1994); HYF: 63 (1997).
Imatong Mountains group, Sudan side: Itibol, 1000-2000 m., terrestrial in montane forest, locally frequent, 1939, *Andrews* 1980 (BM); at Katire, in stream-bed of Kinyeti River, 1070 m., may have washed down from trees higher up on the mountain, 17.7.1947, *MacLeay* 223 (KHU); at Katire, rock island in Kinyeti River, 1100 m., 7.2.1952, *Tothill* 25 (KHU); Gilo, 1650 m., in forest on tree-bases, 3.1.1950, *MacLeay* 417 (BM); Gilo, 1680 m., in forest on base of tree trunks, 3.1.1950, *MacLeay* 416 (BM, K, KHU); Gilo, 1800 m., terrestrial in swampy ground in *Podocarpus latifolius* zone of montane forest, local, 1947, *MacLeay* 91 (BM, KHU); Gilo, 1830 m., in ravine forest, 2.1.1950, *MacLeay* 402 (BM, KHU); Gilo, 1890 m., epiphyte on fallen trunk in *Podocarpus latifolius* forest, 6.1.1950, *MacLeay* 444 (KHU); Gilo, 1920 m., epiphyte in *Podocarpus latifolius* forest, 9.6.1950, *Ali* 77 (KHU); Gilo, 1980 m., epiphyte in *Podocarpus latifolius* forest, no date, *MacLeay* 446 (BM, KHU); Gilo, 2000 m., on ground in forest, 19.6.1953, *Osman* 375 (KHU); Gilo, 2100 m., in rock crevices, 13.6.1953, *Prowse* 238 (KHU); Gilo, 2200 m., epiphyte on *Acacia abyssinica*, 29.12.1951, *Tothill* 7 (KHU).
Imatong Mountains group, Uganda side: no locality, 2200 m., among rocks, no date, *Eggeling* 2397 (K).
General habitat range: terrestrial and low-level epiphyte on trunks in medium-altitude and montane forest.
General distribution: Guinée to Ethiopia, south to South Africa; also in Madagascar and tropical Arabia.

Davallia Sm.

Davallia chaerophylloides (Poir.) Steud.
MACLEAY 1955: 593; FWTA, Suppl.: 53 (1959); FC 3: 118 (1964); FG 8: 91 (1964); FZ, Pteridoph.: 167 (1970); JOHNS 1991: 57; FAC, Davalliac.: 2 (1993); UKWF: 25 (1994).
Imatong Mountains group, Sudan side: Lotti, 910 m., epiphyte in forest, 9.1.1950, *MacLeay* 466 (KHU).
General habitat range: epiphytic or on boulders in lowland and medium-altitude forest.
General distribution: Liberia and Sierra Leone to South West Ethiopia, south to South Africa; also in Madagascar.

Nephrolepis Schott

Nephrolepis undulata (Afzel. ex Sw.) J. Sm.
MACLEAY 1955: 593; FWTA, Suppl.: 50 (1959); FC 3: 109 (1964); FG 8: 86 (1964); FZ, Pteri-

doph.: 162 (1970); JOHNS 1991: 59; UKWF: 25 (1994).

Imatong Mountains group, Sudan side: near Lotti rest house, no alt., 9.6.1939, *Andrews* 1730 (K); Laboni, 1220 m., in forest, 4.6.1950, *Ali* 58 (KHU); Gilo, 1650 m., under rocks in regularly burnt grassland, 10.7.1947, *MacLeay* 218 (BM); Gilo, 1830 m., forest, in damp places beside streams, 28.6.1947, *MacLeay* 112 (BM, KHU); Gilo, 1890 m., in *Albizia-Croton-Macaranga* forest, 29.12.1951, *Tothill* 11 (KHU).

General habitat range: terrestrial in lowland and medium-altitude forest extending into wetter types of woodland and grassland.

General distribution: Cape Verde Islands to Ethiopia, south to South Africa; also in Madagascar.

Oleandra Cav.

Oleandra distenta Kunze

MACLEAY 1955: 593; FWTA, Suppl.: 52 (1959); FC 3: 106 (1964); FG 8: 84 (1964); FZ, Pteridoph.: 165 (1970); JOHNS 1991: 60; UKWF: 25 (1994).

Imatong Mountains group, Sudan side: Gilo, 1620 m., at bridge across Ngairigi River, epiphyte in forest, 3.1.1950, *MacLeay* 422 (BM, KHU); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest, epiphyte, 21.11.1980, *Friis & Vollesen* 383 (C); near summit of Mt. Kinyeti, no alt., terrestrial and epiphyte in montane forest, 15.6.1939, *Andrews* 2021 (BM, KHU).

General habitat range: epiphytic on trunks and larger branches, often with free hanging rhizomes, rarely epilithic or terrestrial.

General distribution: Liberia and Sierra Leone to Ethiopia, south to South Africa.

Fam. 13. **Aspleniaceae** S.F. Gray

Asplenium L.

Asplenium abyssinicum Fée

MACLEAY 1955: 598; HEDBERG 1957:27; FWTA, Suppl.: 57 (1959); FC 3: 216 (1964); FZ, Pteridoph.: 177 (1970); WICKENS 1976: 187; JOHNS 1991: 61; UKWF: 29 (1994).

Imatong Mountains group, Sudan side: Gilo, 2000 m., epiphyte in *Podocarpus latifolius* forest, no date, *Omar* s.n. (KHU); Ibahin, 2030 m., at stream in forest, 18.12.1935, *Thomas* 1666 (BM, K); Dumuso, 2130 m., stream bank in *Podocarpus latifolius* forest, 6.1.1950, *MacLeay* 449 (BM, K, KHU); Mt. Dumuso, 2440 m., epiphytic in *Podocarpus latifolius* forest, 28.2.1948, *Williams* 6/48 (KHU); Kipia, 2590 m., on forest floor, 4.7.1947, *MacLeay* 135 & 139 (KHU); Dumuso, 2600 m., streambank in forest, 17.6.1953, *Osman* 351 (KHU); Dumuso, 2600 m., on ground in forest, no date, *Rubridge* 3 (KHU); below summit of Mt. Kinyeti, on the north-western side of the peak, 2600 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, with open glades and patches of mountain bamboo and *Hagenia abyssinica* and *Hypericum revolutum* woodland, in wet places on forest floor among boulders, 23.3.1982, *Friis & Vollesen* 1294 (C, K).

Lafit, Dongotona and Nangeya Mountains: middle slope of the Dongotona Mts., 1890 m., on ground in forest, 24.1.1950, *Jackson* 1113 (KHU).

General habitat range: terrestrial, often on stream banks, rarely low-level epiphyte on trunks in montane forest.

General distribution: Cameroon to Ethiopia, south to Tanzania.

Asplenium aethiopicum (Burm. f.) Becherer

HEDBERG 1957: 29; FWTA, Suppl.: 59 (1959); FC 3: 212 (1964); FZ, Pteridoph.: 181 (1970);

WICKENS 1976: 187; JOHNS 1991: 61; FSo 1: 13 (1993); UKWF: 30 (1994); HYF: 61 (1997).
Syn.: *Asplenium filare* (Forssk.) Alston: MACLEAY 1955: 599.
Imatong Mountains group, Sudan side: Gilo, 1750 m., hanging from rocks along the road in forest, 12.6.1953, *Prowse* 222 & 225 (KHU); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, epiphytic, 17.11.1980, *Friis & Vollesen* 285 (C, K); Gilo, 1830 m., epiphyte in *Podocarpus latifolius* forest, 24.6.1947, *MacLeay* 52 (KHU); Itibol, 1920 m., epiphyte in *Podocarpus latifolius* forest, 2.1.1950, *MacLeay* 386 (BM, KHU), 387 (BM), 390 (BM) & 407 (BM); Gilo, 1830 m., epiphyte in *Podocarpus latifolius* forest, 26.5.1950, *Ali* 21 (BM, KHU) & 29 (KHU); Gilo, 2100 m., roadside in *Cupressus lusitanica* plantation, 15.6. 1953, *Prowse* 304 & 306 (KHU); Dumuso, 2400 m., epiphytic on *Podocarpus latifolius*, 23.4.1950, *Jackson* 1442 (KHU); Dumuso, 2620 m., epiphyte in *Podocarpus latifolius-Dombeya torrida* forest, 28.2.1948, *MacLeay* 263 (BM); Dumuso, 2620 m., epiphyte on *Dombeya torrida* in forest, 28.2.1948, *Williams* 1/48 (KHU); Kipia, 2890 m., epiphyte in forest, 1.1939, *MacDonald* 49 (BM) & 70 (BM); slope of Mt. Kinyeti, 2710 m., terrestrial in *Podocarpus latifolius-Dombeya torrida* forest, 15.11.1949, *Jackson* 980 (BM, KHU); Dumuso, 3000 m., at base of tree, 9.11.1952, *Rubridge* 11 (KHU).
Didinga Mountains: summit of Mt. Lotuke, 2600 m., on rocks in *Podocarpus latifolius* forest, 18.4.1939, *Myers* 10,895 (K).
General habitat range: epiphytic and terrestrial in medium-altitude and montane forest.
General distribution: Cape Verde Islands to Ethiopia and Somalia, south to South Africa; also in tropical Arabia, and widespread in tropical Asia.

Asplenium anisophyllum Kunze
MACLEAY 1955: 598; FZ, Pteridoph.: 170 (1970); JOHNS 1991: 61.
Imatong Mountains group, Sudan side: Bushbuck Hill, 2150 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, 10.11. 1980, *Friis & Vollesen* 113 (C, K, KHF); Kipia, no alt., 1939, *MacDonald* 65 (BM).
General habitat range: terrestrial in medium-altitude and montane forest.
General distribution: Guinée to Ethiopia, south to South Africa; also in Madagascar.

Asplenium blastophorum Hieron.
MACLEAY 1955: 598; FWTA, Suppl.: 59 (1959); FZ, Pteridoph.: 183 (1970); JOHNS 1991: 62; UKWF: 29 (1994).
Imatong Mountains group, Sudan side: Lotti, 980 m., epiphyte in rain forest, 4.6.1950, *Ali* 66 (BM, KHU).
General habitat range: terrestrial and epiphytic in lowland and medium-altitude forest.
General distribution: Ivory Coast to South Sudan, south to South Africa.

Asplenium bugoiense Hieron.
JOHNS 1991: 62; UKWF: 29 (1994).
Syn.: [*Asplenium thunbergii* auct., non Kunze.: MACLEAY 1955: 600].
Imatong Mountains group, Sudan side: Itibol, 1860 m., in *Podocarpus latifolius* forest, 19.12. 1935, *Thomas* 1698 (BM, K); Gilo, 1830 m., epiphyte in *Podocarpus latifolius* forest, 2.1.1950, *MacLeay* 396 (BM, KHU).
General habitat range: terrestrial and epiphytic in montane forest.
General distribution: South Sudan, Ethiopia, Uganda and Kenya.

Asplenium ceii Pichi Serm.
MACLEAY 1955: 598; JOHNS 1991: 62; UKWF: 28 (1994).
Imatong Mountains group, Sudan side: Lotti, 1000 m., in forest, 24.6.1953, *Prowse* 380 (KHU); Katire, 1000 m., among moss on a rock in midstream in ravine forest, 14.7.1947, *MacLeay* 224 (KHU).

General habitat range: terrestrial in lowland and medium-altitude forest.
General distribution: South Sudan, South West Ethiopia and West Kenya.

Asplenium dregeanum Kunze
MacLeay 1955: 598; FWTA, Suppl.: 59 (1959); FC 3: 220 (1964); FG 8: 141 (1964); FZ, Pteridoph.: 184 (1970); Johns 1991: 63; UKWF: 29 (1994).
Imatong Mountains group, Sudan side: Lotti, towards Lerua Mission, 910 m., on rocks in stream-bed in forest, 9.1.1950, *MacLeay* 468 (BM, KHU); Talanga, at Loboli River, 890 m., growing on mossy rocks in forest, 16.12.1935, *Thomas* 1573 (BM, K); Talanga, 910 m., on rocks in stream-bed in forest, 18.3.1950, *Ali* 31 (KHU); Talanga, 910 m., 4.1.1950, *MacLeay* 430 (BM, KHU); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* on large boulders on forest floor, 1.12.1980, *Friis & Vollesen* 609 (BR, C, K, KHF); at Kinyeti River, no alt., 15.6.1939, *Andrews* 2018 (BM, KHU); Gilo, no alt., in *Olea capensis-Syzygium* forest, 29.12.1951, *Tothill* 13 (KHU); Gilo, 1680 m., damp soil at base of tree in forest, 3.1.1950, *MacLeay* 408 (BM, K, KHU); Gilo, 1750 m., on rocks in bed of the Ngairigi River, 15.6.1953, *Osman* 299 (KHU); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* epiphyte, 8.11.1980, *Friis & Vollesen* 61 (C, K, KHF); Gilo, 1920 m., at base of tree in *Podocarpus latifolius* forest, 9.6.1950, *Ali* 74 (KHU) & 75 (K); Gilo, 1950 m., *Podocarpus latifolius* forest, 24.6.1947, *MacLeay* 53 (KHU); Gilo, 2100 m., terrestrial in *Podocarpus latifolius* forest, 7.11.1952, *Rubridge* 7 (KHU); Mt. Kinyeti, 2600 m., in *Podocarpus latifolius* forest, 17.6.1953, *Osman* 350 (KHU).
General habitat range: terrestrial in lowland, medium-altitude and montane forest.
General distribution: Guinée to South West Ethiopia, south to South Africa.

Asplenium elliottii C. H. Wright
Johns 1991: 63; UKWF: 28 (1994).
Imatong Mountains group, Sudan side: Gilo, 1830 m., edge of stream in montane grassland, 3.3.1948, *Williams* 16/48 (K); Gilo, 1970 m., at stream in mountain forest clearing, 3.3.1948, *MacLeay* s.n. (BM); Dumuso Ridge, 2300 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum,* at small stream in forest, 26.2.1982, *Friis & Vollesen* 1035 (C, K).
General habitat range: terrestrial in medium-altitude and montane forest and along streams in grassland.
General distribution: Cameroon to Ethiopia, south to Tanzania.

Asplenium emarginatum P. Beauv.
FWTA, Suppl.: 56 (1959); FC 3: 192 (1964); Johns 1991: 63.
Imatong Mountains group, Sudan side: Palotaka, no alt., *Shigeta* 154 (?EA, identified and listed by M.G. Gilbert, not traced).
General habitat range: terrestrial in lowland and medium-altitude forest.
General distribution: Ivory Coast to South Sudan, south to Angola and Tanzania.

Asplenium formosum Willd.
MacLeay 1955: 599; FWTA, Suppl.: 57 (1959); FC 3: 196 (1964); FG 8: 133 (1964); FZ, Pteridoph.: 179 (1970); Johns 1991: 63; UKWF: 28 (1994).
Imatong Mountains group, Sudan side: Lotti, 910 m., epiphyte in forest, 9.11.1950, *MacLeay* 469 (BM, KHU) & 469A (KHU); Talanga, 910 m., epilithic in deep shade in forest, 4.1.1950, *MacLeay* 438 (BM, KHU); Talanga, 910 m., on rocks in stream in forest, 25.5.1950, *Ali* 4 (K); Talanga, 910 m., on rocks by stream in forest, 25.5.1950, *Ali* 8 (KHU); Talanga, 980 m., on rocks at stream in forest, 18.3.1950, *Jackson* 1238 & 1239 (KHU).

General habitat range: epiphytic or epilithic in lowland and medium-altitude forest.
General distribution: Sierra Leone to South Sudan, south to Zimbabwe; also in Comoro Islands, India, Sri Lanka and tropical America.

Asplenium friesiorum C. Chr.
MacLeay 1955: 599; FWTA, Suppl.: 57 (1959); FC 3: 202 (1964); FZ, Pteridoph.: 178 (1970); Johns 1991: 63; UKWF: 28 (1994).
Imatong Mountains group, Sudan side: at Amargi River near Torit, 14.6.1939, *Andrews* 1955 (BM); Gilo, 1680 m., at stream in forest, 27.6.1947, *MacLeay* 82 & 88 (BM, KHU); Gilo to Mt. Konoro, 1800 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, terrestrial, 23.11.1980, *Friis & Vollesen* 407 (C, K, KHF); Gilo to Mt. Konoro, 1900 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, 16.11.1980, *Friis & Vollesen* 271 (C, K, KHF); Gilo, 2130 m., dry forest floor in *Podocarpus latifolius* forest, 3.3.1948, *Williams* 26/48 (K, KHU); Gilo, 2300 m., on forest floor in *Podocarpus latifolius* forest, 3.3.1948, *MacLeay* 261 (BM); Kipia, 2890 m., on forest floor, 1.39, *MacDonald* 59 (BM); Lomuleng, 2440 m., on forest floor, 29.12.1935, *Thomas* 1792 (BM, K).
General habitat range: terrestrial in medium-altitude and montane forest.
General distribution: Cameroon to Ethiopia, south to South Africa; also in Madagascar.

Asplenium hypomelas Kuhn
FC 3: 226 (1964); FZ, Pteridoph.: 187 (1970); FWTA, Suppl.: 60 (1959); Johns 1991: 63; UKWF: 29 (1994).
Syn.: *Davallia nigrescens* Hook. *Loxoscaphe nigrescens* (Hook.) T. Moore: MacLeay 1955: 601.
Imatong Mountains group, Sudan side: Gilo, no alt., under overhanging bank at stream in *Podocarpus latifolius-Dombeya torrida* forest, 6.1.1950, *MacLeay* 447 (KHU); at Iyedo River, 1800 m., on rocky boulder in stream-bed, 11.2.1951, *Jackson* 1692 (K, KHU); Mt. Kinyeti, 2600 m., at base of *Podocarpus latifolius* forest, 17.6.1954, *Osman* 344 & 349 (KHU).
General habitat range: terrestrial or low-level epiphyte on trunks in montane forest.
General distribution: Guinée to Ethiopia, south to Zimbabwe.

Asplenium inaequilaterale Willd.
FWTA, Suppl.: 57 (1959); FZ, Pteridoph.: 176 (1970); Johns 1991: 65; UKWF: 29 (1994).
Syn.: *Asplenium suppositum* Hieron.: MacLeay 1955: 600.
Imatong Mountains group, Sudan side: Lotti, 910 m., on mossy bank in forest, 9.1.1950, *MacLeay* 473 (BM, KHU); Talanga, at Loboli River, 950 m., on moist ground in forest, 16.12.1935, *Thomas* 1574 (BM); Lotti, towards Lerua Mission, 980 m., on moist bank in forest, 9.1.1950, *MacLeay* 467 (BM); Talanga, 980 m., on damp rocks in stream-bed, 4.1.1950, *MacLeay* 431 (BM) & 433 (BM); Talanga, 1070 m., at stream in forest, 14.7.1948, *MacLeay* 226 (KHU); Talanga, 1100 m., in forest, 6.4.1950, *Jackson* 1386 (KHU).
General habitat range: terrestrial in lowland and medium-altitude forest.
General distribution: Liberia to Ethiopia, south to South Africa; also in Madagascar and on Reunion.

Asplenium lunulatum Sw.
Johns 1991: 65.
Syn.: *Asplenium erectum* Bory ex Willd.: MacLeay 1955: 599; FZ, Pteridoph.: 175 (1970); Johns 1991: 63; UKWF: 28 (1994). *Asplenium usambarense* Hieron.: MacLeay 1955: 600; Johns 1991: 68. *Asplenium erectum* Bory ex Willd. var. *usambarense* Hieron.: FZ, Pteridoph.: 176 (1970).
Imatong Mountains group, Sudan side: Gilo, no alt., terrestrial in *Podocarpus latifolius* forest, 1950, *MacLeay* s.n. (KHU); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, on

forest floor, 26.11.1980, *Friis & Vollesen* 459 (BR, C, K, KHF); Gilo, 1680 m., on forest floor beneath tree ferns, 3.1.1950, *MacLeay* 412 (BM, KHU); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, on moist slope along trail, 9.11.1980, *Friis & Vollesen* 99 (C); Gilo, 1830 m., on streambank in forest, 2.1.1950, *MacLeay* 403 (BM, KHU); Gilo, 1830 m., edge of stream in forest, 3.3.1948, *Williams* 7/48 (K); Gilo, 1970 m., at stream-side in forest, 3.3.1948, *MacLeay* 260 (BM); Itibol, 2000 m., in *Podocarpus latifolius* forest, 19.12.1935, *Thomas* 1699 (BM, K); Ibahin, 2030 m., in montane forest, 18.12.1935, *Thomas* 1665 (BM, K); Gilo, 2100 m., terrestrial in forest, 7.11.1952, *Rubridge* 16 (KHU); Gilo, 2100 m., in forest, 23.6.1947, *MacLeay* 42 (BM, KHU); Bushbuck Hill, 2150 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, 10.11.1980, *Friis & Vollesen* 112 (C); Gilo, 2200 m., in forest, 14.6.1953, *Prowse* 276 (BM, KHU); Dumuso, 2440 m., in *Podocarpus latifolius* forest, 28.2.1948, *Williams* 42 (KHU); Mt. Kinyeti, 2600 m., in *Podocarpus latifolius* forest, 17.6.1953, *Osman* 346 (KHU); Dumuso, 2620 m., on floor in *Podocarpus latifolius* forest, 28.8.1948, *MacLeay* 271 (BM).

General habitat range: terrestrial in lowland, medium-altitude and montane forest.

General distribution: Cameroon to Ethiopia, south to South Africa; also in Madagascar.

Asplenium macrophlebium Bak.

MacLeay 1955: 599; FWTA, Suppl.: 56 (1959); FC 3: 193 (1964); FG 8: 132 (1964); Johns 1991: 65; UKWF: 28 (1994).

Imatong Mountains group, Sudan side: Lotti, 1000 m., forest, 1939, *Andrews* 1792 (BM).

General habitat range: terrestrial in lowland and medium-altitude forest.

General distribution: Ivory Coast to South Sudan, south to Tanzania.

Asplenium mannii Hook.

MacLeay 1955: 599; FWTA, Suppl.: 60 (1959); FC 3: 224 (1964); FZ, Pteridoph.: 187 (1970); Johns 1991: 65; UKWF: 29 (1994).

Imatong Mountains group, Sudan side: Gilo, 1750 m., epiphyte in forest, 15.6.1953, *Prowse* 292 (KHU); Gilo, 2100 m., epiphyte on mossy tree trunks in *Podocarpus latifolius* forest, 24.6.1947, *MacLeay* 50 (BM, KHU); Gilo, 2200 m., epiphyte in forest, 12.6.1953, *Prowse* 221 (KHU); Gilo, 2200 m., epiphyte in forest, 14.6.1953, *Prowse* 268 (KHU).

General habitat range: epiphyte in medium-altitude and montane forest.

General distribution: Sierra Leone to South West Ethiopia, south to Zimbabwe.

Asplenium megalura Hieron.

MacLeay 1955: 599; FWTA, Suppl.: 57 (1959); FC 3: 208 (1964); FG 8: 136 (1964); FZ, Pteridoph.: 180 (1970); Johns 1991: 65; UKWF: 28 (1994).

Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, 19.11.1980, *Friis & Vollesen* 344 (C, K, KHF); Gilo, 1830 m., epiphyte in *Podocarpus latifolius* forest, 26.5.1950, *Ali* 20 (BM, KHU); Gilo, 1980 m., epiphyte in *Podocarpus latifolius* forest, 2.1.1950, *MacLeay* 340 & 390 (KHU); Gilo, 2200 m., epiphyte in *Acacia abyssinica* woodland, 29.12.1951, *Tothill* 3 & 8 (KHU); Gilo, 2600 m., in *Cupressus lusitanica* plantation, 15.6.1953, *Prowse* 303 (KHU).

General habitat range: epiphyte or epilithic in medium-altitude and montane forest.

General distribution: Sierra Leone to South Sudan, south to Central Mozambique and South Malawi.

Asplenium monanthes L.

MacLeay 1955: 599; FWTA, Suppl.: 57 (1959); FZ, Pteridoph.: 175 (1970); Johns 1991: 66; FSo 1: 13 (1993); UKWF: 28 (1994).

Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* on moist slope along trail, 9.11.1980, *Friis & Vollesen* 97 (C, K, KHF); Dumuso, 2440 m., on the forest floor in *Podocarpus latifolius-Dombeya torrida* forest, 28.2.1948, *Williams* 3/48 (KHU); Dumuso, 2500 m., at base of trunk of *Podocarpus latifolius,* 24.4.1950, *Jackson* 1434 (KHU); Kipia, 2590 m., below trees in cloud forest, 4.7.1947, *MacLeay* 132 (BM, KHU); Dumuso, 2620 m., on forest floor in *Podocarpus latifolius-Dombeya torrida* forest, 28.2.1948, *MacLeay* 265 (BM); Mt. Kinyeti, 2740 m., in ravine forest, 30.12.1935, *Thomas* 1864 (BM, K); Dumuso, beside path to Mt. Kinyeti, 3000 m., on tree trunk in forest, 9.11.1952, *Rubridge* 12, 13 & 14 (KHU).
General habitat range: terrestrial in montane forest.
General distribution: Cameroon to Ethiopia and North Somalia, south to South Africa, more or less cosmopolitan.

Asplenium protensum Schrad.
MacLeay 1955: 600; FWTA, Suppl.: 57 (1959); FC 3: 194 (1964); FZ, Pteridoph.: 179 (1970); Johns 1991: 66; UKWF: 28 (1994); HYF: 61 (1997).
Imatong Mountains group, Sudan side: Talanga, at Loboli River, 970 m., on mossy rocks in forest stream, 16.12.1935, *Thomas* 1580 (BM, K); Gilo, 1680 m., on forest floor under tree ferns, 3.1.1950, *MacLeay* 411 (BM, KHU); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, terrestrial, 19.11.1980, *Friis & Vollesen* 345 (C, K, KHF); Gilo, 1830 m., streambank in forest, 2.1.1950, *MacLeay* 407B (BM, KHU); Gilo, 2070 m., epiphyte in *Podocarpus latifolius* forest, 9.6.1950, *Ali* 72 (BM); Itibol, 2070 m., epiphyte in *Podocarpus latifolius* forest, 2.1.1950, *MacLeay* 392A (BM); Gilo, 2100 m., on mossy bank in forest, 6.11.1952, *Rubridge* 2 (KHU); Gilo, 2100 m., in forest, 29.12.1951, *Tothill* 6 (KHU).
Didinga Mountains: slope of Mt. Lotuke, 2320 m., on rocks in *Podocarpus latifolius* forest, 30.3.1950, *Jackson* 1341 (KHU).
General habitat range: terrestrial in medium-altitude and montane forest.
General distribution: Cameroon to Ethiopia, south to South Africa; also in tropical Arabia.

Asplenium pumilum Sw.
FZ, Pteridoph.: 178 (1970); Wickens 1976: 188.
Syn.: *Asplenium eylesii* Sim: MacLeay 1955: 599.
Imatong Mountains group, Sudan side: Talanga, 910 m., in forest, 1.1.1950, *MacLeay* 380 (BM, KHU); Talanga, 910 m., in forest, 25.5.1950, *Ali* 5 & 7 (KHU); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* on forest floor, 29.11.1980, *Friis & Vollesen* 520 (BR, C, K, KHF); Talanga, 1100 m., on banks along path in forest, 14.7.1947, *MacLeay* 234 (BM, K, KHU).
General habitat range: terrestrial in lowland and medium-altitude forest.
General distribution: Nigeria to South Sudan and Ethiopia, south to Zimbabwe; also in tropical Asia and America.

Asplenium ruwenzoriense Bak.
MacLeay 1955: 600; Johns 1991: 67.
Imatong Mountains group, Sudan side: above Katire, no alt., on rocks in Kinyeti River, 7.2.1952, *Tothill* 22 (KHU); Gilo, 1830 m., terrestrial beside streams in forest, 3.3.1948, *Williams* 16/48 (KHU) & 25/48 (KHU); Gilo, 1830 m., in forest, 2.1.1950, *MacLeay* 395 (KHU); between Iyedo River and Gomia, 2000 m., at stream in forest, 12.2.1951, *Jackson* 1696 (KHU).
General habitat range: terrestrial in montane forest.
General distribution: South Sudan and West Uganda.

Asplenium sandersonii Hook.
JOHNS 1991: 67; UKWF: 27 (1994).
Imatong Mountains group, Sudan side: Lotti, no alt., epiphyte in forest, 10.6.1939, *Andrews* 1787 (BM); Mt. Baghanj, near Radko River, no alt., 14.6.1939, *Andrews* 1931 (BM); Gilo, above the bridge on Ngairigi River, 1680 m., in forest, 3.1.1950, *MacLeay* 409 & 410 (BM, KHU); Gilo, above the bridge on Ngairigi River, 1750 m., in forest, 15.6.1953, *Osman* 294 (KHU); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, on moist slope along trail, 9.11.1980, *Friis & Vollesen* 101 (BR, C, K, KHF); Gilo, 1830 m., on ground in ravine forest, 2.1.1950, *MacLeay* 398 (BM, KHU); Gilo, 1920 m., epiphyte in *Podocarpus latifolius* forest, 9.6.1950, *Ali* 76 (KHU); Gilo, 1920 m., epiphyte in forest, 2.1.1950, *MacLeay* 392 (KHU); Itibol, 1920 m., epiphyte in *Podocarpus latifolius* forest, 2.1.1950, *MacLeay* 385 (BM, KHU); Itibol, 1970 m., on rocks in *Podocarpus latifolius* forest, 2.1.1950, *MacLeay* 393 (BM, K); Gilo, 2100 m., in *Syzygium* forest, 29.12.1951, *Tothill* 12 (KHU).
General habitat range: terrestrial and epiphytic in lowland, medium-altitude and montane forest.
General distribution: Cameroon to Ethiopia, south to South Africa; also in Madagascar.

Asplenium stuhlmannii Hieron.
MACLEAY 1955: 600; FWTA, Suppl.: 59 (1959); FC 3: 213 (1964); JOHNS 1991: 67; UKWF: 30 (1994).
Imatong Mountains group, Sudan side: Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees, on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 30.11.1980, *Friis & Vollesen* 577 (C, K, KHF) & 578 (BR, C, K, KHF); Gilo, no alt., among rocks on open hillside, 1947, *MacLeay* 52 (KHU).
Imatong Mountains group, Uganda side: Ukuti, no alt., rocky outcrops, 12.1935, *Eggeling* 2411 (K) & 2413 (K).
Didinga Mountains: rocks north east of Chukudum, no alt., 22.12.1983, *Kielland-Lund* 448 (C, NLH).
General habitat Range: On rocky outcrops in lowland, medium-altitude and montane grassland.
General distribution: Liberia to South Sudan, south to Tanzania.

Asplenium theciferum (Kunth) Mett.
FZ, Pteridoph.: 188 (1970); JOHNS 1991: 67; UKWF: 29 (1994).
Syn.: *Loxoscaphe theciferum* (H.B.K.) T. Moore: MACLEAY 1955: 601.
Imatong Mountains group, Sudan side: Lotti, no alt., in forest, 4.6.1950, *Ali* 62 (KHU); Gilo, no alt., on bank in forest, 19.6.1953, *Osman* 376 (KHU); Gilo, near bridge on Ngairigi River, 1700 m., epiphyte in forest, 15.6.1953, *Osman* 298 (KHU); Itibol, 1830 m., on rocks in forest, 2.1.1950, *MacLeay* 394 (KHU); Gilo, 1920 m., epiphyte in *Podocarpus latifolius* forest, 9.6.1950, *Ali* 70 (KHU); Gilo, 1950 m., on rocky outcrop in forest, 24.6.1947, *MacLeay* 51 (KHU); Itibol, 1970 m., on rocks in forest, 2.1.1950, *MacLeay* 388 (KHU); Gilo, 2000 m., epiphyte on *Acacia abyssinica*, 18.6.1952, *du Bois* 26 (KHU); Gilo, 2000 m., on bank in *Cupressus lusitanica* plantation, 15.6.1953, *Prowse* 307 (KHU); Gilo, 2100 m., epiphyte in *Podocarpus latifolius* forest, 7.11.1952, *Rubridge* 15A (KHU); Gilo, 2100 m., on rocks near spring on Observation Hill, 6.11.1952, *Rubridge* 18 (KHU); Bushbuck Hill, east of Itibol, 2250 m., *Loudetia arundinacea* grassland with scattered trees, epilithic on large boulders, 21.11.1980, *Friis & Vollesen* 398 (C); Kipia, 2590 m., epiphyte in cloud forest, 4.7.1947, *MacLeay* 130 (KHU).
General habitat range: epiphytic and epilithic in montane forest.
General distribution: Cameroon to Ethiopia, south to South Africa.

Asplenium unilaterale Lam.
MacLeay 1955: 600; FWTA, Suppl.: 56 (1959); FC 3: 195 (1964); FZ, Pteridoph.: 174 (1970); Johns 1991: 68; UKWF: 28 (1994).
Imatong Mountains group, Sudan side: Lotti, no alt., in forest, 1939, *Andrews* 1712 (KHU).
General habitat range: terrestrial in lowland and medium-altitude forest.
General distribution: Liberia to South West Ethiopia, south to Zimbabwe; also in tropical Asia.

Asplenium sp. cf. A. schweinfurthii Bak.
MacLeay 1955: 600; Johns 1991: 67.
Imatong Mountains group, Sudan side: near Kinyeti River, no alt., 18.6.1939, *Andrews* 2017 (BM); Gilo, at bridge on the Ngairigi River, 1700 m., on rocks in the stream, 15.6.1953, *Osman* 295 (KHU); Gilo, 1920 m., epiphyte in *Podocarpus latifolius* forest, 26.5.1950, *Ali* 18 (BM, KHU); Itibol, 2070 m., epiphytic in *Podocarpus latifolius* forest, 2.1.1950, *MacLeay* 392 (BM, KHU); Gilo, 2100 m., terrestrial, 29.12.1951, *Tothill* 15 (KHU).
Didinga Mountains: Mt. Lotuke, 2320 m., on rocks in *Podocarpus latifolius* forest, 30.3.1950, *Jackson* 1343 (BM, KHU).
Note. The identity of this taxon is not certain, *A. schweinfurthii* in the strict sense is restricted to dry habitats on the island of Socotra, while the taxon in the study area is epiphytic and terrestrial in medium-altitude and montane forest.

Asplenium sp.
Imatong Mountains group, Sudan side: Gilo, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 12.11.1980, *Friis & Vollesen* 185 (C).

Fam. 14. **Thelypteridaceae** Ching

Amauropelta Kunze

Amauropelta bergiana (Schlechtend.) Holttum
Johns 1991: 74; UKWF: 31 (1994).
Syn.: *Thelypteris bergiana* (Schlechtend.) Ching: FWTA, Suppl.: 61 (1959); FC 3: 240 (1964); FZ, Pteridoph.: 193 (1970); Wickens 1976: 189. *Dryopteris bergiana* (Schlecht.) O. Kuntze: MacLeay 1955: 602. *Dryopteris maranguensis* (Hieron.) C. Chr.: MacLeay 1955: 602.
Imatong Mountains group, Sudan side: Gilo, no alt., terrestrial beside streams in montane forest, 1947, *MacLeay* 90 (KHU); Gilo, 1680 m., terrestrial in *Podocarpus latifolius* forest, 3.1.1950, *MacLeay* 413 (BM, KHU); Gilo, 2200 m., in forest, 18.6.1953, *Prowse* 256 (KHU).
General habitat range: terrestrial in medium-altitude and montane forest.
General distribution: Cameroon to South West Ethiopia, south to South Africa; also in Madagascar.

Amauropelta oppositiformis (C. Chr.) Holttum
Johns 1991: 74; UKWF: 31 (1994).
Imatong Mountains group, Sudan side: along path from Bushbuck Hill to Mt. Konoro, 2400 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum,* at small brook in forest, 23.2.1982, *Friis & Vollesen* 1014 (C, KHF).
General habitat range: terrestrial in montane forest.
General distribution: Cameroon to Ethiopia, south to North Malawi, also in South Africa (Natal).

Christella Lév.

Christella chaseana (Schelpe) Holttum
Johns 1991: 75; UKWF: 32 (1994).

Syn.: *Thelypteris chaseana* Schelpe: FZ, Pteridoph.: 194 (1970).
Imatong Mountains group, Sudan side: Katire, 1040 m., on side of gadwal [stream] leading to saw-mill in open woodland, 24.5.1950, *Ali* 1 (KHU).
General habitat range: terrestrial in lowland, medium-altitude and montane forest and wetter types of woodland.
General distribution: Cameroon to Ethiopia, south to South Africa.

Christella dentata (Forssk.) Brownsey & Jeremy
JOHNS 1991: 74; UKWF: 32 (1994); HYF: 59 (1997).
Syn.: *Dryopteris dentata* (Forssk.) C. Chr.: MACLEAY 1955: 602. *Cyclosorus dentatus* (Forssk.) Ching: FWTA, Suppl.: 62 (1959). *Thelypteris dentata* (Forssk.) E. St. John: FZ, Pteridoph.: 197 (1970); WICKENS 1976: 189.
Imatong Mountains group, Sudan side: Laboni, 1220 m., in forest, 3.6.1950, *Ali* 52 & 55 (KHU); Lotti, no alt., near rest house, 8.6.1939, *Andrews* 1709 (BM, K, KHU); Mt. Lulir, no alt., 12.6.1939, *Andrews* 1822 (BM); Katire, 910 m., edge of channel, 15.1.1952, *Tothill* 19 (KHU); Talanga, 1070 m., in forest, 1.1.1950, *MacLeay* 384 (BM, KHU); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, 9.11.1980, *Friis & Vollesen* 100 (C, K, KHF).
General habitat range: terrestrial in lowland, medium-altitude and montane forest.
General distribution: Cape Verde Islands to Ethiopia, south to South Africa; also in Madagascar, tropical Arabia, Asia and America.
Note. We have been unable to distinguish between the two varieties, var. *dentata* and var. *buchananii* Schelpe, recognised in FZ, Pteridoph.

Christella gueinziana (Mett.) Holttum
JOHNS 1991: 75; UKWF: 32 (1994).
Syn.: *Thelypteris gueinziana* (Mett.) Schelpe: FZ, Pteridoph.: 194 (1970); WICKENS 1976: 189.
Imatong Mountains group, Sudan side: Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, 15.11.1980, *Friis & Vollesen* 245 (C, K, KHF).
General habitat range: terrestrial in lowland, medium-altitude and montane forest.
General distribution: South Sudan to South West Ethiopia, south to South Africa; also in Madagascar.

Christella hispidula (Decne.) Holttum
JOHNS 1991: 75; UKWF: 31 (1994).
Syn.: *Cyclosorus quadrangularis* (Fée) Tardieu: FWTA, Suppl.: 62 (1959). *Thelypteris quadrangularis* (Fée) Schelpe: FZ, Pteridoph.: 195 (1970); WICKENS 1976: 190.
Imatong Mountains group, Sudan side: Lotti, 910 m., in forest, 9.1.1950, *MacLeay* 472 (BM, K, KHU).
General habitat range: terrestrial in lowland and medium-altitude forest.
General distribution: Sierra Leone to South West Ethiopia, south to Zimbabwe; also in Madagascar, tropical Asia and America.

Cyclosorus Link

Cyclosorus interruptus (Willd.) H. Ito
FWTA, Suppl.: 62 (1959); JOHNS 1991: 77; UKWF: 32 (1994).
Imatong Mountains group, Sudan side: Laboni, 800 m., open swampy grassland at forest, 15.2.1951, *Jackson* 1749 (KHU); Talanga, near Kinyeti River, 950 m., small grass swamp in *Albizia zygia-Combretum* woodland, 17.3.1982, *Friis & Vollesen* 1242 (BR, C, K, KHF).
General habitat range: terrestrial in lowland and medium-altitude swamp grassland and wet places in forest.
General distribution: Senegal to South Sudan, south to Botswana; also in Madagascar, tropical Asia and America.

Cyclosorus striatus (Schumach.) Ching
FWTA, Suppl.: 62 (1959); FC 3: 247 (1964); JOHNS 1991: 77; UKWF: 32 (1994).
Syn.: *Thelypteris striata* (Schumach.) Schelpe: FZ, Pteridoph.: 199 (1970).
Imatong Mountains group, Sudan side: Acholi Mts., Upper Talanga Tea Project, 1800 m., swamp edge, 11.1981, *Howard* UTT 23 (C).
General habitat range: terrestrial in medium-altitude and montane swampy grassland and wet places in forest.
General distribution: Gambia to South West Ethiopia, south to Malawi, Zambia and Angola.

Cyclosorus tottus (Thunb.) Pichi Serm.
JOHNS 1991: 77.
Syn.: *Thelypteris totta* (Thunb.) Schelpe.: FZ, Pteridoph.: 198 (1970). [*Dryopteris gongyloides* auct., non (Schkuhr.) Link: MACLEAY 1955: 602].
Imatong Mountains group, Sudan side: Laboni, 1310 m., on forest floor near stream, 4.6.1950, *Ali* 57 (BM, KHU).
General habitat range: terrestrial in lowland and medium-altitude swampy grassland, wet areas in forest, and along rivers.
General distribution: South Sudan through eastern Africa to South Africa.

Menisorus Alston

Menisorus pauciflorus (Hook.) Alston
FWTA, Suppl.: 63 (1959); JOHNS 1991: 78.
Syn.: *Dryopteris pauciflora* (Hook.) C. Chr.: MACLEAY 1955: 603.
Imatong Mountains group, Sudan side: Talanga, 910 m., on rocks at the Locholi River, under dense shade in forest, 4.1.1950, *MacLeay* 436 (BM, K, KHU).
General habitat range: terrestrial (often on rocks along rivers) in lowland forest.
General distribution: Cameroon to South Sudan, south to Congo [previously Zaire] and Uganda, also in Angola.

Pneumatopteris Nakai

Pneumatopteris afra (Christ) Holttum
JOHNS 1991: 78.
Syn.: *Dryopteris afra* Christ: MACLEAY 1955: 601. *Cyclosorus afer* (Christ) Ching: FWTA, Suppl.: 63 (1959); FC 3: 250 (1964); FG 8: 152 (1964). *Thelypteris afra* (Christ) Reed.
Imatong Mountains group, Sudan side: Lotti, 910 m., in forest, 9.1.1950, *MacLeay* 461 (BM, KHU).
General habitat range: terrestrial in moist places in lowland forest.
General distribution: Guinée to South Sudan, south to Tanzania, also in Angola.

Pneumatopteris unita (Kunze) Holttum
JOHNS 1991: 78; UKWF: 32 (1994).
Syn.: *Dryopteris silvatica* (Pappe & Rawson) C. Chr.: MACLEAY 1955: 603. *Thelypteris madagascariensis* (Fée) Schelpe: FZ, Pteridoph.: 196 (1970). *Cyclosorus patens* (Fée) Copel.: FWTA, Suppl.: 62 (1959); FC 3: 250 (1964).
Imatong Mountains group, Sudan side: Katire, 1000 m., at Kinyeti River, 2.6.1950, *Omar* 3 (KHU); Gilo, 1620 m., in forest, 3.1.1950, *MacLeay* 423 (KHU); Gilo, 1830 m., edge of ditch, 3.3.1948, *Williams* 15/48 (KHU); Gilo, 1830 m., terrestrial in *Podocarpus latifolius* forest, 2.1.1950, *MacLeay* 401 (KHU); Gilo, 1890 m., at small stream, 25.6.1947, *MacLeay* 56 (BM, KHU).
General habitat range: terrestrial in lowland and medium-altitude forest.
General distribution: Sierra Leone to Ethiopia, south to South Africa; also in Madagascar.

Stegnogramma Blume

Stegnogramma pozoi (Lagasca) K. Iwats.
JOHNS 1991: 77; UKWF: 32 (1994).
Syn.: *Dryopteris africana* (Desv.) C. Chr.: MACLEAY 1955: 602. *Thelypteris pozoi* (Lagasca) Mor-

ton: FC 3: 239 (1964); FZ, Pteridoph.: 199 (1970).
Imatong Mountains group, Sudan side: below Gilo, 1830 m., terrestrial on damp soil in *Podocarpus latifolius* forest, near stand of Cyathea, 3.1.1950, *MacLeay* 415 (BM, KHU).
General habitat range: terrestrial in lowland in medium-altitude forest.
General distribution: Cameroon to Ethiopia, south to South Africa; also in Madagascar and tropical Asia.

Fam. 15. **Athyriaceae** Alston

Athyrium Roth

Athyrium scandicinum (Willd.) C. Presl
MacLeay 1955: 601; FZ, Pteridoph.: 204 (1970); Johns 1991: 83; UKWF: 33 (1994).
Imatong Mountains group, Sudan side: Gilo, 1680 m., on damp forest floor, 3.1.1950, *MacLeay* 418 (BM, KHU) & 419 (BM); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, 15.11.1980, *Friis & Vollesen* 224 (BR, C, K, KHF); Gilo, 1830 m., edge of forest, 3.3.1948, *Williams* 21/48 (KHU); Gilo, 1830 m., on damp bank in forest, 3.3.1948, *MacLeay* 273 (BM); Gilo, 1830 m., on stream banks in forest, 2.1.1950, *MacLeay* 397 (KHU) & 399 (BM, K, KHU); Gilo, 1950 m., edge of montane grassland, 7.1.1950, *MacLeay* 453 (BM, KHU); Gilo, below waterfall on Ngairigi River, 1950 m., in damp soil on stream bank in forest, 7.1.1950, *MacLeay* 457 (BM); Mt. Itibol, no alt., in small stream, 14.6.1939, *Andrews* 1995 (BM); Lomuleng, 2440 m., terrestrial in undergrowth of forest, 29.12.1935, *Thomas* 1793 (BM, K).
General habitat range: terrestrial in montane forest.
General distribution: South Sudan through eastern Africa to South Africa; also in Madagascar and on Reunion.

Athyrium schimperi Moug. ex Fée
MacLeay 1955: 601; FC 3: 229 (1964); FZ, Pteridoph.: 202 (1970); Wickens 1976: 188; Johns 1991: 84; UKWF: 33 (1994).
Imatong Mountains group, Sudan side: Gilo, 1980 m., edge of montane grassland, 26.6.1947, *MacLeay* 72 (BM, KHU); Gilo, Observation Hill, 2100 m., in rock crevice, 13.6.1953, *Prowse* 237 (BM, KHU); Mt. Kinyeti, no alt., terrestrial in *Podocarpus latifolius* forest, 30.12.1935, *Thomas* 1858 (K).
General habitat range: terrestrial in montane forest.
General distribution: Cameroon to Ethiopia, south to South Africa; also in Madagascar.

Cystopteris Bernh.

Cystopteris fragilis (L.) Bernh.
MacLeay 1955: 601; Hedberg 1957: 27; FWTA, Suppl.: 64 (1959); FC 3: 228 (1964); Wickens 1976: 188; Johns 1991: 83; UKWF: 33 (1994); HYF: 59 (1997).
Imatong Mountains group, Sudan side: Kipia, no alt., 1939, *MacDonald* 68 (BM).
General habitat range: terrestrial in montane grassland.
General distribution: Cape Verde Islands to Ethiopia, south to North Tanzania, also in South Africa; also in Madagascar and tropical Arabia, and almost cosmopolitan.

Diplazium Sw.

Diplazium proliferum (Lam.) Kaulf.
MacLeay 1955: 601; FWTA, Suppl.: 65 (1959); FC 3: 237 (1964); Johns 1991: 84.
Imatong Mountains group, Sudan side: Lotti, towards Lerua Mission, 910 m., on damp soil in forest, 9.1.1950, *MacLeay* 459 (BM, KHU); Lotti, 910 m., in forest, 6.1.1950, *Jackson* 1025 (KHU); Talanga, 950 m., lowland rain forest

with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* in small forest swamp along brook, 1.12.1980, *Friis & Vollesen* 618 (C, K, KHF).

General habitat range: terrestrial in swampy areas in lowland forest.

General distribution: Sierra Leone and Liberia to South Sudan, south to North East Tanzania; also in Madagascar.

Note. *MacLeay* 459 is erroneously cited as no. 450 in MacLeay 1955.

Fam. 16. **Lomariopsidaceae** Alston

Bolbitis Schott

Bolbitis acrostichoides (Afzel.) Ching

MacLeay 1955: 604; FWTA, Suppl.: 68 (1959); FC 3: 322 (1964); FG 8: 190 (1964); Johns 1991: 87.

Imatong Mountains group, Sudan side: Laboni, 1180 m., by stream in forest, 22.12.1935, *Thomas* 1742 (BM, K); Laboni, 1220 m., in forest, 4.6.1950, *Ali* 64 (KHU); near Lotti rest house, no alt., 8.6.1939, *Andrews* 1717 (BM, KHU); Lerua, no alt., 7.12.1956, Unknown collector (probably *Osman* or *Prowse*) 366 (KHU); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* on forest floor, 26.11.1980, *Friis & Vollesen* 486 (C, K, KHF); Talanga, 1000 m., in forest, 28.2.1950, *Jackson* 1168 (KHU); Talanga, in Locholi River, 1070 m., on rocks in stream in forest, 14.7.1947, *MacLeay* 227 (BM, KHU); Talanga, at Locholi River, 1070 m., damp banks of river in forest, 4.1.1950, *MacLeay* 429 (BM, K, KHU).

General habitat range: terrestrial in lowland and medium-altitude forest, often in wet places.

General distribution: Guinée to South Sudan, south to Angola and Mozambique.

Elaphoglossum Schott

Elaphoglossum lastii (Bak.) C. Chr.

FZ, Pteridoph.: 211 (1970); Johns 1991: 87; UKWF: 34 (1994).

Syn.: *Elaphoglossum volkensii* (Hieron.) C. Chr.: MacLeay 1955: 605.

Imatong Mountains group, Sudan side: between Gilo and Dumuso, 2300 m., epiphyte in *Podocarpus latifolius* forest, 6.1.1950, *MacLeay* 422 (KHU); Itibol to Issore, near bridge on Kinyeti River, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* epiphyte, 22.11.1980, *Friis & Vollesen* 405 (C, KHF).

General habitat range: epiphytic in montane forest.

General distribution: South Sudan and South West Ethiopia, through eastern Africa to Zimbabwe.

Fam. 17. **Aspidiaceae** S.F. Gray

Dryopteris Adans.

Dryopteris inaequalis (Schlechtend.) Kuntze

Hedberg 1957: 26; FZ, Pteridoph.: 221 (1970); Wickens 1976: 188; Johns 1991: 96; HYF: 59 (1997).

Syn.: *Dryopteris pentheri* (Krasser) C. Chr.: MacLeay 1955: 603; FWTA, Suppl.: 70 (1959); Johns 1991: 97; UKWF: 36 (1994). [*Dryopteris elongata* ?auct., non (Sw.) Sim: MacLeay 1955: 602].

Imatong Mountains group, Sudan side: Talanga, no alt., in forest, 1950, *MacLeay* 378B (K) & 380 (BM, KHU); Talanga, 1520 m., steep ravine by stream in forest, 1.1.1950, *MacLeay* 378A (K, KHU); Gilo, 1620 m., forest floor, 27.6.1947, *MacLeay* 93 (K); Gilo, 1680 m., one mile below rest house, in ravine with *Cyathea,* 27.6.1947, *MacLeay* 89 (K, KHU); Gilo, 1680 m., in forest, 1950, *MacLeay* 414 (KHU); Gilo, at bridge across Ngairigi River, 1750 m., upland rain

forest with *Albizia, Macaranga, Croton*, and *Ocotea*, on moist slope along trail, 9.11.1980, *Friis & Vollesen* 102 (C, K); Gilo, 1830 m., in forest, 2.1.1950, *MacLeay* 400 (KHU); Gilo, 1950 m., *Acacia abyssinica* woodland, 7.1.1950, *MacLeay* 454A (K); Kipia, no alt., 1947, *MacLeay* 262 (KHU).

General habitat range: terrestrial in medium-altitude and montane forest.

General distribution: Ivory Coast to Ethiopia, south to South Africa.

Note. *MacLeay* 380 was originally named *D. elongata*, and the specimen is cited as such by MacLeay 1955.

Dryopteris kilemensis (Kuhn) C. Chr.
MacLeay 1955: 602; Johns 1991: 96; FZ, Pteridoph.: 222 (1970); UKWF: 36 (1994).

Imatong Mountains group, Sudan side: Gilo, 1680 m., in forest, 27.6.1947, *MacLeay* 89 (BM); Gilo, 1680 m., in forest, 2.1.1950, *MacLeay* 401 (BM); Gilo, 1680 m., on very wet forest floor, near stand of *Cyathea*, 3.1.1950, *MacLeay* 414 (BM); Gilo, 1830 m., in forest, 2.1.1950, *MacLeay* 399A (BM); Gilo, 1830 m., in forest, 2.1.1950, *MacLeay* 420 (BM) & 421 (BM, KHU); Bushbuck Hill, 2200 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, at edge of forest towards *Loudetia* grassland and *Hagenia abyssinica* woodland, 16.2.1982, *Friis & Vollesen* 909 (C, K, KHF); Mt. Kinyeti, 2300 m., in *Podocarpus latifolius* forest, 17.6.1953, *Prowse* 347 (BM); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, in small forest swamp, 15.11.1980, *Friis & Vollesen* 229 (C, K, KHF); Kipia, 2740 m., terrestrial in forest, 4.7.1947, *MacLeay* 136 (BM, KHU).

General habitat range: terrestrial in medium-altitude and montane forest.

General distribution: Cameroon to South West Ethiopia, south to Zimbabwe.

Dryopteris schimperiana (Hochst.) C. Chr.
MacLeay 1955: 603; UKWF: 36 (1994).

Imatong Mountains group, Sudan side: Kipia, 2450 m., in grassland, 29.12.1935, *Thomas* 1820 (K); summit of Mt. Konoro, 2500 m., *Loudetia arundinacea* grassland on very shallow soil, 16.3.1982, *Friis & Vollesen* 1217 (BR, C, K, KHF); ridge leading to summit of Mt. Kinyeti, 3000 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 22.3.1982, *Friis & Vollesen* 1287 (C, K); summit of Mt. Kinyeti, 3180 m., 27.7.1939, Myers 11,649 (K).

General habitat range: terrestrial in montane grassland and ericaceous bushland.

General distribution: South Sudan and Ethiopia, south to Kenya or Tanzania.

Dryopteris squamiseta (Hook.) O. Kuntze
MacLeay 1955: 603; FWTA, Suppl.: 70 (1959); FC 3: 260 (1964); FZ, Pteridoph.: 223 (1970) Johns 1991: 97.
Syn.: *Nothoperanema squamiseta* (Hook.) Ching: UKWF: 36 (1994).

Imatong Mountains group, Sudan side: Kipia, 2950 m., terrestrial on stream bank in alpine grassland, 29.2.1948, *MacLeay* 269 (BM, KHU).

General habitat range: terrestrial in montane grassland.

General distribution: Cameroon and Bioko [previously Fernando Po] to South Sudan, south to South Africa; also in Madagascar.

Polystichum Roth

Polystichum setiferum (Forssk.) Woynar
MacLeay 1955: 603; Hedberg 1957: 24; FZ, Pteridoph.: 226 (1970).
var. **fuscopaleaceum** (Alston) Schelpe
FZ, Pteridoph.: 226 (1970); Wickens 1976: 189.
Syn.: *Polystichum fuscopaleaceum* Alston: FWTA, Suppl.: 70 (1959); FC 3: 257 (1964); Johns 1991: 93; UKWF: 35 (1994); HYF: 59 (1997).

Imatong Mountains group, Sudan side: Gilo, in the Ngairigi River, below the big waterfall, 1830 m., on rocks in stream-bed, 28.6.1947, *MacLeay* 97 (BM, KHU) & 7.1.1950, *MacLeay* 455 (BM, K, KHU); Dumuso, 2440 m., on stream bank in *Podocarpus latifolius-Olea capensis* forest, 29.2. 1948, *MacLeay* 254 (BM); Dumuso, 2590 m., in *Podocarpus latifolius-Olea capensis* forest, 29.2. 1948, *Williams* 13/48 (KHU); Mt. Kinyeti, 2800 m., upland rain forest with *Hagenia abyssinica, Rapanea melanophloeos* and *Dombeya torrida,* 13.12.1980, *Friis & Vollesen* 852 (C).

General habitat range: terrestrial in montane forest and grassland.

General distribution: Cameroon to Ethiopia, south to South Malawi and East Zimbabwe. Species as a whole widespread in tropical and warm temperate countries.

Tectaria Cav.

Tectaria angelicifolia (Schumach.) Copel.
FWTA, Suppl.: 74 (1959); FC 3: 289 (1964); FG 8: 174 (1964); JOHNS 1991: 92.
Syn.: *Tectaria nigrescens* (Mett.) C. Chr.: MACLEAY 1955: 604.

Imatong Mountains group, Sudan side: Lotti, near the rest house, no alt., on forest floor, 9.6.1939, *Andrews* 1728 (BM, KHU) & 1734 (BM, K, KHU); Talanga, 910 m., in forest, 4.1.1950, *MacLeay* 440 (BM, KHU).

General habitat range: terrestrial in lowland forest.

General distribution: Sierra Leone and Liberia to South Sudan, south to Uganda.

Tectaria gemmifera (Fée) Alston
MACLEAY 1955: 604; FZ, Pteridoph.: 234 (1970); JOHNS 1991: 92; UKWF: 35 (1994); HYF: 59 (1997).

Imatong Mountains group, Sudan side: Laboni, 1180 m., in forest undergrowth, 22.12.1935, *Thomas* 1743 (BM, K); Lotti, 910 m., in forest, 9.1.1950, *MacLeay* 460 (BM, KHU); Lotti, 980 m., in forest, 4.6.1950, *Ali* 60 (KHU); Lotti, 1000 m., in forest, 18.6.1953, *Osman* 320 (KHU); Lotti, 1000 m., in forest, 24.6.1953, *Prowse* 384 (KHU); Lotti, 1090 m., in forest, 14.2.1951, *Jackson* 1715 bis (KHU); Lerua, no alt., 6.12.1956, Unknown collector (*Osman* or *Prowse*) 361 (KHU) & 7.12.1956, Unknown collector (*Osman* or *Prowse*) 364 (KHU) & 368 (KHU); Talanga, 910 m., in forest, 4.1.1950, *MacLeay* 435 (BM, KHU); Talanga, at Locholi River, 910 m., on streambank in forest, 4.1.1950, *MacLeay* 443 (BM, KHU); Talanga, 1000 m., in forest, 24.6.1953, *Osman* 374 (KHU); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 15.11.1980, *Friis & Vollesen* 687 (C, K, KHF); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* along brook in forest, 4.12.1980, *Friis & Vollesen* 223 (BR, C, K, KHF).

General habitat range: terrestrial in lowland and medium-altitude forest.

General distribution: South Sudan and Ethiopia through eastern Africa to South Africa (Transvaal); also in Madagascar and tropical Arabia.

Gymnosperms (**Gymnospermae** Lindl.)

Order 7. **Cycadales** Dumort.

Fam. 18. **Cycadaceae** Pers.
Syn.: *Zamiaceae* Reichb.

Encephalartos Lehm.

Encephalartos septentrionalis Schweinf.
FTA 6,2: 350 (1917); FS: 48 (1929); FCB 1: 3 (1948); FPS 1: 1 (1950); ITU: 104 (1952); MELVILLE 1957: 244; FTEA, Gymnospermae: 6 (1958); HEENAN 1977: 280; EL AMIN 1990: 1.
Imatong Mountains group, Sudan side: Ibahin, 1980 m., rocky grassland, 18.12.1935, *Thomas* 1675 (K); Logoforok, 1220 m., mountain grassland, 6.7.1947, *MacLeay* 185 (BM); north-eastern slope of hill between Mt. Konoro and Mt. Garia, 1800 m., *Loudetia arundinacea* grassland with scattered trees, especially *Protea*, 12.3. 1982, *Friis & Vollesen* 1176 (BR, C, also spirit collection, accession no. 15778, and carpological collection, accession no. 15953, K, KHF).
Imatong Mountains group, Uganda side: 2230 m., in grassland among rocks, 4.1938., *Eggeling* 3578 (K); Lomwaga Mts., near head-waters of Aringa River, 2440 m., 6.4.1945, *Greenway & Hummel* 7295 (EA, FHO, K); in hills above Agoro, no alt., 1935, *Eggeling* 5100 (?K, not traced); ridge between Lakure and Aringa rivers, east of Kikwo, no alt., 5.1956, *Osmaston* 4056 (EA, K); south-east of Mt. Lomwaga, across Aringa River (3° 47' N, 32° 55' E), 1750 m., rocky outcrop, 2.6.1973, *Katende* 1890 (EA).
Didinga Mountains: in foothills of the mountains near Kowda, 10.4.1949, *Jackson* 683 (KHF).
General habitat range: in lowland and medium-altitude grassland and open bushland, often in rocky places.
General distribution: Central African Republic and North Congo [previously Zaire] to South Sudan and North Uganda.

Order 8. **Pinales** Dumort.
(*Coniferae* F.C.L. Spenner, nom. altern.)

Fam. 19. **Podocarpaceae** Endl.

Podocarpus L'Hér. ex Pers.

Podocarpus falcatus (Thunb.) Mirb.
KTSL: 42 (1994).
Syn.: *Podocarpus gracilior* Pilg.: FTA 6,2: 342 (1917); FPS 1: 1 (1950) {Dongotona Mountains}; ITU: 315 (1952); FTEA, Gymnospermae: 12 (1958); EL AMIN 1990: 3.
General habitat range: in dry montane forest.
Note. This record has been doubted by JACKSON 1956, and we agree with this; the record is probably based on *Myers* 14,181 (K) & 14,182 (K), which were originally identified as *Podocarpus gracilior*, but are in fact *Podocarpus latifolius*. The nearest records of *Podocarpus falcatus* are in Wellega, Illubabor and Kefa in South West Ethiopia, and on Mt. Moroto and Mt. Debasien in Uganda.

Podocarpus latifolius (Thunb.) Mirb.
SOMMERLATTE 1990: 296; KTSL: 42 (1994).
Syn.: *Podocarpus milanjianus* Rendle: FTA 6,2: 340 (1917); CHIPP 1929: 188; FPNA 1: 23 (1948); FCB 1: 6 (1948); FPS 1: 1 (1950) {Imatong Mountains}; JACKSON 1951: 339 {Didinga Mountains, Mt. Lotuke}; ITU: 317 (1952); FWTA 1,1: 32 (1954); FTEA, Gymnospermae: 11 (1958); FZ 1,1: 85 (1960); EL AMIN 1990: 3.
Imatong Mountains group, Sudan side: without further locality, 1980 m., 13.4.1933, *Smith* 26

(K, KHF); 3.1936, *Lowden* s.n. (KHF); 2290 m., closed *Olea-Podocarpus* forest, 1976, *Howard* IM 79 (K, KHF) & IM 91 (K, KHF); near Gilo Forest Project Centre, 1850 m., 26.12.1983, *Kielland-Lund* 466 (C, NLH); Mt. Kinyeti, 3100 m., the chief tree in mountain ravine forests; forming pure forests, or with *Gnidia glauca* and *Hypericum revolutum*, trees to 18 m. or more with straight bole c. 10-12 m., 11.2.1929, *Chipp* 85 (K, KHF); Ras Logoforok, 2450 m., common in ravines, 12.2.1929, *Chipp* 104 (K, KHF); Mt. Baghanj, 1830-2130 m., 14.6.1939, *Andrews* 1935 (K); Itibol, 5.2.1940, *Turner* s.n. (KHF); Gilo, 27.2.1964, *Beshir Agwatta* 1 (KHF); Gilo, at Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, 9.11.1980, *Friis & Vollesen* 69 (C, K).

Imatong Mountains group, Uganda side: 2229 m., in forest, 4.1938, *Eggeling* 3564 (K); 2380 m., in forest, 4.1938, *Eggeling* 3600 (EA, K); Lomwaga, 2530 m., common forest tree, 6.1942, *Eggeling* 5077 (K, probably destroyed); Lomwaga, 2530 m., relic forest of *Albizia* and *Prunus africanus*, 5.4.1945, *Greenway & Hummel* 7281 (EA, FHO, K).

Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., Mt. Emogadung, 1980 m., stunted elfin forest, 28.10.1941, *Myers* 14,181 (K) & 14,182 (K) & 14,185 (?K, not traced).

Didinga Mountains: Mt. Lotuke, summit, 2590 m., 18.4.1939, *Myers* 10,897 (K).

General habitat range: in montane forest. According to SOMMERLATTE 1990 it occurs in the Imatong Mountains as the dominant tree in mixed *Podocarpus* forest which increases in frequency until at around 2600 m, where it forms almost pure stands. It is a colonising species which regenerates under its own shade.

General distribution: Cameroon to South Sudan, Uganda and Kenya, south to South Africa.

Fam. 20. **Cupressaceae** Rich. ex Barthl.

Juniperus L.

Juniperus procera Hochst. ex Endl.

FTA 6,2: 336 (1917); FCB 1: 10 (1948); FPS 1: 2 (1950); ITU: 101 (1952); JACKSON 1951: 339 {Didinga Mountains, Mt. Lotuke}; FTEA, Gymnospermae: 16 (1958); FZ 1,1: 88 (1960); EL AMIN 1990: 1; FSo 1: 15 (1993); KTSL: 41 (1994); HYF: 63 (1997).

Didinga Mountains: Naligede, 1770 m., on ridge crest, 22.4.1939, *Myers* 11,008 (K); Mt. Lotuke, 1900 m., *Protea* grassland, between rocks, an outlier of montane forest, 29.3.1950, *Jackson* 1303 bis (K).

General habitat range: in montane forest.

General distribution: East Congo [previously Zaire] to Ethiopia and Somalia, south to the Nyika Plateau in Malawi, and a few records from Zimbabwe; also in tropical Arabia.

Angiosperms (**Magnoliophyta** Cronquist, Takht. & W. Zimm.; *Angiospermae* Lindl., nom. altern.)

Dicotyledons (Class **Magnoliopsida** Cronquist, Takht. & W. Zimm.; *Dicotyledones* Juss., nom. altern.)

Subclass **Archichlamydeae** Engl.

Order 9. **Annonales** Lindl.

Fam. 21. **Annonaceae** Juss.

Annona L.

Annona senegalensis Pers.
FTA 1: 16 (1868); FS: 50 (1929); FPS 1: 3 (1950); FWTA 1,1: 52 (1954); FZ 1,1: 141 (1960); FG 16: 322 (1969); FTEA, Annonac.: 113 (1971); SOMMERLATTE 1990: 106; EL AMIN 1990: 5; KTSL: 44 (1994).
subsp. **senegalensis**
FG 16: (1969); FTEA, Annonac.: 115 (1971); KTSL: 44 (1994).
Syn.: *Annona chrysophylla* Bojer: FPNA 1: 187 (1948); FCB 2: 272 (1951); ITU: 16 (1952); JACKSON 1956: 349.
Imatong Mountains group, Sudan side: without further locality, no alt., 1947, *Maxwell Forbes* 53 (K); Kinyeti Valley, 12 km. south of Hiliu along Katire road (4° 09' N, 32° 41' E), no alt., 1.6.1984, *Kielland-Lund* 824 (C, NLH); 16 km. north of Katire, 900 m., woodland with *Combretum collinum, C. molle* and this species, 22.2. 1982, *Friis & Vollesen* 991 (C); between Palwar and Talanga, Western foothills of the Imatong Mountains (3° 53' N, 32° 39' E), 1000 m., wooded grassland, co-dominant with *Combretum collinum*, area annually burnt between December and March, 28.3.1984, *Sommerlatte* 33 (EA).
General habitat range: in lowland woodlands. According to JACKSON 1956 it occurs in moist lowland woodland west and north of the Imatong Mountains and to SOMMERLATTE 1990 as a small tree in lowland woodland; it has sucker shoots and is adapted to frequent burning.
General distribution: Cape Verde Islands and Senegal to Ethiopia, south to Congo [previously Zaire], Zambia and South Africa (Transvaal); also in Madagascar and Comoro Islands. Species as a whole also in Angola.

Artabotrys R. Br.

Artabotrys monteiroae Oliv.
FZ 1,1: 132 (1960); FTEA, Annonac.: 62 (1971); KTSL: 45 (1994).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber in dark forest, 26.11.1980, *Friis & Vollesen* 475 (C, K, KHF).
General habitat range: in lowland and medium-altitude forest.
General distribution: Congo to Ethiopia, south to Zambia and South Africa (Transvaal, Natal); also in Madagascar.

Cleistopholis Engl.

Cleistopholis patens (Benth.) Engl. & Diels
FCB 2: 302 (1951); ITU: 18 (1952); FWTA 1,1: 38 (1954); JACKSON 1956: 355; FG 16: 91 (1969); FTEA, Annonac.: 31 (1971); EL AMIN 1990: 5.
Syn.: *Oxymitra patens* Benth.: FTA 1: 34 (1868).
Imatong Mountains group, Sudan side: Lotti, 1000 m., marshy places at edge of rain forest, tree in medium high canopy, 20.5.1949, *Jackson* 738 (FHO).
General habitat range: in lowland forest. According to JACKSON 1956 it occurs at the Imatong Mountains in riverine and swamp forest.
General distribution: Sierra Leone to South Sudan and Uganda, south to Angola.

Hexalobus A. DC.

Hexalobus monopetalus (A. Rich.)
Engl. & Diels
FS: 49 (1929); FPS 1: 5 (1950); FCB 2: 370 (1951); ITU: 18 (1952); JACKSON 1956: 358-359; FWTA 1,1: 48 (1954); FZ 1,1: 116 (1960); EL AMIN 1990: 7; FTEA, Annonac.: 46 (1971).
var. **monopetalus**
FWTA 1,1: 48 (1954); FZ 1,1: 118 (1960); FTEA, Annonac.: 46 (1971).
Syn.: *Hexalobus senegalensis* A. DC.: FTA 1: 27 (1868).
Imatong Mountains group, Sudan side: near Molongori, 750 m., abundant, 11.6.1939, *Andrews* 1810 (K); north-eastern side of mountains, near Molongori, 800 m., common in the foothills, especially in cracks in gneiss rocks, 12.11.1948, *Jackson* 520 (FHO, KHF); north-eastern side of the mountains, just North of Molongori, 750 m., almost bare rocky slope with *Boswellia papyrifera, Terminalia brownii, Lannea fulva, Euphorbia magnicapsula, Xerophyta simulans,* etc., 10.3.1982, *Friis & Vollesen* 1146 (BR, C, K); Kinyeti Valley, Hiliu, 700 m., in compound between farm houses, 23.11. 1983, *Kielland-Lund* 33 (C, NLH); hill 3 km. south of Hiliu along Katire road, no alt., north east face of rock, 26.5.1984, *Kielland-Lund* 750 (C, NLH).
Didinga Mountains: Boya Hill, Karauili, 1200 m., rocky outcrop, 22.12.1982, *Fukui* 82-5 (EA). Boya Hill, Kimatong, 700 m., 1.5.1984, *Fukui* 84-81 (EA).
General habitat range: in woodlands, often subjected to regular burning. According to JACKSON 1956 it occurs at the Imatong Mountains on dry rocky slopes in rain shadow.
General distribution: Senegal to Sudan, south to Namibia, Botswana, South Africa (Transvaal) and Mozambique.

Monanthotaxis Baill.

Monanthotaxis buchananii (Engl.) Verdc.
FTEA, Annonac.: 97 (1971); KTSL: 48 (1994).
Syn.: *Popowia djurensis* Engl. & Diels: FS: 50 (1929); FPS 1: 6 (1950); EL AMIN 1990: 7. *Popowia buchananii* (Engl.) Engl. & Diels: FZ 1,1: 128 (1960).
Imatong Mountains group, Sudan side: Kinyeti Valley, village about 500 m. south west of Hiliu, no alt., in savannah, 7.6.1984, *Kielland-Lund* 879 (C, NLH); Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees of *Terminalia laxiflora, T. brownii, Pterocarpus lucens, Combretum collinum* and *Vitex doniana* on rocky outcrop, 5.12.1980, *Friis & Vollesen* 703 (C, K, KHF); Logoforok to Nokolong, 1000 m., in *Pterocarpus* woodland on stony ground, 6.1949, *Jackson* 787 (FHO, KHF).
Didinga Mountains: between Kiduru and Longumu north of Chukudum (4° 20' N, 33° 23' E), 1000 m., 20.12.1983, *Kielland-Lund* 412 (C, NLH).
General habitat range: in lowland forest and woodland.
General distribution: Central African Republic

to Sudan, Uganda and Kenya, south to Zambia, Malawi and Mozambique.

Monanthotaxis ferruginea (Oliv.) Verdc.
FTEA, Annonac.: 106 (1971).
Syn.: *Popowia ferruginea* (Oliv.) Engl. & Diels: FCB 2: 350 (1951); FZ 1,1: 125 (1960); FG 16: 230 (1969).
Imatong Mountains group, Sudan side: near Lotti rest house, no alt., 9.6.1939, *Andrews* 1756 (K); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climbing in dark forest, 26.11. 1980, *Friis & Vollesen* 457 (C, K, KHF); Talanga, 950 m., lowland rain forest, 29.11.1980, *Friis & Vollesen* 518 (C, K, KHF).
General habitat range: in lowland and medium-altitude forest.
General distribution: Cameroon to Ethiopia, south to Angola and Tanzania.

Monanthotaxis schweinfurthii (Engl. & Diels) Verdc.
FTEA, Annonac.: 93 (1971); El Amin 1990: 9; KTSL: 48 (1994).
var. **schweinfurthii**
KTSL: 48 (1994).
Syn.: *Popowia schweinfurthii* Engl. & Diels: FS: 50 (1929). *Enneastemon schweinfurthii* (Engl. & Diels) Robyns & Ghesq.: FPS 1: 4 (1950); FCB 2: 380 (1951); FZ 1,1: 129 (1960); FG 16: 248 (1969).
Imatong Mountains group, Sudan side: Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 15.11.1980, *Friis & Vollesen* 231 (C, K, KHF).
General habitat range: in lowland, medium-altitude and (rarely) montane forest, often along rivers.
General distribution: Central African Republic and Gabon to South West Ethiopia, south to Angola, Zambia and Tanzania; the other varieties are found within the same general distribution.

Monodora Dunal

Monodora angolensis Welw.
FTA 1: 38 (1868); Chipp 1929: 188; FPNA 1: 188 (1948); FPS 1: 6 (1950) {Lotti}; FCB 2: 265 (1951); FTEA, Annonac.: 119 (1971); El Amin 1990: 9.
Syn.: *Monodora gibsonii* Burtt Davy (non rite publ.): FPS 1: 6 (1950). *Monodora sp. nov.* sensu ITU: 20 (1952).
Imatong Mountains group, Sudan side: Lotti, no alt., in closed fringing forest, small tree in lower canopy, 5.2.1929, *Chipp* 16 (K, KHF, WM).
General habitat range: in lowland and medium-altitude forest.
General distribution: Cameroon to Sudan, south to Angola and Zambia.

Monodora sp.
Jackson 1956: 354 {Talanga, Lotti, Laboni}.
Note. Probably *Monodora angolensis* (*q.v.*).

Popowia Endl.

Popowia sp.
Jackson 1956: 354 {Lotti}.
Note. Probably one of the species recorded above under *Monanthotaxis,* most likely *M. ferruginea.*

Uvaria L.

Uvaria angolensis Oliv.
FTA 1: 23 (1868); FCB 2: 295 (1951); FZ 1,1: 107 (1960); FWTA 1,1: 38 (1954); FG 16: 46 (1969); FTEA, Annonac.: 15 (1971); El Amin 1990: 11.

var. **angolensis**
FTEA, Annonac.: 15 (1971).
Syn.: *Uvaria bukobensis* Engl.: FS: 49 (1929); FPNA 1: 186 (1948); FPS 1: 6 (1950); ITU: 21 (1952).
Imatong Mountains group, Sudan side: between Talanga and Upper Talanga, 1300 m., medium-altitude rain forest with *Diospyros abyssinica, Garcinia buchananii, Uvariopsis congoensis, Turraea floribunda, Manilkara butugi,* etc., climber in forest, 7.12.1980, *Friis & Vollesen* 741 (C, K, KHF).
General habitat range: in lowland and medium-altitude forest.
General distribution: Congo [previously Zaire] to South West Ethiopia, south to Angola and Zambia. Species as a whole also in West Tropical Africa, extending to Sierra Leone.

Uvariopsis Engl.

Uvariopsis congoensis Robyns & Ghesq.
FCB 2: 381 (1951); FZ 1,1: 119 (1960); FTEA, Annonac.: 71 (1971); El Amin 1990: 13; KTSL: 54 (1994).
Syn.: *Uvariopsis sp. nov.* sensu ITU: ITU: 22 (1952).
Imatong Mountains group, Sudan side: between Talanga and Upper Talanga, 1300 m., medium-altitude rain forest with *Diospyros abyssinica, Garcinia buchananii, Uvariopsis congoensis, Turraea floribunda, Manilkara butugi,* etc., 7.12. 1980, *Friis & Vollesen* 735 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude forest.
General distribution: Congo [Brazzaville] to Sudan, south to Angola and Zambia.
Uvariopsis sp.
Jackson 1956: 354 {Lotti}.
Note. Probably *Uvariopsis congoensis* (*q.v.*).

Xylopia L.

Xylopia parviflora (A. Rich.) Benth.
FTA 1: 31 (1868); ITU: 23 (1952); FWTA 1,1: 42 (1954); FG 16: 175 (1969); FTEA, Annonac.: 79 (1971); El Amin 1990: 14; KTSL: 55 (1994).
Syn.: *Xylopia vallottii* Hutch. & Dalziel: FS: 50 (1929); FPS 1: 7 (1950); FCB 2: 328 (1951); Jackson 1956: 356. *Xylopia antunesii* Engl. & Diels var. *shirensis* Engl. & Diels: FZ 1,1: 138 (1969). *Xylopia holtzii* Engl.: FZ 1,1: 138 (1960).
Imatong Mountains group, Sudan side: Imeila forest, 750 m., in forest with *Khaya grandifoliola* and *Cola gigantea,* tree in medium high canopy, 27.5.1949, *Jackson* 763 (FHO, KHF).
General habitat range: in lowland forest, often along rivers or in open groundwater forest. According to Jackson 1956 it occurs in gallery forests near the Imatong Mountains.
General distribution: Senegal and Sierra Leone to Ethiopia, south to Angola and South Africa (Transvaal).

Order 10. **Laurales** Perleb

Fam. 22. **Monimiaceae** Juss.

Xymalos Baill.

Xymalos monospora (Harv.) Baill. ex Warb.
FTA 6,1: 169 (1909); FPNA 1: 189 (1948); ITU: 232 (1952); FPS 1: 7 (1950) {Imatong Mountains, Mt. Baghanj}; FCB 2: 402 (1951); FWTA 1,1: 55 (1954); FTEA, Monimiac.: 1 (1968); FC 18: 109 (1974); El Amin 1990: 14; Sommerlatte 1990: 328; KTSL: 55 (1994).
Imatong Mountains group, Sudan side: Upper Talanga (3° 58' N, 32° 48' E), 1800 m., in *Albizia* forest under shade of large *Syzygium,* 16.3.1984, *Sommerlatte* 29 (EA); Upper Talanga Tea Project, 2000 m., forest undergrowth, 8.6.1981, *Fi-*

son in *Lock* 81/281 (K); Mt. Baghanj, 1830-2140 m., in gully, 14.6.1939, *Andrews* 1925 (K); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, 21.11.1980, *Friis & Vollesen* 384 (BR, C, K, KHF); Bushbuck Hill, 2150 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, 10.11.1980, *Friis & Vollesen* 109 (C, K).

Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).

General habitat range: in medium-altitude and montane forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as an understorey tree in *Albizia* forest and in mixed *Podocarpus latifolius* forest.

General distribution: Cameroon to South Sudan, Uganda and Kenya, south to South Africa (Transvaal, Orange Free State, Natal, East Cape Prov.).

Fam. 23. **Lauraceae** Juss.

Ocotea Aubl.

Ocotea kenyensis (Chiov.) Robyns & Wilczek
FCB 2: 406 (1951); EL AMIN 1990: 15; SOMMERLATTE 1990: 308; KTSL: 56 (1994); FTEA, Laurac.: 11 (1996).

Syn.: *Ocotea viridis* Kosterm.: FPNA 1: 193 (1948); FPS 1: 8 (1950) {Imatong Mountains, Itibol}. *Ocotea sp. nov.* sensu ITU: ITU: 162 (1952).

Imatong Mountains group, Sudan side: without further locality, no alt., 31.1.1976, *Howard* IM 16 (K, KHF) & 2.-3.76, *Howard* IM 73 (EA, K, KHF); Gilo, 1800 m., in more open parts of *Podocarpus latifolius-Olea capensis* subsp. *hochstetteri-Syzygium guineense* forest, 29.4.1948, *Jackson* 292 (FHO, KHF); Gilo, at bridge on Ngairigi River, 1800 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, 17.2.1982, *Friis & Vollesen* 931 (C); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, 8.11.1980, *Friis & Vollesen* 57 (C, K, KHF); Gilo, 1920 m., in *Podocarpus latifolius-Olea hochstetteri-Syzygium guineense* forest, 10.1947, *Jackson* 218 (FHO, WM); Jebel Atbal [Itibol], 1950 m., 14.6.1939, *Andrews* 1997 (K, WM); Itibol, 2070 m., *Podocarpus latifolius-Olea* forest, 19.8.1940, *Myers* 13,427 (K) & 13,427A (K).

Imatong Mountains group, Uganda side: without further locality, 1830 m., 7.1946, *Sangster* S 833 (MHU); Lomwaga Mts., near Aringa River headwaters, 2440 m., in forest of *Podocarpus latifolius, Syzygium guineense* and *Pouteria*, 7.4. 1945, *Greenway & Hummel* 7309 (EA, FHO, K, MHU).

Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., Mt. Emogadung, 2230 m., 28.10.1941, *Myers* 14.193 (K).

General habitat range: in upland rain forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a medium sized tree with a straight trunk in *Albizia* forest and in mixed *Podocarpus latifolius* forest.

General distribution: East Congo [previously Zaire] to Ethiopia, south to South Africa (Natal, Transvaal).

Persea Gaertn.

Persea americana Mill.
FCB 2: 409 (1951); FC 18: 86 (1974); EL AMIN 1990: 17.

Syn.: *Persea gratissima* Gaertn.: FG 10: 80 (1965).

Note. According to EL AMIN 1990 this species is introduced to the area at the forest at Lotti in the Imatong Mountains group; no material has been seen.

Fam. 24. **Myristicaceae** R. Br.

Pycnanthus Warb.

Pycnanthus angolensis (Welw.) Exell
ITU: 267 (1952); FPS 1: 8 (1950); FCB 2: 391 (1951); FWTA 1,1: 61 (1954); JACKSON 1956: 353 {Talanga, Lotti}; FG 10: 87 (1965); FC 18: 91 (1974); EL AMIN 1990: 17; FTEA, Myristicac.: 4 (1997).
subsp. **schweinfurthii** (Warb.) Verdc.: FZ 9,2: 38 (1997); FTEA, Myristicac.: 5 (1997).
Syn.: *Pycnanthus schweinfurthii* Warb.: FTA 6,1: 160 (1909).
Imatong Mountains group, Sudan side: Laboni, no alt., in gully forest, 15.10.1938, *Myers* 9749 (K); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* upper storey tree in forest, 6.12.1980, *Friis & Vollesen* 733 (C, K, KHF); Lokideng Forest near Katire, 1000 m., in extended gallery forest, tree in medium canopy, 21.6.1953, *Jackson* 3012 (FHO).
General habitat range: in lowland rain forest.
General distribution: Congo [previously Zaire] to Sudan, Uganda and Tanzania, perhaps also in West Africa. Species as a whole from Guinée to South Sudan and Uganda, south to Angola and Congo [previously Zaire].

Order 11. **Ranunculales** Dumort.
(*Ranales* Lindl., orth. mut.)

Fam. 25. **Ranunculaceae** Juss.

Anemone L.

Anemone thomsonii Oliv.
FPS 1: 10 (1950) {Imatong Mountains, summit of Mt. Kinyeti}; FTEA, Ranunculac.: 12 (1952); HEDBERG 1957: 84; UKWF: 45 (1994).
var. **thomsonii**
FTEA, Ranunculac.: 12 (1952).
Imatong Mountains group, Sudan side: Mt. Kinyeti, 3050 m., rocky summit, 30.12.1935, *Thomas* 1840 (BM, K); near summit of Mt. Kinyeti, 3050 m., 12.2.1936, *Johnston* 1512 (K); near summit of Mt. Kinyeti, 3100 m., ericaceous bushland, 15.11.1949, *Jackson* 958 (BM); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 58' N, 32° 54' E), 3100 m., in upper elfin forest belt, 10.6.1984, *Kielland-Lund* 908 (C, NLH); summit of Mt. Kinyeti, 3170 m., 21.9.1940, *Tothill* in *Myers* 13,513 (?K, not traced); summit of Mt. Kinyeti, 3180 m., 27.7.1939, *Myers* 11,656 (?K, not traced, WM); Mt. Kinyeti, 3180 m., rocky summit, 1.6.1939, MacDonald 40 (BM); summit of Mt. Kinyeti, 3180 m., rocky outcrop in mountain grassland, 17.6.1953, *Prowse* 329 (KHU).
General habitat range: in montane grassland, often among rocks.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Tanzania.

Clematis L.

Clematis brachiata Thunb.
UKWF: 44 (1994); KTSL: 59 (1994).
Syn.: *Clematis hirsuta* Guill. & Perr.: FCB 2: 192 (1951); FTEA, Ranunculac.: 6 (1952); FWTA 1,1: 64 (1954); WICKENS 1976: 83; HYF: 65 (1997). *Clematis glaucescens* Fresen.: FS: 51 (1929); FPS 1: 10 (1950). *Clematis inciso-dentata* A. Rich.: FS: 51 (1929); FPS 1: 10 (1950). *Clematis thunbergii* Steud.: FTA 1: 6 (1868). [*Clematis grata* auct., non Wall.: FTA 1: 7 (1868); FS: 51 (1929)].
Imatong Mountains group, Sudan side: above Katire, no alt., 5.11.1948, *Jackson* 474 (KHF); Loyaru, 2130 m., in scrub, 28.12.1935, *Thomas* 1776 (BM, K); Gilo to Mt. Konoro, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 24.11.1980, *Friis & Vollesen* 427 (C, K, KHF).

Didinga Mountains: between Nagichot and Duguru village (4° 16' N, 33° 35' E), 2000 m., in grassland, 17.12.1983, *Kielland-Lund* 352 (C, NLH).
General habitat range: in lowland, medium-altitude and montane grassland, evergreen bushland and along forest edges.
General distribution: Senegal to Ethiopia, south to South Africa; also in tropical Arabia.

Clematis simensis Fresen.
FTA 1: 6 (1868); FS: 51 (1929); FPNA 1: 170 (1948); FPS 1: 10 (1950); FCB 2: 191 (1951); FTEA, Ranunculac.: 2 (1952); FWTA 1,1: 64 (1964); WICKENS 1976: 83; EL AMIN 1990: 19; FSo 1: 22 (1993); UKWF: 44 (1994); KTSL: 59 (1994); HYF: 65 (1997).
Syn.: *Clematis sp.*: CHIPP 1929: 188.
Imatong Mountains group, Sudan side: Palotaka, 1200 m., wooded grassland, 6.1.1979, *Shigeta* 38 (EA); Kinyeti Valley, at river 1 km. north of Hiliu, 700 m., banks of seasonal river, 3.12.1983, *Kielland-Lund* 178 (C, NLH); Gilo to Itibol, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 11.11. 1980, *Friis & Vollesen* 146 (BR, C, K, KHF); east of Kipia, 2740 m., in forest up mountain ravines, 1929, *Chipp* 101 (K, WM); slope of Mt. Kinyeti, 2900 m., in forest, 15.11.1949, *Jackson* 968 (BM, KHF).
Didinga Mountains: near Loming north of Nagichot (4° 19' N, 33° 33' E), 2000 m., 18.12.1983, *Kielland-Lund* 376 (NLH).
General habitat range: in medium-altitude and montane grassland, evergreen bushland and along forest edges.
General distribution: Cameroon to Ethiopia and North Somalia, south to Angola, Zambia, Malawi, Zimbabwe and Mozambique; also in tropical Arabia.

Delphinium L.

Delphinium leroyi Franch. ex Huth
FPS 1: 12 (1950) {Imatong Mountains}; FCB 2: 169 (1951); FTEA, Ranunculac.: 20 (1952); UKWF: 45 (1994).
Syn.: *Delphinium candidum* Hemsl.: CHIPP 1929: 188.
Imatong Mountains group, Sudan side: without further locality, 1520-1830 m., 12.6.1939, *Andrews* 1848 (K); without further locality, 2750 m., 10.2.1936, *Johnston* 1531 (K); Lobeke, 1870 m., *Loudetia* grassland, 1.8.1939, *Myers* 11,742 (K, WM); Gilo, 1900 m., grassland, 29.9.1954, *Jackson* 405 (BM, WM); Gilo to Mt. Konoro, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 24.11.1980, *Friis & Vollesen* 428 (C, K, KHF); Kipia, 2650 m., mountain meadow, 28.7.1939, *Myers* 11,688 (K); Kipia, 2680 m., mountain meadow, 12.1938, *MacDonald* 10 (BM); east of Kipia, 2740 m., mountain meadow, 1929, *Chipp* 100 (K); Mt. Kinyeti, 3050 m., mountain meadow, 11.2.1929, *Chipp* 70 (K, WM).
General habitat range: in medium-altitude and montane grassland and evergreen bushland.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Tanzania and Malawi.

Ranunculus L.

Ranunculus multifidus Forssk.
FPNA 1: 174 (1948); FPS 1: 12 (1950) {Imatong Mountains}; FCB 2: 175 (1951); FTEA, Ranunculac.: 19 (1952); FWTA 1,1: 64 (1954); WICKENS 1976: 83; UKWF: 45 (1994); HYF: 66 (1997).
Syn.: *Ranunculus pubescens* Thunb.: FS: 51 (1929). [*Ranunculus pinnatus* auct., non Poir.: FTA 1: 9 (1868)].
Imatong Mountains group, Sudan side: Lomuleng, 2440 m., forest, 29.12.1935, *Thomas* 1796

(BM, K); at the Ngairigi River, 1600 m., on alluvial along stream, 8.1.1950, *Jackson* 1036 (BM, WM); near Gilo, 1680 m., by path in forest, 12.6.1953, *Prowse* 230 (KHU); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* on moist slope along trail, 20.11.1980, *Friis & Vollesen* 365 (C, K, KHF); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 58' N, 32° 53' E), 2600 m., in swampy area along stream, 9.6.1984, *Kielland-Lund* 900 (C, NLH).

Didinga Mountains: Nagichot, 1980 m., edge of khor, 27.4.1939, *Myers* 11,159 (K, WM); near Nagichot, 2040 m., stream-side in upland pasture, 24.4.1939, *Myers* 11,108 (K); Mt. Lotuke, South West peak, 2750 m., in stunted *Podocarpus latifolius* forest, 30.5.1950, *Jackson* 1337 (BM).

General habitat range: in medium-altitude and montane grassland.

General distribution: Nigeria and Cameroon to Ethiopia, south to South Africa (Cape Prov.); also in tropical Arabia.

Ranunculus oreophytus Del.

FTA 1: 10 (1868); FPS 1: 13 (1950) {Imatong Mountains, Kipia}; FCB 2: 173 (1951); HEDBERG 1957: 86; UKWF: 45 (1994).

var. **oreophytus**

FTEA, Ranunculac.: 14 (1952); HEDBERG 1957: 86.

Syn.: *Ranunculus oreophytus* Del. var. *lanuriensis* De Wild.: FPNA 1: 173 (1948).

Imatong Mountains group, Sudan side: Kipia, 2590 m., in meadow, 30.12.1935, *Thomas* 1880 (BM, K).

General habitat range: in montane grassland, often among rocks and in moist places.

General distribution: East Congo [previously Zaire] to Ethiopia, south to Tanzania.

Thalictrum L.

Thalictrum rhynchocarpum Dill. & A. Rich.

FTA 1: 8 (1868); FPNA 1: 178 (1948); FPS 1: 13 (1950) {Imatong Mountains, Jebel Garia}; FCB 2: 181 (1951); FTEA, Ranunculac.: 11 (1952); FWTA 1,1: 64 (1954); UKWF: 44 (1994).

Imatong Mountains group, Sudan side: Upper Talanga Tea Project, 2000 m., 18.6.1981, *Fison* in *Lock* 81/282 (K); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 9.11.1980, *Friis & Vollesen* 86 (C, K, KHF); Gilo, 1860 m., in open forest, 29.6.1947, *MacDonald* 118 (BM); Mt. Garia, 1830-2140 m., 13.6.1939, *Andrews* 1878 (K); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 59' N, 32° 53' E), 2200 m., in montane forest, 9.6.1984, *Kielland-Lund* 891 (C, NLH); below Lomuleng, 2260 m., 25.7.1935, *Myers* 11,569 (K).

Imatong Mountains group, Uganda side: Langia, 2440 m., mountain grassland, 4.1943, *Purseglove* 1410 (EA, K); near summit of Mt. Lomwaga, 2440 m., 1963, *Morrison* s.n. (MHU).

Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1800 m., clearing in high mountain forest, 16.5.1972, *Synnott* 1015 (MHU).

General habitat range: in medium-altitude and montane forest and evergreen bushland.

General distribution: Cameroon to Ethiopia, south to South Africa (Natal).

Fam. 26. **Nymphaeaceae** Salisb.

Nymphaea L.

Nymphaea lotus L.

FTA 1: 52 (1868); FS: 52 (1929); FPS 1: 14 (1950); FCB 2: 156 (1951); FWTA 1,1: 66 (1954); JACKSON 1956: 351; WICKENS 1976: 84; FTEA, Nymphaeac.: 3 (1989); FSo 1: 24 (1993); UKWF: 46 (1994);.

Imatong Mountains group, Sudan side: no specimen seen; JACKSON 1956 records this from lowland streams around the mountains.
General habitat range: in lowland freshwater ponds or slow-flowing streams.
General distribution: from Egypt and throughout tropical and southern Africa; introduced elsewhere.
Note. Nearest herbarium material (*Thomas* 4409 (K), 18.11.1945) has been collected from Uganda, Acholi Distr., Gulu, Adilang. *Nymphaea nouchali* Burm. f. var. *coerulea* (Savigny) Verdc. probably also occurs in the study area, see FTEA, Nymphaeac.: 7 (1989).

Order 12. **Berberidales** Dumort.

Fam. 27. **Menispermaceae** Juss.

Chasmanthera Hochst.

Chasmanthera dependens Hochst.
FTA 1 41 (1868); FS: 53 (1929); FPS 1: 15 (1950); FWTA 1,1: (1954); FTEA, Menispermac. 17 (1956); FZ 1,1: 159 (1960); WICKENS 1976: 84; FSo 1: 26 (1993); KTSL: 61 (1994).
Imatong Mountains group, Sudan side: Loa, Moliandro village west of Kerepi (3° 54' N, 31° 54' E), no alt., 5.6.1984, *Kielland-Lund* 847 (C, NLH); Kinyeti Valley, rocks near Hiliu (4° 16' N, 32° 48' E), no alt., 30.5.1984, *Kielland-Lund* 802 (C, NLH); village about 500 m. south west of Hiliu, no alt., in savannah, 7.6.1984, *Kielland-Lund* 878 (C, NLH).
General habitat range: in lowland forest, riverine forest, on termite mounds and rocky outcrops in lowland woodland and wooded grassland, and along temporary streams.
General distribution: Sierra Leone to Somalia, south to Congo [previously Zaire], Tanzania and Zambia.

Cissampelos L.

Cissampelos mucronata A. Rich.
FS: 54 (1929); FPNA 1: 184 (1948); FPS 1: 17 (1950); FCB 2: 250 (1951); FWTA 1,1: 75 (1954); FTEA, Menispermac.: 27 (1956); WICKENS 1976: 84; UKWF: 47 (1994).
Syn.: [*Cissampelos pereira* auct., non L.: FTA 1: 45 (1868), pro parte; FS: 53 (1929)].
Imatong Mountains group, Uganda side: Agoro, 910 m., wooded grassland, 4.1943, *Purseglove* 1380 (EA, K).
General habitat range: in lowland and medium-altitude deciduous bushland and woodland.
General distribution: Senegal to Ethiopia, south to Namibia and South Africa (Transvaal, Natal).

Cissampelos sp. cf. C. pareira L.
Imatong Mountains group, Sudan side: near Ibuken, 1830 m., in secondary growth, 23.10.1941, *Myers* 14,165 (K).
Note. Material insufficient for exact determination. This may represent the plant referred to by JACKSON 1956: 363 as *Cissampelos rigidifolia* (Engl.) Diels from the lower *Acacia abyssinica* woodland of the Imatong Mountains, especially because the habitats seem to be the same, but no material of Jackson's plant has been traced.

Cocculus DC.

Cocculus hirsutus (L.) Diels
FPS 1: 17 (1950); FTEA, Menispermac.: 12 (1956); FZ 1,1: 163 (1960); UKWF: 46 (1994); KTSL: 62 (1994).
Syn.: *Cocculus villosus* DC., nom. illeg.: FTA 1: 45 (1868). *Cocculus holopeira-torrida* Broun & Massey, sphalm. pro *Holopeira torrida* Miers: FS: 53 (1929).
Lafit, Dongotona and Nangeya Mountains: 800 m. south east of Lafon (5° 02' N, 32° 27-28'

E), no alt., 28.12.1983, *Kielland-Lund* 499 (C, NLH).
General habitat range: in lowland and medium-altitude deciduous bushland and woodland.
General distribution: Sudan to Ethiopia, south to Namibia and South Africa (Natal); also in tropical Asia, including tropical Arabia, and eastwards to South China.

Stephania Lour.

Stephania abyssinica (Dill. & A. Rich.) Walp.
FTA 1: 47 (1868); FS: 54 (1929); FPNA 1: 182 (1948); FPS 1: 19 (1950); FCB 2: 245 (1951); FWTA 1,1:75 (1954); FTEA, Menispermac.: 22 (1956); UKWF: 46 (1994); KTSL: 63 (1994); HYF: 67 (1997).
Imatong Mountains group, Sudan side: Gilo, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* climber at forest edge, 19.2.1982, *Friis & Vollesen* 961 (BR, C, K, KHF).
General habitat range: in medium-altitude and montane evergreen bushland and at forest edges.
General distribution: Guinée to Ethiopia, south to Angola, Botswana and South Africa (Orange Free State, Natal, East Cape Prov.); also in tropical Arabia.

Stephania cyanantha Welw. ex Hiern
FCB 2: 244 (1951); FTEA, Menispermac.: 21 (1956); UKWF: 46 (1994); KTSL: 63 (1994).
Imatong Mountains group, Sudan side: north-east of Gilo at Ngairigi River, 2000 m., scrub along the river in *Loudetia* grassland, 28.2.1982, *Friis & Vollesen* 1051 (BR, C, K, KHF).
General habitat range: in a wide, but poorly defined range of medium-altitude habitats.
General distribution: Cameroon to South Sudan, south to Angola, Zambia and Tanzania. First record from the Sudan.

Tiliacora Colebr.

Tiliacora funifera (Miers) Oliv.
FTA 1: 44 (1868); FTEA, Menispermac.: 9 (1956); FSo 1: 26 (1993); UKWF: 46 (1994); KTSL: 63 (1994).
Imatong Mountains group, Sudan side: Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 15.11.1980, *Friis & Vollesen* 248 (C, K).
General habitat range: in lowland, medium-altitude and montane forest.
General distribution: Ivory Coast to South Sudan, Uganda, Kenya and South Somalia, south to Angola, Zambia, Zimbabwe, Malawi and Mozambique. First record from the Sudan.

Tinospora Miers

Tinospora caffra (Miers) Troupin
FTEA, Menispermac.: 19 (1956); UKWF: 46 (1994); KTSL: 64 (1994).
Imatong Mountains group, Sudan side: Kinyeti Valley, 3 km. south of Hiliu along Katire road, north face of rock, no alt., 26.5.1984, *Kielland-Lund* 744 (C, NLH); Katire, 1000 m., in garden of Assistant Conservator of Forest's house, 950 m., weed, 15.6.1958, *Jackson* 3883 (K); Kinyeti Valley above Katire, 1200 m., wooded grassland with *Combretum molle, Cussonia arborea, Stereospermum kunthianum, Erythrina abyssinica, Entada abyssinica,* etc., climbing over rocks, 24.3. 1982, *Friis & Vollesen* 1305 (BR, C, K, KHF).
Didinga Mountains: Iwowa, 1620 m., in khor, 23.4.1939, *Myers* 11,049 (K).
General habitat range: in lowland and medium-altitude forest and bushland, often at rocky outcrops.
General distribution: Central African Republic to South Sudan, Uganda and Kenya, south to Angola, Zambia, Zimbabwe and South Africa (Transvaal).

Order 13. **Aristolochiales** Dumort.

Fam. 28. **Aristolochiaceae** Juss.

Aristolochia L.

Aristolochia bracteolata Lam.
FPS 1: 21 (1950); FTEA, Aristolochiac.: 6 (1986); FSo 1: 29 (1993); UKWF: 47 (1994).
Syn.: *Aristolochia bracteata* Retz.: FTA 6,1: 136 (1909); FS: 22 (1929); HYF: 65 (1997).
Imatong Mountains group, Sudan side: Loa, Moliandro village west of Kerepi (3° 54' N, 31° 54' E), no alt., 5.6.1984, *Kielland-Lund* 844 (C, NLH).
General habitat range: in lowland deciduous bushland or subdesert grassland, in dry, sandy river beds, and on lava flows.
General distribution: Nigeria to Ethiopia and Somalia, south to Tanzania; also in tropical Arabia, Pakistan, India and Sri Lanka.

Order 14. **Piperales** Dumort.

Fam. 29. **Piperaceae** C. Agardh

Peperomia Ruiz & Pavon

Peperomia abyssinica Miq.
FTA 6,1: 153 (1909); FCB 1: 26 (1948); FPNA 1: 34 (1948); UKWF: 48 (1994); FTEA, Piperac.: 15 (1996); HYF: 64 (1997).
Syn.: *Peperomia stuhlmannii* C. DC.: FTA 6,1: 152 (1909); FPNA 1: 35 (1948); FWTA 1,1: 82 (1954). *Peperomia abyssinica* Miq. var. *stuhlmannii* (C. DC.) Duell. *Peperomia goetzeana* Engl.
Imatong Mountains group, Sudan side: Talanga, at Loboli River, 890 m., on rocks in forest, 16.12.1935, *Thomas* 1581 (BM); Gilo, near Swimming Pool, 1750 m., 26.12.1983, *Kielland-Lund* 462 (C, NLH); Gilo, 1830 m., mountain woodland, 12.7.1947, *MacLeay* 216 (BM); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 58' N, 32° 53' E), 2800 m., on stones and as epiphytes in upper montane forest, 9.6.1984, *Kielland-Lund* 892 (C, NLH); along path from Lowiliwili to Mt. Kinyeti, 2900 m., epiphyte in *Podocarpus latifolius-Dombeya torrida* forest, 15.11.1949, *Jackson* 950 (BM).
General habitat range: in lowland, medium-altitude and montane forest.
General distribution: Sierra Leone to Ethiopia, south to Malawi and Mozambique; also in tropical Arabia.

Peperomia fernandopoiana C. DC.
FTA 6,1: 152 (1909); FWTA 1,1: 82 (1954); UKWF: 48 (1994); FTEA, Piperac.: 19 (1996).
Syn.: [*Peperomia holstii* auct., non C. DC.: FPS 1: 23 (1950) {Imatong Mountains}].
Imatong Mountains group, Sudan side: without further locality, 10.6.1939, *Andrews* 1795 (K); 1830-2130 m., 13.6.1939, *Andrews* 1872 (K); Bushbuck Hill, 2150 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, 10.11.1980, *Friis & Vollesen* 116 (BR, C, K, KHF).
General habitat range: in lowland, medium-altitude and montane forest.
General distribution: Sierra Leone and Ivory Coast to Ethiopia, south to Cameroon and Congo [previously Zaire]. Var. *butaguensis* (De Wild.) Duell in East Congo [previously Zaire], Rwanda, Uganda, and West Kenya.

Peperomia molleri C. DC.
FTA 6,1: 150 (1909); FWTA 1,1: 82 (1954); FTEA, Piperac.: 16 (1996).
subsp. **molleri**
FTEA, Piperac.: 16 (1996).
Imatong Mountains group: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, on

forest floor, 1.12.1980, *Friis & Vollesen* 600 (C, K, KHF).
General habitat range: in lowland, medium-altitude and montane forest.
General distribution: Liberia to Ethiopia, south to Angola, Congo [previously Zaire], Kenya and Tanzania; also in Madagascar; the other subspecies occurs locally within this general area.

Peperomia tetraphylla (Forst.) Hook. & Arn.
UKWF: 47 (1994); FTEA, Piperac.: 12 (1996).
Syn.: *Peperomia reflexa* (L. f.) A. Dietr., nom. illeg., non Kunth: FTA 6,1: 155 (1909); FCB 1: 21 (1948); FPNA 1: 30 (1948); FPS 1: 23 (1950) {Imatong Mountains, Itibol}; FWTA 1,1: 83 (1954).
Imatong Mountains group, Sudan side: Itibol, 1860 m., epiphyte in forest, 19.12.1935, *Thomas* 1685 (BM); Gilo to Mt. Konoro, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 24.11.1980, *Friis & Vollesen* 438 (C, K, KHF); Mt. Kinyeti, 1830-2140 m., in forest, 15.6.1939, *Andrews* 2020 (K).
General habitat range: in medium-altitude or montane forest.
General distribution: Guinée to Ethiopia, south to South Africa (Transvaal, Natal East Cape Prov.); also in Socotra.

Piper L.

Piper capense L. f.
FTA 6,1: 146 (1909); FS: 55 (1929); FCB 1: 17 (1948); FPNA 1: 28 (1948); FPS 1: 24 (1950); FWTA 1,1: 84 (1954); El Amin 1990: 20; UKWF: 48 (1994); KTSL: 66 (1994); FTEA, Piperac.: 5 (1996).
Imatong Mountains group, Sudan side: without further locality, 1500-1900 m., secondary forest with *Croton* and *Macaranga,* 27.1.1976, *Howard* IM 9 (K, KHF); at Lobeke, 1920 m., gallery forest, 1.8.1939, *Myers* 11,746 (K, WM); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 8.11.1980, *Friis & Vollesen* 53 (C, K, KHF); Gilo, near Swimming Pool, 1750 m., 26.12.1983, *Kielland-Lund* 453 (C, NLH).
General habitat range: in medium-altitude and montane forest.
General distribution: Guinée to Ethiopia, south to South Africa; Also the Comoro Islands and Madagascar.

Piper guineense Schumach. & Thonn.
FTA 6,1: 145 (1909); FS: 55 (1929); FCB 1: 17 (1948); FPNA 1: 29 (1948); FPS 1: 26 (1950); El Amin 1990: 20; UKWF: 48 (1994); KTSL: 66 (1994); FTEA, Piperac.: 4 (1996).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* on forest floor, 25.11.1980, *Friis & Vollesen* 446 (BR, C, K, KHF); Talanga, 1100 m., at edge of forest with *Bridelia* sp., 8.3.1950, *Jackson* 1199 (BM).
General habitat range: in lowland and medium-altitude rain forest.
General distribution: Guinée to South Sudan and South West Ethiopia, south to Angola and Tanzania.

Piper umbellatum L.
FTA 6,1: 144 (1909); FS: 55 (1929); FCB 1: 16 (1948); FPNA 1: 27 (1948); FPS 1: 23 (1950); Jackson 1956: 355 {Talanga, Lotti}; FWTA 1,1: 84 (1954); El Amin 1990: 21; UKWF: 48 (1994); KTSL: 66 (1994); FTEA, Piperac.: 8 (1996).
Imatong Mountains group, Sudan side: without further locality, 1937, *Trought* s.n. (KHF); Lotti, at rest house, no alt., 9.6.1939, *Andrews* 1748 (K); Talanga, 1000 m., in forest of *Khaya, Chrysophyllum,* etc., 8.11.1948., *Jackson* 492 (BM, KHF); Lotti at Palotaka, forest, 1979, *Shigeta* 113 (?EA, identified and listed by M.G. Gilbert, not traced); Talanga, 950 m., lowland rain

forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, on forest floor, 28.11.1980, *Friis & Vollesen* 513 (C).
General habitat range: in lowland and medium-altitude forest.
General distribution: perhaps the species is of tropical American origin, but now widely distributed in lowland and medium-altitude forest throughout all the humid parts of the tropics.

Order 15. **Papaverales** Dumort.
(*Rhoeadales* F.C.L. Spenner, nom. altern.)

Fam. 30. **Fumariaceae** DC.

Corydalis DC.

Corydalis cornuta Royle
LIDÉN 1993: 46.
Syn.: *Corydalis mildbraedii* Fedde: FPNA 1: 195 (1948); FCB 2: 452 (1951); FTEA, Fumariac.: 2 (1962); UKWF: 48 (1994).
Imatong Mountains group, Sudan side: below Lomuleng, 2260 m., 25.7.1939, *Myers* 11,569 (?K, not traced).
General habitat range: in montane forest, evergreen bushland and grassland.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Tanzania; also in the Himalayas.

Fumaria L.

Fumaria abyssinica Hammar
FTEA, Fumariac.: 3 (1962); FSo 1: 33 (1993); HYF: 67 (1997).
Imatong Mountains group, Sudan side: Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 58' N, 32° 54' E), 3100 m., in upper elfin forest belt, 10.6.1984, *Kielland-Lund* 915 (C, NLH).
General habitat range: in medium-altitude and montane forest, montane bamboo thicket, evergreen bushland and grassland, often below cliffs.
General distribution: East Congo [previously Zaire] to Ethiopia, Djibouti and Somalia, south to Tanzania; also in tropical Arabia. First record from the Sudan.

Order 16. **Turnerales** Dumort.
(*Loasales* Bessey)

Fam. 31. **Turneraceae** DC.

Tricliceras Thonn. ex DC.
Syn.: *Wormskjoldia* Thonn. in Schumach. & Thonn.

Tricliceras lobatum (Urb.) R. Fernandes
FZ 4: 363 (1978); UKWF: 49 (1994).
Syn.: *Wormskjoldia lobata* Urb.: FS 56 (1929); FPS 1: 29 (1950); FTEA, Turnerac.: 10 (1954); FAC, Turnerac.: 7 (1967).
Imatong Mountains group, Sudan side: Kinyeti Valley, south west of Hiliu (4° 16' N, 32° 48' E), no alt., at big stone in flat area, 25.5.1984, *Kielland-Lund* 733 (C, NLH).
General habitat range: in lowland grassland, woodland and deciduous bushland, usually in sandy places or on rocky outcrops, and as a weed in cultivations on sandy soil.
General distribution: Gabon, Congo [previously Zaire] to Sudan, south to Namibia, Zimbabwe and Mozambique.

Order 17. **Capparales** Hutch.

Fam. 32. **Capparaceae** Juss.

Boscia Lam.

Boscia salicifolia Oliv.
FTA 1: 93 (1868); FS: 61 (1929); FPS 1: 32 (1950); FCB 2: 510 (1951); ITU: 72 (1952); FWTA 1,1: 93 (1954); JACKSON 1956: 359-360; FZ 1,1: 233 (1960); FTEA, Capparidac.: 52 (1964); WICKENS 1976: 84; EL AMIN 1990: 23; KTSL: 69 (1994).
Imatong Mountains group, Sudan side: Molongori, 800 m., open woodland at rocky hillside, with *Combretum adenogonium, Acacia hockii,* and *Acalypha fruticosa* underneath, 12.11.1948, *Jackson* 509 (FHO); Kinyeti Valley, Hiliu, no alt., 2.6.1984, *Kielland-Lund* 831 (C, NLH).
Imatong Mountains group, Uganda side: between Madi Opei and Agoro, no alt., 12.1932, *Eggeling* 856 (EA, MHU).
General habitat range: in lowland and medium-altitude deciduous bushland and woodland. According to JACKSON 1956 it occurs at the Imatong Mountains in areas with rain shadow in woodland on bouldery soil and on the hill slopes with deeper soil.
General distribution: Senegal to Ethiopia, south to Botswana, Zimbabwe and Mozambique.

Cadaba Forssk.

Cadaba farinosa Forssk.
FTA 1: 89 (1868); FS: 62 (1929); FPS 1: 35 (1950); FCB 2: 484 (1951); FWTA 1,1: 90 (1954); FTEA, Capparidac.: 75 (1964); WICKENS 1976: 84; EL AMIN 1990: 25; FSo 1: 50 (1993); KTSL: 70 (1994); HYF: 121 (1997).
subsp. **farinosa**
FTEA, Capparidac.: 75 (1964); WICKENS 1976: 84; FSo 1: 50 (1993); KTSL: 71 (1994).
Imatong Mountains group, Sudan side: Torit, no alt., 5.2.1947, *Jackson* 180 ['178'] (FHO); Kinyeti Valley, 10 km. north of Hiliu towards Torit, 650 m., 8.12.1983, *Kielland-Lund* 268 (C, NLH); between Torit and Hiliu, at Katire road, 850 m., dry bushland, 21.1.1947, *Dawkins* 227 (MHU); north-eastern side of mountains, 8 km. south of turn off at Ngarama, 700 m., open *Acacia seyal-Combretum* deciduous bushland, 10.3.1982, *Friis & Vollesen* 1163 (C, K, KHF).
Imatong Mountains group, Uganda side: Agoro, no alt., in plains, no date, *Eggeling* 824 (K); Agoro, no alt., 3.1935, *Eggeling* 1711 (EA); at Agoro, 1520 m., in *Acacia albida, A. polyacantha* subsp. *campylacantha, Albizia amara, Ximenia americana,* and *Balanites aegyptiaca* woodland, 9.4.1945, *Greenway & Hummel* 7328 (EA, K).
Didinga Mountains: near Kapoeta Regional District Centre (4° 47' N, 33° 35' E), 650 m., in deciduous bushland, 13.6.1984, *Kielland-Lund* 944 (C, NLH).
General habitat range: in lowland and medium-altitude deciduous bushland and grassland.
General distribution: Senegal to Ethiopia and Somalia, south to Angola, Congo [previously Zaire] and Tanzania; also in Egypt, tropical Arabia and India. Species as a whole within the same general range of distribution.

Capparis L.

Capparis erythrocarpos Isert
FTA 1: 98 (1868); FS: 60 (1929); FPNA 1: 203 (1948); FPS 1: 42 (1950); FCB 2: 468 (1951); FZ 1,1: 240 (1960); FWTA 1,1: 89 (1954); FTEA, Capparidac.: 60 (1964); KTSL: 73 (1994).
var. **erythrocarpos**
FTEA, Capparidac.: 62 (1964); EL AMIN 1990: 31 {Didinga Mountains; Torit}.
Imatong Mountains group, Sudan side: Imeila forest, 700 m., in gallery forest, 27.1.1949, *Jackson* 582 (FHO, KHF); Kinyeti Valley at Imeila,

850 m., lowland rain forest, scrambling at edge of relic forest patch, 24.2.1982, *Friis & Vollesen* 1017 (BR, C, K, KHF); above Katire, 980 m., river valley, 10.1.1947, *Jackson* 163 (FHO); Logoforok, 700 m., in fringing forest of *Trichilia emetica* and *Ficus sycomorus*, 2.2.1949, *Jackson* 619 (FHO, KHF).
Imatong Mountains group, Uganda side: Agoro, 920 m., wooded grassland, 4.1943, *Purseglove* 1381 (EA); Lututuru, on east bank of Aringa River, 1070 m., in *Combretum* woodland, 27.4.1947, *Dawkins* 253 (FHO, MHU); 3 km. south-west of Lututuru, near Patika, 1600 m., scrub along road, 17.2.1969, *Lye* 2034 (MHU).
Didinga Mountains: rocks north-east of Chukudum (4° 15' N, 33° 27' E), 1100 m., 21.12.1983, *Kielland-Lund* 421 (C, NLH); above Chukudum, 1280 m., 28.4.1939, *Myers* 11,217 (K, WM).
General habitat range: in lowland and medium-altitude deciduous bushland and grassland.
General distribution: Guinée to Ethiopia, south to Angola, Congo [previously Zaire] and Tanzania. Species as a whole also in Malawi, Zambia, Zimbabwe and Mozambique.

Capparis fascicularis DC.
FTEA, Capparidac.: 65 (1964); Wickens 1976: 85; El Amin 1990: 32; FSo 1: 53 (1993); KTSL: 73 (1994).
var. **fascicularis**
FTEA, Capparidac.: 65 (1964); Wickens 1976: 85.
Syn.: *Capparis rothii* Oliv.: FTA 1: 97 (1868); FS: 60 (1929); FPS 1: 41 (1950); FWTA 1,1: 90 (1954). *Capparis jodotricha* Gilg & Bened.: FS: 60 (1929). [*Capparis corymbosa* auct., non Lam.: FTA 1: 96 (1868); FS: 69 (1929)].
Imatong Mountains group, Sudan side: Kinyeti Valley, 10 km. north of Hiliu towards Torit, 650 m., 8.12.1983, *Kielland-Lund* 259 (C, NLH); between Hiliu and Molongori, 700 m., open woodland with *Acacia seyal, Albizia amara* subsp. *sericocephala, Lannea humilis*, etc., on sandy soil, 13.3.1982, *Friis & Vollesen* 1196 (C, K, KHF); Hiliu, east of compound and stream, 700 m., 9.12.1983, *Kielland-Lund* 280A (C, NLH).
Imatong Mountains group, Uganda side: Agoro, in the plains, 12.1932, *Eggeling* 794 (K, MHU).
Didinga Mountains: 1 km. south of Keiala, near Chukudum (4° 15' N, 33° 27' E), 1100 m., 22.12.1983, *Kielland-Lund* 441 (C, NLH).
General habitat range: in lowland deciduous bushland and wooded grassland.
General distribution: Gambia and Senegal to Ethiopia and Somalia, south to Uganda and Kenya.
var. **eleagnoides** (Gilg) De Wolf
FTEA, Capparidac.: 66 (1964).
Didinga Mountains: Boya Hill, Kimatong, 700 m., rocks, 1.7.1985, *Fukui* 84-70 (EA).
General habitat range: in lowland and medium-altitude deciduous bushland, wooded grassland and dry forest.
General distribution: Congo [previously Zaire] to South Sudan, Uganda and Kenya, south to Botswana and Zimbabwe. Species as a whole within the joined distribution areas of the two varieties mentioned here.

Capparis micrantha A. Rich.
FTA 1: 98 (1868); FS: 59 (1929); FPS 1: 42 (1950); Wickens 1976: 85; El Amin 1990: 32.
Imatong Mountains group, Sudan side: Kinyeti Valley, Imeila to Hiliu, 700 m., wooded grassland with *Acacia sieberiana, Tamarindus indica* and *Ziziphus mauritiana*, 27.2.1982, *Friis & Vollesen* 1039 (BR, C, K, KHF).
General habitat range: in lowland deciduous bushland and woodland.
General distribution: Sudan and West Ethiopia.

Capparis sepiaria L.
FTEA, Capparidac.: 63 (1964); Wickens 1976: 85; FSo 1: 50 (1993); KTSL: 73 (1994).
var. **fischeri** (Pax) De Wolf
FTEA, Capparidac.: 64 (1964) Wickens 1976: 85; El Amin 1990: 32.

Syn.: *Capparis djurica* Gilg & Bened.: FS: 60 (1929); FPS 1: 42 (1950). [*Capparis corymbosa* auct., non Lam.: FTA 1: 96 (1868); FS: 59 (1929); FPS 1: 42 (1950); FWTA 1,1: 90 (1954)].

Imatong Mountains group, Sudan side: between Katire and Torit, 630 m., open woodland, 22.4.1949, *Jackson* 707 (FHO, KHF).

General habitat range: in lowland deciduous bushland.

General distribution: Senegal to South Sudan, south to Kenya. Species as a whole reaching south-east to Somalia and south to Angola, Zimbabwe and South Africa (Transvaal).

Capparis tomentosa Lam.

FTA 1: 96 (1868), pro parte; FS: 59 (1929); FPNA 1: 201 (1948); FPS 1: 41 (1950); FCB 2: 460 (1951); FWTA 1,1: 90 (1954); FZ 1,1: 236 (1960); FTEA, Capparidac.: 62 (1964); EL AMIN 1990: 33; FSo 1: 52 (1993); KTSL: 73 (1994).

Imatong Mountains group, Sudan side: between Katire and Torit, no alt., 11.3.1948, *Jackson* 181 (KHF); Kinyeti Valley at Kiwa (4° 13' N, 32° 39' E), 800 m., rocky ground with bamboo thicket of *Oxytenanthera abyssinica*, 5.2.1949, *Jackson* 627 (FHO, KHF); north-eastern side of mountains, north of Molongori, 700 m., *Acacia seyal-Balanites aegyptiaca* woodland on clay, 10.3.1982, *Friis & Vollesen* 1158 (C, K, KHF).

Imatong Mountains group, Uganda side: Agoro, no alt., 3.1935, *Eggeling* 1720 (MHU); at Agoro, 1520 m., with *Allophylus, Phyllanthus, Ficus thonningii, Ficus sycomorus, Ficus vallis-choudae, Trichilia emetica, Acacia albida, Acacia polyacantha subsp. campylacantha, Acacia seyal, Albizia zygia, Albizia amara,* and *Cadaba farinosa* on bank of dried up river, 9.4.1945, *Greenway & Hummel* 7329 (EA, K, MHU).

General habitat range: in lowland and medium-altitude deciduous bushland.

General distribution: Senegal to Ethiopia and South Somalia, south to South Africa (Natal).

Cleome L.

Syn.: *Gynandropsis* DC.

Cleome gynandra L.

Syn.: *Gynandropsis gynandra* (L.) Briq.: FS: 58 (1929); FPNA 1: 200 (1948); FPS 1: 49 (1950); FCB 2: 519 (1951); FWTA 1,1: 88 (1954); FZ 1,1: 205 (1960); FTEA, Capparidac.: 18 (1964); WICKENS 1976: 85; FSo 1: 56 (1993); UKWF: 50 (1994); HYF: 120 (1997). *Gynandropsis pentaphylla* DC.: FTA 1: 82 (1868).

Imatong Mountains group, Sudan side: Palotaka, 1200 m., "forest." 22.2.1979, *Shigeta* 203 (EA); Kinyeti Valley, Hiliu, near farm houses, 700 m., 29.11.1983, *Kielland-Lund* 92 (C, NLH).

General habitat range: in lowland, medium-altitude and montane deciduous bushland, especially in rocky places, and in waste, disturbed or cultivated ground.

General distribution: Senegal to Ethiopia and Somalia, south to South Africa; also in Madagascar, tropical Arabia and in tropical Asia and America.

Cleome monophylla L.

FTA 1: 76 (1868); FS: 57 (1927); FPNA 1: 199 (1948); FPS 1: 44 (1950); FCB 2: 511 (1951); FWTA 1,1: 87 (1954); FZ 1,1: 196 (1960); FTEA, Capparidac.: 5 (1964); WICKENS 1976: 85; FSo 1: 56 (1993); UKWF: 49 (1994); HYF: 119 (1997).

Imatong Mountains group, Sudan side: Kinyeti Valley, south west of Hiliu (4° 16' N, 32° 48' E), no alt., at big stone in flat area, 25.5.1984, *Kielland-Lund* 730 (C, NLH).

General habitat range: in lowland and medium-altitude grassland, deciduous woodland and bushland, and in waste, disturbed or cultivated ground.

General distribution: Senegal to Ethiopia and Somalia, south to South Africa (Cape Prov.); also in Madagascar, tropical Arabia and India.

Crateva L.

Crateva adansonii DC.
FS: 58 (1929); FPS 1: 47 (1950); ITU: 73 (1952); JACKSON 1956: 358; FTEA, Capparidac.: 20 (1964); WICKENS 1976: 85; EL AMIN 1990: 33; KTSL: 75 (1994).
subsp. **adansonii**
WICKENS 1976: 85.
Syn.: [*Crateva religiosa* auct., non Forst. f.: FTA 1: 99 (1868); FCB 2: 478 (1951); FWTA 1,1: 90 (1954)].
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, at the bank of Kinyeti River, no alt., on anthill, 14.3.1984, *Kielland-Lund* 1013 (C, NLH).
Imatong Mountains group, Uganda side: Agoro, 1370 m., riparian, 13.11.1945, *Thomas* 4372 (EA, K).
Didinga Mountains: Boya Hill, Kimatong, 640 m., near base of mountain, 31.12.1984, *Fukui* 84-3 (EA); Boya Hill, Thuguru region (4° 40' N, 33° 17' E), 12.6.1984, *Kielland-Lund* 932 (C, NLH).
General habitat range: in lowland moist woodland and riverine forest. According to JACKSON 1956 it occurs at the Imatong Mountains in riverine forest with heavy clay soil of the rain shadow east of the mountains.
General distribution: Senegal to Ethiopia, south to Kenya and Tanzania. In East Africa the species is almost completely restricted to the Nile basin.

Maerua Forssk.

Maerua angolensis DC.
FTA 1: 86 (1868); FS: 62 (1929); FPNA 1: 208 (1948); FPS 1: 52 (1950); FCB 2: 487 (1951); ITU: 75 (1952); FWTA 1,1: 88 (1954); FZ 1,1: 228 (1960); FTEA, Capparidac.: 28 (1964); WICKENS 1976: 86; EL AMIN 1990: 35; FSo 1: 40 (1993); KTSL: 42 (1994).
Imatong Mountains group, Sudan side: Torit, 620 m., in compound, 28.1.1949, *Jackson* 612 (KHF); Kinyeti Valley, Hiliu, 860 m., wooded grassland, 21.1.1947, *Dawkins* 226 (FHO, MHU); Hiliu, no alt., 14.1.1984, *Kielland-Lund* 632 (C, NLH).
Lafit, Dongotona and Nangeya Mountains: 1 km. south of Lafon, no alt., 28.12.1983, *Kielland-Lund* 505 (C, NLH).
General habitat range: in lowland and medium-altitude deciduous bushland and woodland.
General distribution: Senegal to Ethiopia and Somalia, south to South Africa (Natal).

Maerua duchesnei (De Wild.) F. White
FTEA, Capparidac.: 29 (1964); EL AMIN 1990: 37.
Syn.: *Capparis duchesnei* De Wild.: FPS 1: 42 (1950), Equatoria; FCB 2: 459 (1951). *Ritchiea duchesnei* (De Wild.) Keay: FWTA 1,1: 92 (1954); JACKSON 1956: 354 {Talanga, Lotti}. *Capparis afzelii* sensu Aylmer [unpublished], non Pax, quoad *Smith* 33.
Imatong Mountains group, Sudan side: Lotti, no alt., forest undershrub, 15.4.1933, *Smith* 33 (K, KHF); Lotti, 1000 m., understorey in closed forest of *Chrysophyllum spp., Khaya,* etc., 17.1.1949, *Jackson* 584 (K, KHF).
General habitat range: in lowland and medium-altitude forest.
General distribution: Sierra Leone to South Sudan and Uganda, south to Tanzania.

Maerua oblongifolia (Forssk.) A. Rich.
FTA 1: 85 (1868); FS: 63 (1929); FPS 1: 52 (1950); FWTA 1,1: 89 (1954); FTEA, Capparidac.: 37 (1964); WICKENS 1976: 86; EL AMIN 1990: 37; FSo 1: 43 (1993); KTSL: 79 (1994); HYF: 120 (1997).
Imatong Mountains group, Sudan side: Kinyeti Valley, between Torit and Hiliu, near Ngarama (4° 20' N, 32° 38' E), no alt., 14.1.1984, *Kielland-Lund* 618 (C, NLH), 619 (C, NLH) and 620 (C, NLH); near Kiyeli (4° 19' N, 32° 40' E),

between Katire and Torit, 800 m., at gneiss ridge in woodland with *Acacia seyal, Lannea schweinfurthii, Cadaba farinosa, Grewia villosa,* and *Hyperthelia dissoluta,* 15.1.1950, *Jackson* 1043 (FHO, KHF); Kinyeti Valley, between Imeila and Hiliu, 700 m., wooded grassland with *Acacia sieberiana, Tamarindus indica* and *Ziziphus mauritiana,* 27.2.1982, *Friis & Vollesen* 1041 (BR, C, EA, K, KHF).

Lafit, Dongotona and Nangeya Mountains: 2 km. south of Lafon (5° 01' N, 32° 27-28' E), no alt., 29.12.1983, *Kielland-Lund* 513 (C, NLH).

Didinga Mountains: near Kapoeta Regional District Centre (4° 47' N, 33° 35' E), 650 m., in deciduous bushland, 13.6.1984, *Kielland-Lund* 945 (C, NLH).

General habitat range: in lowland and medium-altitude deciduous bushland and grassland.

General distribution: Senegal to Ethiopia and Somalia, south to Uganda and Kenya; also tropical Arabia.

Maerua pseudopetalosa (Gilg & Bened.) De Wolf

FTEA, Capparidac.: 43 (1964); WICKENS 1976: 86; EL AMIN 1990: 39.

Syn.: *Courbonia virgata* Brongn.: FTA 1: 88 (1868); FS: 61 (1929); FPNA 1: 205 (1948); FPS 1: 46 (1950); FWTA 1,1: 95 (1954).

Imatong Mountains group, Sudan side: Kinyeti Valley, 10 km. north of Hiliu towards Torit, 650 m., 8.12.1983, *Kielland-Lund* 267 (C, NLH); Hiliu, south-east of compound, 700 m., burnt savannah, 2.12.1983, *Kielland-Lund* 163 (C, NLH); between Imeila and Hiliu, 700 m., wooded grassland with *Acacia sieberiana, Tamarindus indica* and *Ziziphus mauritiana,* 27.2. 1982, *Friis & Vollesen* 1038 (BR, C, K, KHF).

Imatong Mountains group, Uganda side: near Agoro, in the plains, no date, *Eggeling* 791 (EA, K, MHU); near Agoro, no alt., no date, *Eggeling* 1743 (K); Agoro, no alt., 1936, *Eggeling* 2367 (EA, K, MHU); Agoro, no alt., thicket, 15.11.1945, *Thomas* 4389 (EA, K).

General habitat range: in lowland and medium-altitude deciduous bushland and grassland.

General distribution: Senegal to Ethiopia and Somalia, south to Uganda and Kenya.

Maerua triphylla A. Rich.

FTA 1: 84 (1868); FPS 1: 50 (1950); FCB 2: 498 (1951); FTEA, Capparidac.: 43 (1964); EL AMIN 1990: 41; FSo 1: 40 (1993); KTSL: 79 (1994).

var. **triphylla**

FTEA, Capparidac.: 45 (1964).

Imatong Mountains group, Sudan side: Kinyeti Valley, 10 km. north of Hiliu towards Torit, 650 m., 8.12.1983, *Kielland-Lund* 260 (C, K); North east side of mountains, just north of Molongori, 750 m., almost bare rocky slope with *Boswellia papyrifera, Terminalia brownii, Lannea fulva, Euphorbia magnicapsula, Xerophyta simulans,* etc., 10.3.1982, *Friis & Vollesen* 1147 (BR, C, K, KHF).

Didinga Mountains: between Kiduru and Longumu north of Chukudum (4° 20' N, 33° 23' E), 1000 m., 20.12.1983, *Kielland-Lund* 414 (C, NLH); at rocks north-east of Chukudum (4° 15' N, 33° 27' E), 1100 m., 21.12.1983, *Kielland-Lund* 431 (C, NLH).

General habitat range: in lowland and medium-altitude deciduous bushland.

General distribution: Congo [previously Zaire] to Ethiopia and Somalia, south to Tanzania.

var. **calophylla** (Gilg) De Wolf

FTEA, Capparidac.: 48 (1964); FSo 1: 40 (1993).

Syn.: *Maerua sphaerocarpa* Gilg.: ITU: 77 (1952).

Imatong Mountains group, Sudan side: between Katire and Torit, Lomo (4° 04' N, 32° 57' E), 820 m., rocky area with *Cissus quadrangularis,* 18.1.1950, *Jackson* 1061 (FHO, KHF).

Imatong Mountains group, Uganda side: near Agoro, in stream valley, 12.1934, *Eggeling* 797 (EA, K); Agoro, no alt., 3.1935, *Eggeling* 1703 (EA, K); Agoro, 3.1935, *Eggeling* 1747 (EA).

General habitat range: in lowland and medium-

altitude deciduous and evergreen bushland, often fringing riverine forest.
General distribution: Uganda and South Sudan to Ethiopia and Somalia, south to Tanzania. Species as a whole within the same general area.

Ritchiea R. Br. ex G. Don

Ritchiea albersii Gilg
FPS 1: 52 (1950) {Imatong Mountains}; FCB 2: 476 (1951); ITU: 77 (1952); FWTA 1,1: 92 (1954); JACKSON 1956: 354 {Lotti}; FZ 1,1: 244 (1960); FTEA, Capparidac.: 21 (1964); EL AMIN 1990: 41; KTSL: 80 (1994).
Syn.: [*Ritchiea pentaphylla* auct., non Gilg & Bened.: FPS 1: 52 (1950) {Imatong Mountains}].
Imatong Mountains group, Sudan side: without further locality, 1980 m., forest understorey, 28.1.1976, *Howard* IM 6 (EA, K, KHF); Lotti, no alt., forest, medium sized tree, 15.4.1933, *Smith* 34 (K, KHF); Gilo, 1800 m., in secondary forest with Macaranga, etc., 2.1951, *Jackson* 1750 (FHO); Gilo, 1830 m., in forest understorey, 7.1946, *Sangster* 824 (MHU); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 15.11.1980, *Friis & Vollesen* 239 (C).
Imatong Mountains group, Uganda side: 1830 m., 4.4.1945, *Hummel* 758 (FHO) & *Hummel* 772 (FHO); Lomwaga Mt., 2290 m., locally common in *Diospyros abyssinica, Albizia gummifera, Sapium ellipticum,* and *Syzygium guineense* fringing forest, 4.4.1945, *Greenway & Hummel* 7268 (EA, K, MHU).
Didinga Mountains: Mt. Lotuke, Kurumo River (4° 07' N, 33° 47' E), 1800 m., edge of gallery forest, 31.3.1950, *Jackson* 1363 (K, WM).
General habitat range: in medium-altitude and montane forest.
General distribution: Nigeria to Ethiopia, south to Zimbabwe.

Order 18. **Brassicales** Bromhead
(*Cruciales* Lindl., nom. altern.)

Fam. 33. **Brassicaceae** Burnett
(*Cruciferae* Juss., nom. altern.)

Cardamine L.

Cardamine africana L.
FTA 1: 60 (1868); FPNA 1: 215 (1948); FCB 2: 535 (1951); FWTA 1,1: 98 (1954); FZ 1,1: 189 (1960); FC 21: 14 (1980); FTEA, Cruciferae: 38 (1982); UKWF: 52 (1994); HYF: 127 (1997).
Imatong Mountains group, Sudan side: Dumuso, 2200 m., in grassland with *Hagenia abyssinica,* 8.5.1954, *Jackson* 3136 (K); near Lowiliwili, 2900 m., *Podocarpus latifolius-Dombeya torrida* forest, 15.11.1949, *Jackson* 945 (BM).
General habitat range: in medium-altitude and montane forest, sometimes in clearings, and in evergreen bushland.
General distribution: Cameroon to Ethiopia, south to South Africa (East Cape Prov.); also in tropical Arabia, Madagascar, Mascarene Islands, Comoro Islands, India, Indonesia, Central and tropical South America.

Erucastrum C. Presl

Erucastrum arabicum Fisch. & Mey.
FPNA 1: 212 (1948); FCB 2: 528 (1951); FTEA, Cruciferae: 9 (1982); FSo 1: 64 (1993); HYF: 124 (1997).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., riparian vegetation, 22.2.1979, *Shigeta* 199 (EA).
General habitat range: along paths in forest and in cultivated land at low, medium and (most frequently) high altitudes.
General distribution: East Congo [previously Zaire] to Ethiopia and Somalia, south to Nami-

bia, Botswana, Zimbabwe and Tanzania; also in tropical Arabia.

Order 19. **Violales** Perleb

Fam. 34. **Violaceae** Batsch

Rinorea Aubl.

Rinorea brachypetala (Turcz.) O. Kuntze
FPNA 1: 628 (1948); FWTA 1,1: 101 (1954); FAC, Violac.: 53 (1969); FTEA, Violac.: 7 (1986); KTSL: 84 (1994).
Syn.: *Rinorea poggei* Engl.: FPS 1: 63 (1950) {Laboni}; ITU: 448 (1952); FWTA 1,1: 101 (1954); JACKSON 1956: 354 {Talanga, Lotti, Laboni}; FZ 1,1: 251 (1960); EL AMIN 1990: 43. *Alsodeia brachypetala* Turcz.: FTA 1: 109 (1868).
Imatong Mountains group, Sudan side: Laboni, 1100 m., in forest undergrowth, 22.12.1935, *Thomas* 1740 (K); Lotti, no alt., at rest house, 9.6.1939, *Andrews* 1757 (K); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* in forest, 5.12.1980, *Friis & Vollesen* 712 (BR, C, K, EA, KHF); Talanga, 1000 m., in forest understorey, 26.3.1949, *Jackson* 639 (FHO, KHF); Talanga, 1000 m., in shrub layer of forest, beneath *Syzygium* near stream, 1.3.1950, *Jackson* 1172 (FHO); Talanga, 1050 m., forest with *Khaya* and *Chrysophyllum,* 20.3.1950, *Jackson* 1242 (K); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 15.11.1980, *Friis & Vollesen* 219 (C, K, KHF).
General habitat range: in lowland and medium-altitude forest.
General distribution: Sierra Leone to South Sudan, Uganda and Kenya, south to Angola, Zambia and Tanzania.

Rinorea ilicifolia (Oliv.) O. Kuntze
FS: 66 (1929); FPNA 1: 628 (1948); FPS 1: 63 (1950); ITU: 448 (1952); FWTA 1,1: 99 (1954); JACKSON 1956: 354 {Talanga, Lotti}; FAC, Violac.: 9 (1969); FSA 22: 44 (1976); FTEA, Violac.: 4 (1986); EL AMIN 1990: 42; KTSL: 85 (1994).
Syn.: *Alsodeia ilicifolia* Oliv.: FTA 1: 108 (1868).
Imatong Mountains group, Sudan side: Laboni, 1280 m., in fringing forest with *Coffea canephora,* 19.1.1930, *Snowden* 1691 (BM, K).
General habitat range: in lowland and medium-altitude forest.
General distribution: Guinée to South West Ethiopia, south to Angola and South Africa (Natal).
Note. There is also a specimen, *Jackson* 209 (KHF), of this species from "Torit" (later corrected to "Boma Plateau"), 12.3.1948.

Rinorea oblongifolia (C. H. Wright) Chipp
FS: 66 (1929); FPNA 1: 630 (1948); FPS 1: 65 (1950); ITU: 448 (1952); FWTA 1,1: 104 (1954); FAC, Violac.: 27 (1969); FTEA, Violac.: 9 (1986); EL AMIN 1990: 43.
Syn.: *Alsodeia welwitschii* Oliv.: FTA 1: 110 (1868), pro parte.
Imatong Mountains group, Sudan side: Lotti, no alt., at rest house, 10.6.1939, *Andrews* 1755 (K), 1789 (K) & 1791 (K).
General habitat range: in lowland and medium-altitude forest.
General distribution: Guinée to South Sudan, south to Congo [previously Zaire] and Uganda.

Viola L.

Viola abyssinica Oliv.
FTA 1: 105 631 (1868); FPNA 1: (1948); FWTA 1,1: 107 (1954); FZ 1,1: 258 (1960); FAC, Violac: 69 (1969); FSA 22: 50 (1976); FTEA, Violac.: 25 (1986); UKWF: 54 (1994).

Imatong Mountains group, Sudan side: Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* on moist slope along trail, 20.11.1980, *Friis & Vollesen* 366 (BR, C, EA, K, KHF).
General habitat range: in medium-altitude and montane forest, evergreen bushland, bamboo thicket and grassland.
General distribution: Nigeria to Ethiopia, south to South Africa; also in Madagascar. First record from the Sudan.

Viola eminii (Engl.) R.E. Fr.
FPNA 1: 632 (1948); FPS 1: 65 (1950) {Imatong Mountains, Mt. Kinyeti}; HEDBERG 1957: 132; FAC, Violac.: 71 (1969); FTEA, Violac.: 27 (1986); UKWF: 54 (1994).
Imatong Mountains group, Sudan side: Mt. Kinyeti, 2960 m., in scrub, 30.12.1935, *Thomas* 1857 (BM, K); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak, (3° 58' N, 32° 54' E), 3100 m., above timberline, 10.6.1984, *Kielland-Lund* 921 (C, NLH); summit of Mt. Kinyeti, 3180 m., 27.7.1939, *Myers* 11,645 (K, WM); summit of Mt. Kinyeti, 3180 m., among rocks, 15.11.1949, *Jackson* 921 (BM, WM).
General habitat range: in montane forest, especially in clearings and along edges, in evergreen bushland and grassland.
General distribution: East Congo [previously Zaire] to South Sudan, Uganda and Kenya.

Fam. 35. **Resedaceae** DC. ex S.F. Gray

Caylusea A. St.-Hil.

Caylusea abyssinica (Fresen.) Fisch. & Mey.
FS: 66 (1929); FPS 1: 66 (1950); FCB 2: 546 (1951); FTEA, Resedac.: 3 (1958); UKWF: 55 (1994); HYF: 128 (1997).
Imatong Mountains group, Uganda: Agoro, 1380 m., old farmland, 12.11.1945, *Thomas* 4335 (EA, K).
General habitat range: in medium-altitude and montane grassland, disturbed ground and abandoned cultivations.
General distribution: Sudan to Ethiopia, south to Tanzania; also in tropical Arabia.

Order 20. **Polygalales** Dumort.

Fam. 36. **Polygalaceae** R. Br.

Carpolobia Don

Carpolobia goetzei Guerke
FCB 7: 283 (1958); KTSL: 86 (1994).
Syn.: *Carpolobia sp.* sensu FPS: FPS 1: 69 (1950) {Imatong Mountains}; JACKSON 1956: 354 {Lotti}. *Carpolobia conradsiana* Engl.: FZ 1,1: 304 (1960); EL AMIN 1990: 43.
Imatong Mountains group, Sudan side: Laboni, 1280 m., in fringing forest with *Coffea canephora,* 19.4.1930, *Snowden* 1682 (BM, K); Lotti, no alt., forest, 15.4.1933, *Smith* 31 (K, KHF); Lotti, 1000 m., shrub layer in tropical deciduous forest, 26.3.1950, *Jackson* 1275 (K).
General habitat range: in lowland forest.
General distribution: East Congo [previously Zaire] to South Sudan and Kenya, south to Mozambique and Zambia.

Polygala L.

Polygala abyssinica R. Br. ex Fresen.
FTA 1: 130 (1868); FS: 67 (1929); FPS 1: 71 (1950) {Imatong Mountains, Kipia}; WICKENS 1976: 87; FSo 1: 86 (1993); UKWF: 55 (1994); HYF: 195 (1997).
Imatong Mountains group, Sudan side: without further locality, 2900 m., 12.2.1936, *Johnston* 1521 (K); Mt. Itibol, 1960 m., 14.6.1939, *Andrews* 1992 (K); Kipia, 2440 m., grassland, 29.12.1935, *Thomas* 1814 (BM, K); Kipia, 2680

m., mountain meadow, 12.1936, *MacDonald* 26 (BM); Mt. Kinyeti, 3050 m., 27.7.1939, *Myers* 11,666 (K, WM); Mt. Kinyeti, 3060 m., 12.2.1936, *Johnston* 1524 (K).
Imatong Mountains group, Uganda side: near summit of Mt. Lomwaga, 2450 m., 1963, *Morrison* 2001 (EA) & s.n. (MHU); 4 km. south-east of Lomwaga, no alt., shallow soil over rock in tall grassland, 18.7.1974, *Katende* 2147 (MHU).
General habitat range: in montane grassland.
General distribution: South Sudan and North East Uganda to Ethiopia and Somalia, south to North Tanzania; also in tropical Arabia and North West India.

Polygala albida Schinz
FZ 1,1: 320 (1960); UKWF: 55 (1994).
var. **angustifolia** (Chod.) Exell: FZ 1,1: 322 (1960).
Syn.: *Polygala stanleyana* Chod.: FPNA 1: 428 (1948); FPS 1: 72 (1950); FWTA 1,1: 112 (1954); FCB 7: 250 (1958).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 21.11.1980, *Friis & Vollesen* 380 (C, WM).
General habitat range: in medium-altitude woodland and wooded grassland, often in wet flushes on rocky outcrops.
General distribution: Guinée to Ethiopia, south to Angola, Zambia and Malawi. The species as a whole extends to South Africa.

Polygala erioptera DC.
FS: 67 (1929); FPS 1: 73 (1950); FWTA 1,1: 112 (1954); FCB 7: 255 (1958); FZ 1,1: 316 (1960); FSo 1: 84 (1993); UKWF: 56 (1994); HYF: 195 (1997).
Syn.: [*Polygala triflora* auct., non L.: FTA1: 128 (1868).]
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 3.1.1984, *Kielland-Lund* 545 (C, NLH).
General habitat range: in medium-altitude dry woodland and wooded grassland, often on rocky outcrops.
General distribution: Cape Verde Islands and Senegal to Ethiopia and Somalia, also in Egypt and Socotra, south to South Africa (Transvaal); also in tropical Arabia and India.

Polygala persicariifolia DC.
FTA 1: 129 (1868), pro parte; FS: 67 (1929); FPS 1: 72 (1950); FWTA 1,1: 113 (1954); FCB 7: 254 (1958); FZ 1,1: 322 (1960); WICKENS 1976: 87; UKWF: 55 (1994); HYF: 195 (1997).
Imatong Mountains group, Sudan side: Laboni, no alt., waste ground near cultivations, 14.10. 1938, *Myers* 9717 (K); Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 8.12.1980, *Friis & Vollesen* 765 (C, K, KHF); Palotaka, 1200 m., forest, 3.1.1979, *Shigeta* 133 (EA); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 8.11.1980, *Friis & Vollesen* 16 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude woodland and wooded grassland.
General distribution: Guinée to Ethiopia, south to North Mozambique, Malawi and Zambia; also in India.

Polygala petitiana A. Rich.
FTA 1: 133 (1868); FPNA 1: 431 (1948); FPS 1: 70 (1950); FWTA 1,1: 112 (1954); FCB 7: 278 (1958); WICKENS 1976: 87; FZ 1,1: 334 (1960); UKWF: 55 (1994).
subsp. **parviflora** (Exell) J. Paiva
FZ 1,1: 334 (1960).
Imatong Mountains group, Sudan side: Katire to Itibol, 1940 m., scrub on rocky outcrop, 17.12. 1935, *Thomas* 1639 (K); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia* grassland, on

rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 13.11.1980, *Friis & Vollesen* 194 (BR, C, EA, FT, K, KHF).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 2260 m., open short *Sporobolus festivus* turf over rock, 26.8.1966, *Lock* K4 (EA, MHU).
General habitat range: in montane grassland.
General distribution: South Sudan through West Uganda, East Congo [previously Zaire], Burundi and Tanzania to Zimbabwe.

Polygala sphenoptera Fresen.
FCB 7: 251 (1958); FZ 1,1: 315 (1960); FSo 1: 82 (1993); UKWF: 55 (1994).
Syn.: *Polygala quartiniana* A. Rich.
Didinga Mountains: near Nagichot, 2040 m., upland pasture, 24.4.1939, *Myers* 11,107 (K, WM).
General habitat range: in medium-altitude and montane grassland.
General distribution: Sudan, Ethiopia and Somalia through eastern Africa to Botswana, Namibia and South Africa (Transvaal).

Securidaca L.

Securidaca longipedunculata Fresen.
FTA 1: 134 (1868); FS: 68 (1929); FPS 1: 75 (1950); ITU: 318 (1952); FWTA 1,1: 110 (1954); FCB 7: 280 (1958); FZ 1,1: 305 (1960); Wickens 1976: 87; El Amin 1990: 45; KTSL: 86 (1994).
Imatong Mountains group, Sudan side: Talanga to Katire, 890 m., wooded grassland, 16.12.1935, *Thomas* 1593 (BM, K); Kinyeti Valley north of Katire, 850 m., wooded grassland, 3.3.1982, *Friis & Vollesen* 1085 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).
General habitat range: in lowland and medium-altitude woodland and wooded grassland.
General distribution: Senegal to Ethiopia, south to South Africa and Namibia.

Securidaca welwitschii Oliv.
FTA 1: 135 (1868); FPNA 1: 432 (1948); FWTA 1,1: 110 (1954); FCB 7: 279 (1958); FZ 1,1: 305 (1960); KTSL: 87 (1994).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* climber in forest, 17.2.1982, *Friis & Vollesen* 923 (BR, C, K, KHF) & 20.2.1982, *Friis & Vollesen* 967 (C, K, KHF).
General habitat range: in lowland and medium-altitude forest.
General distribution: Guinée to South Sudan, south to Angola, Congo [previously Zaire], North West Zambia and Uganda. First record from the Sudan.

Order 21. **Saxifragales** Dumort.

Fam. 37. **Crassulaceae** DC.

Crassula L.

Crassula alsinoides (Hook. f.) Engl.
FPNA 1: 230 (1948); FPS 1: 76 (1950) {Imatong Mountains, Kipia}; FCB 2: 570 (1951); FWTA 1,1: 116 (1954); Hedberg 1957: 99; FZ 7,1: 17 (1983); FTEA, Crassulac.: 12 (1987); FE 3: 6 (1989); UKWF: 56 (1994); HYF: 133 (1997).
Syn.: *Tillaea alsinoides* Hook. f.: FTA 2: 387 (1871).
Imatong Mountains group, Sudan side: Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* on moist slope along trail, 8.11.1980, *Friis & Vollesen* 45 (BR, C, EA, K, KHF); Gilo, 1900 m., wet places on paths, 20.6.1958, *Jackson* 3899 (K); Kipia, 2440 m., in scrub, 29.12.1935, *Thomas* 1822 (BM, K); Lolibai Mountain south of Gilo, towards Ingwok

(Kinyeti) peak (3° 58' N, 32° 53' E), 2600 m., near small stream at foot of Kinyeti, 9.6.1984, *Kielland-Lund* 893 (C, NLH); Lowiliwili, 2700 m., in broken montane forest, 14.11.1948, *Jackson* 911 (BM).

General habitat range: in montane grassland, evergreen bushland and forest, especially along streams.

General distribution: Cameroon to Ethiopia and North Somalia, south to South Africa (Transvaal, Natal); also in Madagascar and tropical Arabia.

Crassula schimperi Fisch. & Mey.
FTEA, Crassulac.: 7 (1987); FE 3: 8 (1989); UKWF: 57 (1994); HYF: 133 (1997).
subsp. **phyturus** (Mildbr.) R. Fernandes
FZ 7,1: 8 (1983); FTEA, Crassulac.: 8 (1987); FE 3: 8 (1989).

Imatong Mountains group, Sudan side: Mt. Ibahin, 1980 m., on rocks, 18.12.1935, *Thomas* 1668 (BM, K); along path from Bushbuck Hill to Mt. Konoro, 2300 m., rocky outcrop in *Loudetia* grassland, 5.3.1982, *Friis & Vollesen* 1100 (C, K, KHF); Kipia, 2670 m., rock crevices in forest clearings, 4.7.1947, *MacLeay* 131 (BM); Mt. Kinyeti, near summit, 3000 m., 12.2.1936, *Johnston* 1466 (K); Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 828 (C); summit of Mt. Kinyeti, 3170 m., 21.9.1940, *Tothill* in *Myers* 13,521 (K); summit of Mt. Kinyeti, 3180 m., ericaceous bushland, 15.11.1949, *Jackson* 913 (BM).

Imatong Mountains group, Uganda side: Mt. Lomwaga, 2640 m., on rocks in grassland, 5.4.1945, *Greenway & Hummel* 7288 (EA, K).

General habitat range: in montane grassland and forest, often among rocks.

General distribution: South Sudan, Ethiopia, Socotra and Uganda south to Tanzania; also in tropical Arabia. Species as a whole also in Cameroon, Chad (Tibesti Mts.), East Congo [previously Zaire], Ethiopia; and also in India.

Crassula vaginata Eckl. & Zeyh.
FZ 7,1: 24 (1983); FTEA, Crassulac.: 13 (1987); FE 3: 8 (1989).
Syn.: [*Crassula alba* auct., non Forssk.: FPS 1: 76 (1950) {Imatong Mountains, summit of Mt. Kinyeti}; HEDBERG 1957: 101, pro parte].

Imatong Mountains group, Sudan side: without further locality, 3050 m., 12.2.1936, *Johnston* 1468 (K); hill above bridge on Ngairigi River, 1680 m., short grassland on hillside, 15.6.1953, *Prowse* 289 (KHU); Gilo, 1620 m., montane woodland, 24.6.1947, *MacLeay* 37 (BM); Gilo, 1980 m., burnt grassland, 12.7.1947, *MacLeay* 211 (BM); on Mt. Baghanj, 1830-2130 m., 13.6.1939, *Andrews* 1901 (K); summit of Mt. Kinyeti, 3050 m., 13.12.1935, *Thomas* 1853 (BM, K); Mt. Kinyeti, 3180 m., open montane grassland, 1.1.1939, *MacDonald* 34 (BM); summit of Mt. Kinyeti, 3170 m., 21.9.1949, *Tothill* in *Myers* 13,508 (K); summit of Mt. Kinyeti, 3180 m., grassland, 15.11.1949, *Jackson* 935 (WM).

Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 2000 m., among rocky outcrops, 17.5.1972, *Synnott* 1023 (EA, MHU).

General habitat range: in montane grassland or forest clearings, especially between rocks.

General distribution: Nigeria and Cameroon to Ethiopia, south to Angola, Zambia, Zimbabwe and South Africa (Transvaal, Natal).

Kalanchoe Adans.

Kalanchoe densiflora Rolfe
FTEA, Crassulac.: 41 (1987); FE 3: 23 (1989); UKWF: 58 (1994).
var. **densiflora**
FTEA, Crassulac.: 41 (1987); FE 3: 23 (1989).
Syn.: [*Kalanchoe petitiana* auct., non A. Rich.: CHIPP 1929: 188; FPS 1: 76 (1950) {Imatong Mountains, summit of Mt. Kinyeti}].

Imatong Mountains group, Sudan side: Mt. Kinyeti, 3050 m., in forested ravines, 11.2.1929, *Chipp* 83 (K, WM); Bushbuck Hill, 2300 m., rocky outcrop in *Loudetia arundinacea* grassland with scattered trees, recently burnt, 16.2.1982, *Friis & Vollesen* 916 (C, K).
General habitat range: in montane forest and grassland.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Tanzania. Species as a whole within the same general distribution area.

Kalanchoe glaucescens Britten
FPS 1: 76 (1950); FTEA, Crassulac.: 39 (1987); FE 3: 22 (1989); FSo 1: 91 (1993); UKWF: 58 (1994); HYF: 134 (1997).
Imatong Mountains group, Sudan side: Kinyeti Valley, 5 km. north of Hiliu on road to Torit, 650 m., 6.12.1983, *Kielland-Lund* 237 (C, NLH).
Imatong Mountains group, Uganda side: 2 km. east of Lututuru, near a rivulet, 1400 m., in open woodland, 17.2.1969, *Lye* 2115 (MHU).
Didinga Mountains: rocks north-east of Chukudum (4° 15' N, 33° 27' E), 1100 m., 21.12.1983, *Kielland-Lund* 433 (C, NLH).
General habitat range: in lowland, medium-altitude and montane dry open bushland and grassland, mostly on rocky ground.
General distribution: Congo [previously Zaire] to Ethiopia and Somalia, south to Tanzania; also tropical Arabia.

Kalanchoe laciniata (L.) DC.
FWTA 1,1: 117 (1954); FZ 7,1: 51 (1983); FTEA, Crassulac.: 52 (1987); FE 3: 25 (1989); FSo 1: 93 (1993); UKWF: 58 (1994).
Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., Mt. Aripiwa, 2100 m., rocky outcrop at edge of montane forest, 24.1.1950, *Jackson* 1109 (BM); foothills, above Sadit, 1000 m., rocky soil, 24.1.1950, *Jackson* 1110 (BM).
General habitat range: in lowland and medium-altitude bushland, often among rocks.
General distribution: Nigeria and Cameroon to Ethiopia and Somalia, south to Angola, Namibia, Zimbabwe and Mozambique; also in tropical Arabia and South India.

Kalanchoe lanceolata (Forssk.) Pers.
FPS 1: 79 (1950) {Imatong Mountains, Katire}; FWTA 1,1: 118 (1954); WICKENS 1976: 87; FZ 7,1: 42 (1983); FTEA, Crassulac.: 49 (1987); FE 3: 23 (1989); FSo 1: 92 (1993); UKWF: 58 (1994).
var. **lanceolata**
WICKENS 1976: 87.
Imatong Mountains group, Sudan side: Kinyeti Valley, 10 km. north of Hiliu towards Torit, 650 m., 8.12.1983, *Kielland-Lund* 258 (C, NLH); Katire, 910 m., in scrub, 16.12.1935, *Thomas* 1604 (BM, K); between Katire and Gilo, 1700 m., 26.12.1983, *Kielland-Lund* 473 (NLH); Gilo, at bridge on Ngairigi River,, 1800 m., *Loudetia arundinacea* grassland, on rocky outcrop at edge of upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 20.2.1982, *Friis & Vollesen* 969 (C, K).
General habitat range: in lowland and medium-altitude woodland or grassland, often on heavy clay soil.
General distribution: Guinée to Ethiopia and Somalia, south to Namibia and South Africa (Transvaal, Natal); also in Madagascar, tropical Arabia and India. Species as a whole within the same general area of distribution.

Kalanchoe prittwitzii Engl.
FTEA, Crassulac.: 38 (1987); FE 3: 22 (1989); UKWF: 58 (1994).
Imatong Mountains group, Sudan side: Kipia, 2590 m., edge of montane forest, 1.1939, *MacDonald* 75 (BM).
General habitat range: in medium-altitude or montane grassland and forest, especially at margins.
General distribution: Congo [previously Zaire] to Ethiopia and North Somalia, south to Tanzania.

Sedum L.

Sedum ruwenzoriense Bak.
FPNA 1: 223 (1948); FCB 2: 558 (1951); HEDBERG 1957: 97; FTEA, Crassulac.: 24 (1987); UKWF: 57 (1994).
Didinga Mountains: Mt. Lotuke, summit, 2590 m., mats on rock in *Podocarpus latifolius* forest, 18.4.1939, *Myers* 10,899 (?K, not traced); Mt. Lotuke, 2740 m., on rocks at summit, 3.1939, *MacDonald* 101 (BM); summit of Mt. Lotuke, 2795 m., in rock crevices, 30.3.1950, *Jackson* 1336 (WM).
General habitat range: in montane forest and grassland, especially on or between rocks.
General distribution: East Congo [previously Zaire] to South Sudan, south to Kenya.

Order 22. **Sarraceniales** Bromhead

Fam. 38. **Droseraceae** Salisb.

Drosera L.

Drosera indica L.
FS: 69 (1929); FPS 1: 82 (1950); FCB 2: 551 (1951); FWTA 1,1: 121 (1954); FTEA, Droserac.: 2 (1959).
Imatong Mountains group, Sudan side: Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees, on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 30.11.1980, *Friis & Vollesen* 564 (C).
General habitat range: in lowland swamps and on moist rocks.
General distribution: Senegal to South Sudan, south to Mozambique; also in Madagascar and widespread in tropical Asia.

Order 23. **Podostemales** Lindl.

Fam. 39. **Podostemaceae** Rich. ex C. Agardh

Sphaerothylax Bisch. ex Krauss

Sphaerothylax abyssinica (Wedd.) Warming
FTA 6,1: 128 (1909); UKWF: 59 (1994).
Syn.: [*Inversodicraea sp.* sensu FPS 1: 82 (1950) {Imatong Mountains, River Narije}].
Imatong Mountains group, Sudan side: near pool in Kinyeti River, Gilo, 1750 m., 26.12.1983, *Kielland-Lund* 484 (C, NLH); Itibol to Ibahin, Narije River [Ngairigi River], 1860-1950 m., on rocks in stream, 18.12.1935, *Thomas* 1660 (K); Itibol to Issore, near bridge on Kinyeti River, 1850 m., in a waterfall formed by the river, 22.11.1980, *Friis & Vollesen* 401 (BR, C, EA, FT, K, KHF); upper Kinyeti Valley, Gilo Pool (4° 02' N, 32° 50' E), no alt. , on rocks in pool, 15.1.1984, *Kielland-Lund* 659 (C, NLH); Gilo to Mt. Konoro, at Ngairigi River, 1800 m., on rocks in a waterfall formed by the river, 23.11.1980, *Friis & Vollesen* 420 (BR, C, EA, FT, K, KHF).
General habitat range: growing densely appressed to rocks in fast running streams, often at waterfalls.
General distribution: Sudan and Ethiopia, through eastern Africa to Zimbabwe; also in Madagascar.

Tristichia Thouars

Tristichia trifaria (Bory ex Willd.) Spreng.
FTA 6,1: 121 (1909); FPS 1: 83 (1950); FWTA 1,1: 124 (1954); WICKENS 1976: 88; FC 30: 98 (1987); UKWF: 48 (1994).
Syn.: *Tristichia hypnoides* (St.-Hil.) Spreng.: FTA 6,1: 121 (1909); FS: 70 (1929).
Imatong Mountains group, Sudan side: near Katire, in Kinyeti River, 910 m., on rocks in stream

just above water, 16.12.1935, *Thomas* 1606 (BM, K); Lomariti, 1280 m., on rocks in stream, 23.12.1935, *Thomas* 1752 (BM, K); River Lerua, 910 m., on rocks, 24.12.1935, *Thomas* 1755 (BM, K); Kimoru River, 910 m., on rocks in stream, 26.12.1935, *Thomas* 1762 (BM); River Torit, 610 m., on rocks, 26.12.1935, *Thomas* 1763 (BM, K); River Ingoma, 700 m., 27.12. 1935, *Thomas* 1764 (BM, K); Talanga 950 m., in waterfall on small brook between rocks, 2.12.1980, *Friis & Vollesen* 636 (BR, C, K, KHF); Talanga, 950 m., on rocks in small river, 4.12.1980, *Friis & Vollesen* 678 (BR, C, EA, K, KHF); Gilo to Mt. Konoro, at Ngairigi River, 1800 m., on rocks in waterfall, 23.11.1980, *Friis & Vollesen* 421 (BR, C, EA, FT, K, KHF).

General habitat range: growing on rocks in fast running streams, often at waterfalls.

General distribution: Sierra Leone to Ethiopia, south to South Africa; also in Madagascar, Australia, and in Central and South America.

Order 24. **Caryophyllales** Perleb

Fam. 40. **Caryophyllaceae** Juss.

Cerastium L.

Cerastium afromontanum T.C.E. Fr. & Weim.
FTEA, Caryophyllac.: 21 (1956); Hedberg 1957: 79; UKWF: 61 (1994).

Imatong Mountains group, Sudan side: Mt. Kinyeti, 2500 m., upland rain forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri, Syzygium guineense* subsp. *afromontanum* and *Dombeya torrida*, 12.12.1980, *Friis & Vollesen* 850 (BR, C, K, KHF); Mt. Kinyeti, summit, 3190 m., 27.7.1939, *Myers* 11,653B (K).

General habitat range: in montane grassland, evergreen bushland and forest.

General distribution: South Sudan, Uganda, Kenya and Tanzania.

Cerastium octandrum Hochst. ex A. Rich.
FPS 1: 86 (1950) {Imatong Mountains, summit of Mt. Kinyeti}; FWTA 1,1: 129 (1954); FTEA, Caryophyllac.: 21 (1956); Hedberg 1957: 77; Wickens 1976: 88; UKWF: 61 (1994); HYF: 91 (1997).

Imatong Mountains group, Sudan side: Mt. Kinyeti, summit, 3180 m., 27.7.1939, *Myers* 11,653A (K); summit of Mt. Kinyeti, 3180 m., rocky summit, 15.11.1949, *Jackson* 923 (BM).

General habitat range: in montane grassland, evergreen bushland and forest.

General distribution: Cameroon to Ethiopia, south to Tanzania and East Congo [previously Zaire]; also in tropical Arabia.

Drymaria Willd. ex Schult.

Drymaria cordata (L.) Willd. ex Roem. & Schult.
FTA 1: 143 (1868); FPNA 1: 156 (1948); FPS 1: 86 (1950) {Imatong Mountains, Atiaro}; FCB 2: 139 (1951); FWTA 1,1: 131 (1954); FTEA, Caryophyllac.: 9 (1956); FZ 1,2: 344 (1961); FG 7: 72 (1963); Wickens 1976: 88; UKWF: 60 (1994).

Imatong Mountains group, Sudan side: along Kinyeti River, 1830-2140 m., in forest, 15.6.1939, *Andrews* 2027 (K); Upper Kinyeti Valley, above Gilo Pool (4° 02' N, 32° 50' E), no alt., 15.1.1984, *Kielland-Lund* 657 (C, NLH); Itibol to Ibahin, Atiaro, 1960 m., *Acacia abyssinica* forest, 18.12.1935, *Thomas* 1656 (K).

Imatong Mountains group, Uganda side: without further locality, 2630 m., grassland, 4.1938, *Eggeling* 3572 (K).

General habitat range: in medium-altitude and montane evergreen bushland and forest, also a weed in cultivated areas.

General distribution: Guinée to Ethiopia, south to South Africa; also widespread in tropical Asia and America.

Minuartia L.

Minuartia filifolia (Forssk.) Mattf.
FPS 1: 86 (1950); FTEA, Caryophyllac.: 17 (1956); WICKENS 1976: 89; HYF: 91 (1997).
Syn.: *Arenaria schimperi* (Hochst.) Oliv.: FTA 1: 142 (1868); FS: 70 (1929).
Imatong Mountains group, Sudan side: summit of Mt. Kinyeti, 3180 m., between rocks, 15.11. 1949, *Jackson* 932 (WM).
General habitat range: in montane grasslands, often in moist places.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Kenya; also in tropical Arabia.

Polycarpaea Lam.

Polycarpaea corymbosa Lam.
FTA 1: 145 (1868), pro parte; FS: 71 (1929); FPS 1: 87 (1950); FCB 2: 145 (1951); FWTA 1,1: 132 (1954); FTEA, Caryophyllac.: 8 (1956); FZ 1,2: 343 (1961); WICKENS 1976: 89; UKWF: 60 (1994).
Imatong Mountains group, Sudan side: Laboni, 1100 m., along path in forest, 23.12.1935, *Thomas* 1748 (BM, K); 3 km. south of Torit, 650 m, 13.12.1983, *Kielland-Lund* 313 (C, NLH).
General habitat range: in lowland and medium-altitude woodlands and grasslands, and along paths in forest.
General distribution: Senegal to Ethiopia, south to South Africa; also widely distributed in tropical Asia and America.

Polycarpaea eriantha A. Rich.
FS: 71 (1929); FPS 1: 87 (1950); FCB 2: 144 (1951); FWTA 1,1: 132 (1954); FTEA, Caryophyllac.: 7 (1956); FZ 1,2: 341 (1961); WICKENS 1976: 89; UKWF: 60 (1994).
Syn.: [*Polycarpaea corymbosa* auct., non Lam.: FTA 1: 145 (1868), pro parte].
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, 700 m., in compound, 26.11.1983, *Kielland-Lund* 49 (C, NLH).
Imatong Mountains group, Uganda side: North of Madi Opei, 1070 m., in dry scrub with grass, 8.1960, *M'Carthy* 15 (MHU).
General habitat range: in dry bushland and disturbed sites at low and medium altitudes.
General distribution: Senegal to Ethiopia, south to South Africa.

Sagina L.

Sagina abyssinica Hochst. ex A. Rich.
FTA 1: 142 (1868); FPS 1: 89 (1950) {Imatong Mountains, Kipia}; FCB 2: 132 (1951); FWTA 1,1: 130 (1954); FTEA, Caryophyllac.: 15 (1956); HEDBERG 1957: 81; UKWF: 61 (1994).
Imatong Mountains group, Sudan side: Kipia, 2440 m., in scrub, 29.12.1935, *Thomas* 1809 (BM); summit of Mt. Kinyeti, 3180 m., rocky summit, 15.11.1949, *Jackson* 932 (BM).
Imatong Mountains group, Uganda side: Lomwaga, 2590 m., 6.1942, *Eggeling* 5073 (EA, MHU).
General habitat range: in montane grassland, often in moist places.
General distribution: Cameroon to Ethiopia, south to East Congo [previously Zaire] and Tanzania.

Silene L.

Silene burchellii Otth ex DC.
FTA 1: 138 (1868); FCB 2: 150 (1951); FTEA, Caryophyllac.: 33 (1956); HEDBERG 1957: 82; FZ 1,2: 352 (1961); WICKENS 1976: 89; UKWF: 62 (1994); HYF: 90 (1997).
Syn.: *Silene chirensis* A. Rich.: FPS 1: 90 (1950) {Imatong Mountains, summit of Mt. Kinyeti}.
Imatong Mountains group, Sudan side: Bushbuck Hill, 2300 m., *Loudetia arundinacea* grassland with scattered trees, recently burnt, 16.2.1982, *Friis & Vollesen* 910 (C, KHF); Kipia, 2930 m., in

grassy clearings of montane forest, 4.7.1947, *MacLeay* 180 (BM); Mt. Kinyeti, below summit, 3100 m., in ericaceous bushland, 15.11.1949, *Jackson* 959 (BM); summit of Mt. Kinyeti, 3080 m., rocky summit, 30.12.1935, *Thomas* 1847 (BM, K); Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 834 (C).

Imatong Mountains group, Uganda side: without further locality, 2290 m., grassland, 4.1938, *Eggeling* 3559 (K); Langia, 1830-2740 m., grassland, 4.1943, *Purseglove* 1419 (EA, K); Lomwaga, 2590 m., in *Hyparrhenia-Exotheca* grassland, 1945, *Greenway & Hummel* 7274 (EA, K); 2 km. north-east of Lututuru, near end of road, 1800 m., grassland, 17.2.1969, *Lye* 2060 (EA, MHU, NLH).

Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 2140 m., montane grassland, 4.1960, *Wilson* 890 (EA).

General habitat range: in montane grassland, often in damp places or among rocks.

General distribution: East Congo [previously Zaire] to Ethiopia and Somalia, south to Angola and South Africa (Transvaal, Natal, Cape Prov.); also in tropical Arabia.

Stellaria L.

Stellaria mannii Hook. f.

FTA 1: 141 (1868); FWTA 1,1: 129 (1954); FTEA, Caryophyllac.: 24 (1956); FZ 1,2: 349 (1961); UKWF: 61 (1994).

Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* in small forest swamp, 1.12.1980, *Friis & Vollesen* 615 (BR, C, EA, K, KHF).

General habitat range: in lowland, medium-altitude and montane forest.

General distribution: Cameroon to Ethiopia, south to Zimbabwe and Malawi; also in Madagascar. First record from the Sudan.

Fam. 41. **Molluginaceae** Hutch.

Gisekia L.

Gisekia pharnaceoides L.

FTA 2: 593 (1871); FPS 1: 91 (1950); FCB 2: 102 (1951); FTEA, Aizoac.: 5 (1961); FWTA 1,1: 134 (1954); FZ 4: 523 (1978); FSo 1: 118 (1993); UKWF: 62 (1994); HYF: 80 (1997).

var. **pharnaceoides**

FTEA, Aizoac.: 5 (1961).

Syn.: *Gisekia rubella* Moq.: FTA 2: 594 (1871); FPS 1: 92 (1950); FCB 2: 103 (1951).

Imatong Mountains group, Sudan side: Kinyeti Valley, piedmont of hill west of Hiliu (4° 17' N, 32° 40' E), no alt., 14.1.1984, *Kielland-Lund* 633 (C, NLH).

General habitat range: in lowland and medium-altitude woodland and wooded grassland, most frequently along roadsides, in waste places and as a weed in cultivated ground.

General distribution: Senegal to Ethiopia and Somalia, south to Botswana and South Africa; also in Madagascar, tropical Arabia and India.

Mollugo L.

Mollugo nudicaulis Lam.

FTA 2: 591 (1871); FWTA 1: 134 (1954); FPS 1: 94 (1950); FCB 2: 110 (1951); FTEA, Aizoac.: 17 (1961); FSo 1: 110 (1993); UKWF: 63 (1994); HYF: 80 (1997).

Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 6.1.1984, *Kielland-Lund* 602 (C, NLH); Kinyeti Valley, Hiliu, between compound and river, 700 m., 28.11.1983, *Kielland-Lund* 76 (C, NLH); Hiliu, south-east of compound, 700 m., near stream, 5.12.1983, *Kielland-Lund* 207 (C,

NLH); south west of Hiliu, (4° 16' N, 32° 48' E), no alt., at big stone in flat area, 25.5.1984, *Kielland-Lund* 729 (C, NLH).
General habitat range: in lowland and medium-altitude waste places and cultivations, frequent in dry streambeds and along roadsides in sandy places.
General distribution: Pantropical.

Fam. 42. **Portulacaceae** Juss.

Portulaca L.

Portulaca oleracea L.
FTA 1: 148 (1868); FS: 75 (1929); FPNA 1: 152 (1948); FPS 1: 97 (1950); FWTA 1,1: 137 (1954); FZ 1,2: 363 (1961); FG 7: 66 (1963); WICKENS 1976: 90; UKWF: 64 (1994); HYF: 89 (1997).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., at dam, 6.1.1984, *Kielland-Lund* 601 (C, NLH); Palotaka, 1200 m., weed, 1979, *Shigeta* 47 (?EA, determined and listed by M.G. Gilbert, not traced); Kinyeti Valley, south west of Hiliu (4° 16' N, 32° 48' E), no alt., big stone in flat area, 25.5.1984, *Kielland-Lund* 735 (C, NLH).
General habitat range: in a wide range of lowland and medium-altitude habitats, especially as a weed of cultivations and in disturbed places.
General distribution: Senegal to Ethiopia and South Somalia, south to South Africa; in all parts of the tropical and warm temperate regions of the world.

Portulaca quadrifida L.
FCap 2: 382 (1862); FTA 1: 149 (1868); FS: 75 (1929); FPNA 1: 152 (1948); FPS 1: 98 (1950); FCB 2: 125 (1951); FWTA, 1,1: 137 (1954); FZ 1,2: 365 (1961); FSo 1: 125 (1993); UKWF: 64 (1994); HYF: 89 (1997).
Imatong Mountains group, Sudan side: plain south east of Torit, between Torit and Ngarama (4° 22' N, 32° 37' E), no alt., 28.5.1984, *Kielland-Lund* 773 (C, NLH).
General habitat range: in lowland dry or subdesert grassland, wooded grassland and evergreen bushland, often in sandy places, along temporary steams and at pools; also a weed in cultivated areas and waste places near human dwellings.
General distribution: Senegal to Ethiopia and Somalia, south to South Africa; also in tropical Asia.

Talinum Adans.

Talinum caffrum (Thunb.) Eckl. & Zeyh.
FTA 1: 150 (1868); FS: 75 (1929); FPS 1: 100 (1950); FZ 1,2: 370 (1961); UKWF: 65 (1994).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, near compound, no alt., 26.5. 1984, *Kielland-Lund* 766 (C, NLH); south west of Hiliu (4° 16' N, 32° 48' E), near big stone in flat area, 25.5.1984, *Kielland-Lund* 736 (C, NLH).
Imatong Mountains group, Uganda side: Agoro, 1380 m., rocky hillside, 12.11.1945, *Thomas* 4361 (EA, K); near Agoro, in dry plains, no date, *Eggeling* 1744 (K).
General habitat range: in lowland bushland and on rocky hills.
General distribution: South Sudan and South West Ethiopia, through eastern Africa to South Africa.

Talinum portulacifolium (Forssk.) Schweinf.
FPNA 1: 150 (1948); FPS 1: 100 (1950); FCB 2: 119 (1951); FWTA 1,1: 137 (1954); FZ 1,2: 372 (1961); FG 7: 69 (1963); FSo 1: 120 (1993); UKWF: 65 (1994); HYF: 89 (1997).
Syn.: *Talinum cuneifolium* Willd.: FTA 1: 150 (1868); FS: 75 (1929).
Imatong Mountains group, Sudan side: near Mo-

longori, 750 m., rocky outcrop, 11.6.1939, *Andrews* 1802 (K); Kinyeti Valley, 2 km. from junction of Katire and Ngarama roads, along Imatong road and 500 m. east of road (4° 21' N, 32° 39' E), no alt., 26.5.1984, *Kielland-Lund* 756 (C, NLH); Hiliu, in compound, 700 m., 28.11. 1983, *Kielland-Lund* 69 (C, NLH).
General habitat range: in lowland and medium-altitude deciduous bushland and wooded grassland.
General distribution: Senegal to Ethiopia and Somalia, south to South Africa (Cape Province); also in tropical Arabia and India.

Order 25. **Polygonales** Dumort.

Fam. 43. **Polygonaceae** Juss.

Fagopyrum Mill.
Syn.: *Harpagocarpus* Hutch. & Dandy

Fagopyrum snowdenii (Hutch. & Dandy) S.-P. Hong
Syn.: *Harpagocarpus snowdenii* Hutch. & Dandy: FCB 1: 423 (1948); FWTA 1,1: 140 (1954); FTEA, Polygonac.: 4 (1958); UKWF: 66 (1994).
Imatong Mountains group, Sudan side: Itibol to Issore, near bridge on Kinyeti River, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 22.11.1980, *Friis & Vollesen* 403 (C, K, KHF); valley between Gilo and Mt. Konoro, 1700 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* at small stream, 16.3.1982, *Friis & Vollesen* 1224 (BR, C, K, KHF).
General habitat range: in medium-altitude and montane forest.
General distribution: Cameroon to South Sudan, south to East Congo [previously Zaire] and Tanzania. First record from the Sudan.

Persicaria (L.) Mill.
Syn.: *Polygonum* L. pro parte

Persicaria decipiens (R. Br.) K.L. Wilson
Syn.: *Polygonum decipiens* R. Br. *Polygonum salicifolium* Willd.: FTA 6,1: 107 (1909); FCB 1: 413 (1948); FPNA 1: 119 (1948); FPS 1: 102 (1950); FWTA 1,1: 141 (1954); FTEA, Polygonac.: 17 (1958); FG 7: 14 (1963); WICKENS 1976: 89; FSo 1: 176 (1993); UKWF: 67 (1994). *Persicaria salicifolia* (Willd.) Assenov, nom. illeg., non S.F. Gray. *Polygonum serrulatum* Lag.: FTA 6,1: 107 (1909); FS: 76 (1929).
Imatong Mountains group, Sudan side: Gilo, stream below village, 1650 m., on damp ground, 28.6.1947, *MacLeay* 111 (BM); Gilo, at bridge on Ngairigi River, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* in swampy area along the river, 20.2.1982, *Friis & Vollesen* 971 (BR, C, K, KHF).
Didinga Mountains: rocks north east of Chukudum (4° 15' N, 33° 27' E), 1100 m., 21.12.1983, *Kielland-Lund* 427 (NLH).
General habitat range: in medium-altitude and montane forest, evergreen bushland, woodland and wooded grassland, associated with streams and marshy places.
General distribution: Senegal to Ethiopia and North Somalia, south to South Africa; also in tropical Asia, Australia and America.

Persicaria setosula (A. Rich.) K.L. Wilson
Syn.: *Polygonum setosulum* A. Rich.: UKWF: 67 (1994). *Polygonum setulosum* A. Rich., orth. mut.: FTEA, Polygonac.: 22 (1958); WICKENS 1976: 90. [*Polygonum acuminatum* auct., non Kunth: FTA 6,1: 112 (1909); FS: 77 (1929); FPS 1: 103 (1950). *Polygonum aculeatum* Kunth, sphalm. pro *Polygonum acuminatum* auct., non H.B.K.: JACKSON 1965: 368 {Imatong Mountains}. *Polygonum barbatum* auct, non L.: FTA 6,1: 112 (1909); FS: 76 (1929); FPS 1: 103 (1950). *Polygonum glabrum* auct., non Willd.: FS: 77 (1929); FPS 1: 103 (1950). *Polygonum*

senegalensis auct., non Meisn.: FS: 76 (1929); FPS 1: 103 (1950)].

Imatong Mountains group, Sudan side: Acholi Mts., Upper Talanga Tea Project, 1800 m., swamp edge, 11.1981, *Howard* UTT 25 (BR, C, EA, FT, K); Gilo to Mt. Konoro, 1850 m., seepage meadow on edge between upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea* and grassland with *Loudetia arundinacea,* 18.11.1980, *Friis & Vollesen* 310 (BR, C, K, KHF); Gilo, at bridge on Ngairigi River, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* in swampy area along the river, 20.2.1982, *Friis & Vollesen* 970 (C, K); swamp near Mt. Garia, 1830-2130 m., 13.6. 1939, *Andrews* 1869 (K); second rest-house from Logoforok, 2010 m., 24.7.1939, *Myers* 11,559 (K).

Imatong Mountains group, Uganda side: 2 km. east of Lututuru, near a rivulet, 1400 m., in open woodland, 17.2.1969, *Lye* 2107 (MHU).

Didinga Mountains: Iwowa, 1620 m., at stream edge, 23.4.1939, *Myers* 11,082 (K).

General habitat range: in medium-altitude and montane forest, bushland, woodland and wooded grassland, associated with streams and marshes.

General distribution: widespread in tropical Africa.

Rumex L.

Rumex abyssinicus Jacq.

FTA 6,1: 114 (1909); FS: 77 (1929); FCB 1: 398 (1948); FPNA 1: 112 (1948); FPS 1: 104 (1950) {Imatong Mountains}; FWTA 1,1: 139 (1954); FTEA, Polygonac.: 7 (1958); FG 7: 8 (1963); WICKENS 1976: 90; UKWF: 66 (1994).

Imatong Mountains group, Sudan side: "high upon the Imatong Hills", 1929, *Hunter* in *Simpson* 7382 (K); between Katire and Gilo, 1700 m., 26.12.1983, *Kielland-Lund* 483 (C, NLH); Mt. Itibol, 2000 m., 15.6.1939, *Andrews* 2009 (K, WM); Kipia, 2740 m., rest house clearing, 26.7.1939, *Myers* 11,616 (K, WM); Gilo, 1900 m., edge of grassland, 27.9.1954, *Jackson* 413 (BM, WM); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 9.11.1980, *Friis & Vollesen* 87 (C, K, KHF).

General habitat range: in medium-altitude and montane evergreen bushland, forest clearings and along forest edges.

General distribution: Nigeria and Cameroon to Ethiopia, south to South Africa; also in Madagascar. The only other locality for this species in the Sudan is on Jebel Marra.

Rumex nepalensis Spreng.

FTA 6,1: 117 (1909); FS: 78 (1929); FPS 1: 105 (1950).

Syn.: *Rumex bequaertii* De Wild.: FCB 1: 400 (1948); FPNA 1: 116 (1948); FPS 1: 105 (1950); FWTA 1,1: 139 (1954); FTEA, Polygonac.: 8 (1958); WICKENS 1976: 90.

Imatong Mountains group, Sudan side: at Ngairigi River, 1600 m., on alluvial ground along stream, 8.1.1950, *Jackson* 1035 (BM, KHF); Gilo, no alt., swampy place, no date, *Jackson* 3134 (K); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 9.11. 1980, *Friis & Vollesen* 93 (C, K, KHF).

Didinga Mountains: Iwowa, 1620 m., along stream, 23.4.1939, *Myers* 11,081 (K); Nagichot, near farm (4° 16' N, 33° 35' E), 1950 m., 17.12.1983, *Kielland-Lund* 348 (C, NLH).

General habitat range: in medium-altitude and montane evergreen bushland, forest clearings and along forest edges.

General distribution: Cameroon to Ethiopia, south to South Africa; also in Madagascar and the mountains of tropical Asia. The only other locality of this species in the Sudan is on Jebel Marra.

Order 26. **Chenopodiales** Dumort.

Fam. 44. **Phytolaccaceae** R. Br.

Hilleria Vell.

Hilleria latifolia (Lam.) H. Walt.
FPNA 1: 143 (1948); FPS 1: 107 (1950); FCB 2: 98 (1951); FWTA 1,1: 143 (1954); JACKSON 1956: 355 {Talanga, Lotti}; FG 7: 60 (1963); FTEA, Phytolacc.: 6 (1971); FZ 9,1: 167 (1988); UKWF: 68 (1994).
Syn.: *Molana nemoralis* Mart.: FTA 6,1: 95 (1909); FS: 78 (1929).
Imatong Mountains group, Sudan side: Lotti, no alt., in forest, 25.12.1937, *Sanderson* 71 (KHF); Lotti, no alt., in forest, 11.10.1938, *Myers* 9659 (K, WM); Lotti no alt., in forest, 8.6.1939, *Andrews* 1697 (K, WM); Talanga, 1070 m., in forest undergrowth, 14.7.1947, *MacLeay* 241 (BM); Talanga, 1000 m., in forest understorey, 8.11.1948, *Jackson* 496 (BM, WM); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* on forest floor, 27.11.1980, *Friis & Vollesen* 509 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude forest.
General distribution: Liberia to Ethiopia, south to South Africa; also in Madagascar and tropical South America.
Note. Often considered to have been introduced from South America, but occurs widely in tropical Africa in undisturbed or very little disturbed habitats which indicates that it is indigenous; see also discussion in FTEA, Phytolacc.: 6 (1971).

Phytolacca L.

Phytolacca dodecandra L'Hér.
FTA 6,1: 97 (1909); FPNA 1: 144 (1948); FPS 1: 106 (1950) {Imatong Mountains, Gilo}; FCB 2: 94 (1951); FWTA 1,1: 143 (1954); FG 7: 56 (1963); FTEA, Phytolacc.: 2 (1971); FZ 9,1: 164 (1988); EL AMIN 1990: 45; UKWF: 68 (1994); KTSL: 89 (1994).
Imatong Mountains group, Sudan side: Gilo, 1900 m., in *Albizia* forest regrowth, 20.1.1949, *Jackson* 602 (BM, KHF); Gilo, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* at forest edges and along roadsides, 19.2.1982, *Friis & Vollesen* 964 (C).
General habitat range: in a wide range of habitats, often associated with evergreen bushland or riverine vegetation.
General distribution: Guinée to Ethiopia, south to South Africa; also in Madagascar.

Fam. 45. **Chenopodiaceae** Vent.

Chenopodium L.

Chenopodium opulifolium Schrad. ex Koch & Ziz
FTA 6,1: 78 (1909); FPNA 1: 123 (1948); FCB 2: 7 (1951); FTEA, Chenopodiac.: 7 (1954); WICKENS 1976: 91; FSo 1: 128 (1993); UKWF: 68 (1994); HYF: 82 (1997).
Syn.: *Chenopodium mucronatum* Thunb. var. *subintegrum* Aellen pro parte: FPS 1: 109 (1950) {Didinga Mountains, Nagichot}.
Didinga Mountains: near Nagichot, 2040 m., upland pasture, 24.4.1939, *Myers* 11,104 (K).
General habitat range: in a wide range of disturbed habitats at montane altitudes.
General distribution: Cameroon to Ethiopia and North Somalia, south to Angola, Zambia and Zimbabwe; also in the warm parts of Europe and in tropical Arabia, eastwards to India and Mongolia, and also introduced to the warm parts of North America.

Chenopodium procerum Hochst. ex Moq.
FCB 2: 6 (1951); FTEA, Chenopodiac.: 11 (1954); UKWF: 69 (1994); HYF: 82 (1997).
Didinga Mountains: near Nagichot, 2040 m., upland pasture, 24.4.1939, *Myers* 11,103 (K).
General habitat range: in montane grassland or as a weed in cultivated areas.
General distribution: South Sudan to Ethiopia, south to Angola and Malawi; also in tropical Arabia.

Chenopodium pumilio R. Br.
FTEA, Chenopodiac.: 13 (1954); UKWF: 69 (1994).
Imatong Mountains group, Sudan side: Gilo to Mt. Konoro, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 23.11.1980, *Friis & Vollesen* 409 (BR, C, K, KHF); between Gilo and Itibol, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* along trail in forest and in old cultivations, 26.2.1982, *Friis & Vollesen* 1028 (BR, C, K, KHF).
General habitat range: in disturbed habitats associated with medium-altitude or montane forest (forest paths).
General distribution: indigenous in Australia and New Zealand; now widely introduced throughout the tropics. First record from the Sudan.

Chenopodium schraderianum Schult.
FTA 6,1: 80 (1909); FS: 79 (1929); FPS 1: 109 (1950) {Imatong Mountains, Itibol}; FCB 2: 4 (1951); FTEA, Chenopodiac.: 12 (1954); WICKENS 1976: 91; UKWF: 69 (1994).
Imatong Mountains group, Sudan side: without further locality, 1520-1830 m., 12.6.1939, *Andrews* 1837 (K); Itibol, 1550 m., farmland, 17.12.1935, *Thomas* 1614 (K); at road between Gilo and Itibol, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* edge of old cultivation, 26.2.1982, *Friis & Vollesen* 1034 (BR, C, K, KHF).
General habitat range: in medium-altitude and montane grasslands, especially in disturbed sites.
General distribution: South Sudan and Ethiopia south to Angola and South Africa (East Cape Prov.); sometimes introduced to Europe.

Fam. 46. **Amaranthaceae** Juss.

Achyranthes L.

Achyranthes aspera L.
FTA 6,1: 63 (1909); FS: 84 (1929); FPNA 1: 135 (1948); FPS 1: 113 (1950); FCB 2: 53 (1951); FWTA 1,1: 152 (1954); FG 7: 37 (1963); FC 17: 31 (1974); WICKENS 1976: 91; FTEA, Amaranthac.: 101 (1985); UKWF: 73 (1994); HYF: 88 (1997).
var. **aspera**
FC 17: 31 (1974); FTEA, Amaranthac.: 102 (1985).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, 700 m., waste ground in compound, 26.11.1983, *Kielland-Lund* 44 (C, NLH).
Didinga Mountains: Kalamulinga, north of Kapoeta, no alt., in *Acacia spirocarpa* woodland, 30.8.1941, *Myers* 13,973 (K); between Nagichot and Duguru village (4° 16' N, 33° 35' E), 2000 m., 17.12.1983, *Kielland-Lund* 357 (C, NLH).
General habitat range: in disturbed places in a range of lowland and medium-altitude habitats.
General distribution: distributed as for species as a whole.
var. **sicula** L. f.
FTEA, Amaranthac.: 104 (1985).
Imatong Mountains group, Sudan side: without further locality, 2440 m., 10.2.1936, *Johnston* 1484 (K); Katire to Itibol, near Itibol camp, 1940 m., in scrub, 17.12.1935, *Thomas* 1637 (K); Kipia, 2680 m., forest edge, 1.1939, *MacDonald* 64 (BM); Kipia, 2740 m., grassland, 6.7.1947, *MacLeay* 190 (BM); Kipia, 2750 m.,

edge of rest-house clearing, 26.7.1939, *Myers* 11,617 (K, WM).
Imatong Mountains group, Uganda side: at Agoro, 1980 m., no date, *Eggeling* 818 (K, MHU).
General habitat range: in disturbed habitats, often at edge of medium-altitude or montane forest.
General distribution: species as a whole (and most infraspecific taxa) distributed practically throughout the tropics and warm regions of the world.

Alternanthera Forssk.

Alternanthera pungens Kunth
FTEA, Amaranthac.: 122 (1985); UKWF: 74 (1994); HYF: 88 (1997).
Syn.: *Alternanthera repens* (L.) Link, non Gmel.: FPS 1: 116 (1950); FCB 2: 76 (1951); FWTA 1,1: 154 (1954); FG 7: 43 (1963); FC 17: 54 (1974).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, 700 m., waste ground in compound, 21.11.1983, *Kielland-Lund* 6 (C, NLH).
General habitat range: in disturbed habitats, especially areas trampled by cattle, along roads or in cultivations at lowland and medium-altitude.
General distribution: this species is presumably of tropical American origin, but has become widely naturalised elsewhere, and is now widespread throughout the tropics of the world.

Amaranthus L.

Amaranthus dubius Thell.
FCB 2: 30 (1951); FC 17: 18 (1974); FTEA, Amaranthac.: 27 (1985); FSo 1: 143 (1993); UKWF: 71 (1994).
Syn.: [*Amaranthus patulus* auct., non Bertol.: FTA 6,1: 33 (1909).]
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, near compound, 700 m., 10.12. 1983, *Kielland-Lund* 295 (C, NLH).
General habitat range: in lowland and medium-altitude cultivations as a weed, also in waste places near villages and along roadsides, at forest margins, and in sandy streambeds.
General distribution: an almost pantropical weed, probably of American origin; also sometimes introduced in the temperate region.

Amaranthus hybridus L.
FPS 1: 116 (1950); FCB 2: 27 (1951); FWTA 1,1: 148 (1954); FG 7: 29 (1963); FC 17: 22 (1974); WICKENS 1976: 92; FTEA, Amaranthac.: 25 (1985); FSo 1: 143 (1993); UKWF: 71 (1994); HYF: 86 (1997).
subsp. **hybridus**
FWTA 1,1: 148 (1954); FC 17: 22 (1974); WICKENS 1976: 92; FTEA, Amaranthac.: 25 (1985); UKWF: 71 (1994).
Imatong Mountains group, Sudan side: near Lotti rest house, 8.6.1939, *Andrews* 1693 (K, WM).
subsp. **cruentus** (L.) Thell.
FPNA 1: 129 (1948); FCB 2: 27 (1951); FWTA 1,1: 148 (1954); FG 7: 29 (1963); FC 17: 23 (1974); FTEA, Amaranthac.: 26 (1985); FSo 1: 143 (1993).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., weed, 1979, *Shigeta* 164 (?EA, determined and listed by M.G. Gilbert, not traced).
General habitat range: in disturbed habitats or cultivations at lowland and medium-altitude.
General distribution: this species is presumably of Central American origin, but has become widely naturalised elsewhere, and is now widespread in the tropics and warm temperate parts of the world.

Amaranthus spinosus L.
FTA 6,1: 32 (1909); FPS 1: 116 (1950); FCB 2: 31 (1951); FWTA 1: 148 (1954); WICKENS 1976: 92; FTEA, Amaranthac.: 26 (1985); UKWF: 71 (1994); HYF: 87 (1997).
Imatong Mountains group, Sudan side: Kinyeti

Valley, near Kinyeti River 5 km. south of Hiliu, 700 m., 6.12.1983, *Kielland-Lund* 228 (C, NLH); Hiliu, near compound, 700 m., 10.12.1983, *Kielland-Lund* 294 (C, NLH).
General habitat range: in lowland and medium-altitude cultivations as a weed, also in waste places and along roadsides, in open places in grassland and along rivers.
General distribution: a pantropical weed often also found in the subtropical regions, and occasionally introduced into the temperate regions; presumed to be of American origin.

Celosia L.

Celosia argentea L.
FTA 6,1: 17 (1909); FS: 81 (1929); FPS 1: 117 (1950); FCB 2: 16 (1951); FWTA 1,1: 146 (1954); WICKENS 1976: 92; FTEA, Amaranthac.: 19 (1985); FSo 1: 142 (1993); UKWF: 70 (1994); HYF: 86 (1997).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, 700 m., in compound, 28.11.1983, *Kielland-Lund* 57 (C, NLH).
General habitat range: in lowland and medium-altitude woodland and bushland, often in grassland on flood plains, along streams, on open soil in riverine forest, or weed in cultivations.
General distribution: almost a pantropical weed, probably originating in tropical America.

Celosia schweinfurthiana Schinz
FTA 6,1: 22 (1909); FS: 81 (1929); FPNA 1: 128 (1948); FPS 1: 118 (1950); FCB 2: 18 (1951); JACKSON 1956: 355 {Lotti}; FTEA, Amaranthac.: 9 (1985); UKWF: 70 (1994).
Imatong Mountains group, Sudan side: Lotti, 1000 m., forest, 23.6.1953, *Jackson* 3025 (K); near Lotti rest house, no alt., 8.6.1939, *Andrews* 1700 (K); Gilo to Mt. Konoro, 1900 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, 18.11.1980, *Friis & Vollesen* 323 (C).
General habitat range: in lowland and medium-altitude forest, clearings, bushland, and along streams.
General distribution: Ethiopia, South Sudan, Congo [previously Zaire], Uganda, Kenya, Tanzania and Angola.

Celosia trigyna L.
FTA 6,1: 19 (1909); FS: 81 (1929); FPNA 1: 126 (1948); FPS 1: 117 (1950); FCB 2: 17 (1951); FWTA 1,1: 146 (1954); FG 7: 25 (1963); FC 17: 7 (1974); WICKENS 1976: 92; FTEA, Amaranthac.: 12 (1985); FSo 1: 142 (1993); UKWF: 70 (1994); HYF: 86 (1997).
Syn.: *Celosia laxa* Schumach. & Thonn.: FTA 1: 18 (1868); FPS 1: 117 (1950); FCB 2: 20 (1951); FWTA 1,1: 147 (1954).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, scrambling in forest, 1.12.1980, *Friis & Vollesen* 593 (BR, C, K, KHF); Kinyeti Valley, Hiliu, south-east of compound, 700 m., in cultivation, 2.12.1983, *Kielland-Lund* 153A (C, NLH); Hiliu, south of compound, 700 m., 5.12.1983, *Kielland-Lund* 205 (C, NLH).
General habitat range: in lowland and medium-altitude disturbed habitats in forest and evergreen bushland.
General distribution: Senegal to Ethiopia and South Somalia, south to Angola, Zimbabwe and Mozambique; also in tropical Arabia.

Cyathula Blume

Cyathula achyranthoides (Kunth) Moq.
FPNA 1: 132 (1948); FCB 2: 64 (1951); FWTA 1,1: 151 (1954); JACKSON 1956: 355 {Lotti, Laboni}; FC 17: 44 (1974); FTEA, Amaranthac.: 60 (1985).
Imatong Mountains group, Sudan side: Talanga to

Upper Talanga, 1100 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* along trail in forest, 7.12.1980, *Friis & Vollesen* 755 (BR, C, KHF); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 8.11.1980, *Friis & Vollesen* 62 (C).

General habitat range: in lowland and medium-altitude forest.

General distribution: Sierra Leone to Ethiopia, south to Congo [previously Zaire] and Tanzania; also in Madagascar and in tropical America.

Cyathula cylindrica Moq.

FTA 6,1: 46 (1909); FPNA 1: 132 (1948); FPS 1: 119 (1950) {Imatong Mountains, Mt. Kinyeti}; FCB 2: 66 (1951); FWTA 1,1: 151 (1954); FC 17: 43 (1974); FTEA, Amaranthac.: 64 (1985); UKWF: 72 (1994).

Syn.: *Cyathula schimperiana* Moq.: FTA 6,1: 45 (1909); CHIPP 1929: 188. *Cyathula mannii* Bak.: FTA 6,1: 46 (1909); UKWF: 135 (1974). *Cyathula cylindrica* Moq. var. *mannii* (Bak.) Suess. : FWTA 1,1: 151 (1954).

Imatong Mountains group, Sudan side: without further locality, 2440 m., 10.2.1936, *Johnston* 1534 (K); without further locality, 2740 m., 12.2.1936, *Johnston* 1503 (K); Kipia, 2690 m., at edge of camp clearings, 20.9.1940, *Myers* 13,489 (K); Mt. Kinyeti, 2740 m., in forested ravines, 11.2.1929, *Chipp* 84 (K, WM).

General habitat range: in a wide range of habitats, partly disturbed.

General distribution: Cameroon to Ethiopia, south to South Africa (Cape Prov.).

Cyathula orthacantha (Asch.) Schinz

FTEA, Amaranthac.: 66 (1985); UKWF: 72 (1994).

Syn.: *Cyphocarpa orthacantha* (Asch.) C.B. Clarke: FTA 6,1: 55 (1909).

Didinga Mountains: 8 km. south of Kapoeta on Nathilani road, no alt., sandy soil, 27.8.1953, *Peers* KO12 (K, WM).

General habitat range: in lowland and medium-altitude grassland and woodland, often in stony places along rivers.

General distribution: Sudan to Ethiopia, south to Botswana and Namibia.

Cyathula prostrata (L.) Blume

FTA 6,1: 43 (1909); FS: 84 (1929); FPNA 1: 132 (1948); FPS 1: 119 (1950); FCB 2: 62 (1951); FWTA 1,1: 149 (1954); FG 7: 33 (1963); FC 17: 45 (1974); FTEA, Amaranthac.: 58 (1985).

var. **prostrata**

FC 17: 45 (1974); FTEA, Amaranthac.: 59 (1985).

Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 25.11.1980, *Friis & Vollesen* 445 (BR, C, K, KHF).

General habitat range: widespread in disturbed places of a wide range of habitats.

General distribution: throughout the tropics of the world.

var. **pedicellata** (C.B. Clarke) Cavaco

FG 7: 35 (1963); FC 17: 46 (1974); FTEA, Amaranthac.: 59 (1985).

Syn.: *Cyathula pedicellata* C.B. Clarke: FTA 6,1: 46 (1909).

Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* on forest floor, 1.12.1980, *Friis & Vollesen* 596 (BR, C, K, KHF).

General habitat range: in lowland and medium-altitude forest, often in disturbed places.

General distribution: Sierra Leone to Ethiopia, south to Congo [previously Zaire] and Mozambique. Species as a whole throughout the tropics of the world.

Cyathula uncinulata (Schrad.) Schinz
FCB 2: 67 (1951); FWTA 1,1: 151 (1954); FC 17: 48 (1974); FTEA, Amaranthac.: 65 (1985); FSo 1: 152 (1993); UKWF: 72 (1994).
Syn.: *Cyathula globulifera* Moq.: FTA 6,1: 44 (1909).
Imatong Mountains group, Sudan side: Issore, 1200 m., gallery forest, 15.1.1949, *Jackson* 593 (BM).
Didinga Mountains: Nagichot, 2010 m., forest edge, 28.10.1941, *Myers* 14,200 (K).
General habitat range: widespread in a wide range of habitats.
General distribution: Cameroon to Ethiopia and North Somalia, south to South Africa (Cape Prov.); also in Madagascar.
Note. The record from the Didinga Mountains is based on information from the herbarium label of *Myers* 14,200; according to *Myers*' notebook the collecting locality for no. 14200 is: "Dongotona Mts., lower slope below Moimoi, 1070 m., 29.10.1941."

Digera Forssk.

Digera muricata (L.) Mart.
FTEA, Amaranthac.: 36 (1985); FSo 1: 146 (1993); UKWF: 71 (1994); HYF: 86 (1997).
subsp. **trinervis** C.C. Townsend
FTEA, Amaranthac.: 37 (1985); FSo 1: 146 (1993).
Imatong Mountains group, Sudan side: Torit, at suburb west of town (4° 24' N, 32° 34' E), no alt., 12.1.1984, *Kielland-Lund* 613 (C, NLH).
Didinga Mountains: 34 km. south of Kapoeta on road to Nathilani, no alt, black cotton soil, 27.8.1953, *Peers* KM19 (K); near Keiala (Chukudum), no alt., 22.12.1983, *Kielland-Lund* 450 (NLH).
General habitat range: in dry lowland and medium-altitude habitats.
General distribution: Sudan and Uganda to Ethiopia and South Somalia, Kenya and Tanzania. Species as a whole also on Madagascar, and in tropical Asia from tropical Arabia to India, Malaysia and Indonesia.

Gomphrena L.

Gomphrena celosioides Mart.
FCB 2: 79 (1951); FTEA, Amaranthac: 127 (1985); UKWF: 74 (1994).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, 700 m., waste ground in compound, 26.11.1983, *Kielland-Lund* 47 (C, NLH).
Lafit, Dongotona and Nangeya Mountains: Lafon Regional District Centre (5° 02' N, 32° 27-28' E), no alt., 29.12.1983, *Kielland-Lund* 517 (C, NLH).
General habitat range: in dry lowland and medium-altitude habitats, usually on trodden ground in disturbed places, sometimes a weed in cultivations and in seasonally flooded areas.
General distribution: an almost pantropical species; it is presumably indigenous in Brazil, Paraguay, Uruguay and Argentina, but has in this century spread rapidly to its present distribution.

Psilotrichum Blume

Psilotrichum elliotii Bak.
FTA 6,1: 58 (1909); FTEA, Amaranthac.: 97 (1985); FSo 1: 160 (1993); UKWF: 73 (1994).
Syn.: *Psilotrichum ovatum* (Moq.) Hauman, *nom. illeg.*: FPNA 1: 137 (1948); FCB 2: 38 (1951).
Imatong Mountains group, Sudan side: Talanga, 950 m., open woodland with *Albizia zygia, Combretum collinum,* etc., recently burnt, 17.3.1982, *Friis & Vollesen* 1233 (BR, C, EA, FT, K, KHF).
General habitat range: in dry lowland or medium-altitude grassland, bushland or woodland.
General distribution: Congo [previously Zaire] to Ethiopia and South Somalia, south to Tanza-

nia; also in South India and Sri Lanka. First record from the Sudan.

Pupalia Adans. mut. Juss.

Pupalia grandiflora Peter
FPNA 1: 134 (1948); FCB 2: 61 (1951); FTEA, Amaranthac.: 74 (1985); UKWF: 73 (1994); HYF: 87 (1997).
Didinga Mountains: Iwowa, 1620 m., in deep shade in khor, 22.4.1939, *Myers* 11,034 (K).
General habitat range: in medium-altitude woodlands and forest, often at forest edges, in evergreen bushland and riverine forest.
General distribution: Congo [previously Zaire] to Ethiopia, south to Tanzania; also in tropical Arabia.

Pupalia lappacea (L.) Juss.
FTA 6,1: 47 (1909); FS: 84 (1929); FPNA 1: 133 (1948); FPS 1: 122 (1950); FCB 2: 60 (1951); FWTA 1,1: 151 (1954); WICKENS 1976: 92; FTEA, Amaranthac.: 75 (1985); UKWF: 72 (1994); HYF: 87 (1997).
Syn.: *Pupalia atropurpurea* (Lam.) Moq.: FTA 6,1: 48 (1909).
var. **velutina** (Moq.) Hook. f.
FTEA, Amaranthac.: 78 (1985); HYF: 87 (1997).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, 700 m., waste ground in compound, 21.11.1983, *Kielland-Lund* 7 (C, NLH).
General habitat range: in a wide range of lowland and medium-altitude habitats, frequent at forest edges and in clearings and woodland and bushland influence by human activity and cattle grazing, also along streams and on temporarily flooded ground.
General distribution: widespread in the tropics of the Old World; natural range probably extended by human activity. Species as a whole within the same area.

Sericostachys Gilg & Lopr.

Sericostachys scandens Gilg & Lopr.
FTA 6,1: 71 (1909); FPNA 1: 131 (1948); FCB 2: 70 (1951); FWTA 1,1: 151 (1954); FC 17: 41 (1974); FTEA, Amaranthac.: 42 (1985); UKWF: 72 (1994); KTSL: 91 (1994).
Imatong Mountains group, Sudan side: without further locality [Talanga, Upper Talanga, Katire or Gilo], no alt., common climber in secondary forest, 29.1.1976, *Howard* IM 10 (K, KHF).
General habitat range: in lowland and medium-altitude forest.
General distribution: Ivory Coast to Ethiopia, south to Angola and Malawi.

Order 27. **Geraniales** Dumort.

Fam. 47. **Linaceae** DC. ex S.F. Gray

Hugonia L.

Hugonia platysepala Welw. ex Oliv.
FTA 1: 272 (1868); FS: 86 (1929); FPNA 1: 406 (1948); FPS 1: 123 (1950); JACKSON 1956: 354 {Talanga, Lotti}; FWTA 1,2: 359 (1958); FTEA, Linac.: 2 (1966); FC 14: 26 (1972); FG 21: 25 (1973); EL AMIN 1990: 47.
Imatong Mountains group, Sudan side: Lotti, 1000 m., edge of forest, 20.5.1950, *Jackson* 1500 (BM, KHF); Lotti, 1000 m., in the forest understorey, 23.6.1953, *Jackson* 3019 (KHF).
General habitat range: in lowland and medium-altitude forest.
General distribution: Guinée and Sierra Leone to South Sudan, south to Angola, Congo [previously Zaire] and Tanzania.

Linum L.

Linum volkensii Engl.
FTEA, Linac.: 8 (1966); FC 14: 40 (1972); FSo 1: 266 (1993); UKWF: 75 (1994); HYF: 194 (1997).
Imatong Mountains group, Uganda side: Lututuru, no alt., 7.6.1963, *Kertland* s.n. (MHU).
General habitat range: in montane grassland, often near streams.
General distribution: Cameroon and East Congo [previously Zaire] to Ethiopia and North Somalia, south to Malawi and Mozambique; also in tropical Arabia.
Note. The inflorescence of the only specimen from the study area is poorly developed, and could resemble that of the two annual species; as the bracts have scabrid margin, the resemblance is greatest with *Linum strictum* L. subsp. *corymbulosum* (Reichb.) Rouy.

Fam. 48. **Zygophyllaceae** R. Br.

Tribulus L.

Tribulus terrestris L.
FTA 1: 283 (1868); FS: 86 (1929); FPNA 1: 408 (1948); FPS 1: 125 (1950); FWTA 1,2: 363 (1954); FCB 7: 64 (1958); FC 1: 155 (1963); FG 6: 111 (1963); FTEA, Zygophyllac.: 7 (1985); FSo 1: 180 (1993); UKWF: 75 (1994); HYF: 203 (1997).
Didinga Mountains: Boya Hill, Thuguru region (4° 40' N, 33° 17' E), on road banks, 12.6.1984, *Kielland-Lund* 933 (C, NLH).
General habitat range: in lowland and medium-altitude subdesert grassland and deciduous bushland on dry, sandy soil, often in disturbed places or a troublesome weed in cultivations.
General distribution: Senegal to Ethiopia and Somalia, north to Egypt, south to South Africa; throughout the tropical and warm temperate parts of the world.

Fam. 49. **Balanitaceae** Endl.

Balanites Del.

Balanites aegyptiaca (L.) Del.
FTA 1: 315 (1868); FS: 228 (1929); FPS 2: 318 (1952); FCB 7: 66 (1958); FWTA 1,2: 364 (1958); FC 1: 163 (1963); FZ 2,1: 223 (1963); Wickens 1976: 93; FE 3: 433 (1989); El Amin 1990: 299; KTSL: 377 (1994); HYF: 202 (1997).
Imatong Mountains group, Sudan side: without further locality, no alt., *Trought* s.n. (according to Aylmer [unpublished], specimen not traced); Talanga, 900 m., woodland, 1980, *Friis & Vollesen* (sight record); Kinyeti Valley, Hiliu, near compound, 700 m., 30.11.1983, *Kielland-Lund* 113 (C, NLH).
Imatong Mountains group, Uganda side: Agoro, 4.1943, *Purseglove* 1379 (K); Agoro, 1220 m., 8.4.1945, *Greenway & Hummel* 7324 (K) & 7325 (MHU).
Didinga Mountains: Boya Hill, Kimatong, 640 m., open woodland, 31.12.1984, *Fukui* 84-27 (EA); Boya Hill, Kimatong, 700 m., open woodland, 17.11.1983, *Fukui* 83-8 (EA); near Kapoeta Regional District Centre (4° 47' N, 33° 35' E), 650 m., in deciduous bushland, 13.6.1984, *Kielland-Lund* 939 (C, NLH).
General habitat range: in lowland dry wooded grassland and deciduous bushland, often in sites which are waterlogged during the rainy season.
General distribution: Mauritania and Senegal to Egypt, Sudan, Ethiopia and Somalia, south to Zambia and Zimbabwe; also in tropical Arabia, Saudi Arabia and Israel.

Balanites rotundifolia (van Tiegh.) Blatter
FE 3: 434 (1989); KTSL: 378 (1994).
Syn.: *Balanites orbicularis* Sprague
Didinga Mountains: c. 2 km north of Keiala, near Chukudum (4° 15' ,N 33° 27' E), 1100 m., 22.12.1983, *Kielland-Lund* 444 (C, NLH); Boya

Hill, Kimatong, 640 m., open woodland, 31.12. 1984, *Fukui* 84-36 (EA).
General habitat range: in dry lowland wooded grassland and bushland.
General distribution: South Sudan and Ethiopia through Kenya to Central Tanzania.

Fam. 50. **Geraniaceae** Juss.

Geranium L.

Geranium aculeolatum Oliv.
FTA 1: 291 (1868); FPNA 1: 396 (1948); FPS 1: 128 (1950) {Imatong Mountains}; FCB 7: 23 (1958); FTEA, Geraniac.: 2 (1971); UKWF: 75 (1994).
Imatong Mountains group, Sudan side: Katire to Itibol, 2000 m., edge of forest, 17.12.1935, *Thomas* 1646 (BM, K); Gilo, 1900 m., in forest regrowth, 18.10.1948, *Jackson* 438 (BM, WM); Itibo (4° 2' N, 32° 50' E), 1600 m., path in cultivation, 25.10.1949, *Jackson* 853 (BM); Gilo to Itibol, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* along trail in forest, 26.2.1982, *Friis & Vollesen* 1027 (C, K, KHF).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, below the peak, no alt., edge of forest, 4.12.1971, *Katende* 1388 (EA, MHU).
General habitat range: in medium-altitude and montane forest, evergreen bushland and grassland.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Malawi and Mozambique.
Note. *Thomas* 1646 lacks sharp, reflexed prickles, but is otherwise characteristic of the species.

Geranium arabicum Forssk.
FTEA, Geraniac.: 8 (1971); UKWF: 76 (1994); HYF: 205 (1997).
subsp. **arabicum**
FTEA, Geraniac.: 9 (1971).
Syn.: *Geranium simense* A. Rich.: FPS 1: 128 (1950) {Imatong Mountains}; FWTA 1,1: 157 (1954); HEDBERG 1957: 125; FCB 7: 24 (1958).
Imatong Mountains group, Sudan side: without further locality, 1980 m., 2.1936, *Johnston* 1454 (K); without further locality, 2130 m., forest, 10.2.1936, *Johnston* 1501 (K); below Gilo, 1680 m., roadside, 15.6.1953, *Prowse* 301 (KHU); Dumuso (4° 00' N, 32° 53' E), 2400 m. *Hagenia* grassland, 23.4.1950, *Jackson* 1451 (K); above Lomuleng, 2500 m., mountain meadow, 25.7.1939, *Myers* 11,581 (K); Kipia, 2740 m., in grassland, 4.7.1947, *MacLeay* 195 (KHU); slope of Mt. Kinyeti, 3060 m., grassland on rocks, 17.6.1953, *Prowse* 319 (KHU); summit of Mt. Kinyeti, 3180 m., rocky summit, 15.11.1949, *Jackson* 922 (BM).
Imatong Mountains group, Uganda side: Mt. Lomwaga, near summit, 2440 m., 6.1963, *Morrison* s.n. (MHU).
Didinga Mountains: near Duguru village, Nagichot (4° 16' N, 33° 35' E), near stream, 2000 m., 17.12.1983, *Kielland-Lund* 361 (C, NLH).
General habitat range: in medium-altitude and montane forest, evergreen bushland and grassland.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Zambia, Malawi and Zimbabwe; also in tropical Arabia. Species as a whole within the same general distribution area.

Geranium ocellatum Cambess.
FPNA 1: 396 (1948); FWTA 1,1: 157 (1954); FCB 7: 22 (1958); FTEA, Geraniac.: 5 (1971); WICKENS 1976: 93; FSo 1: 187 (1993); UKWF: 76 (1994); HYF: 206 (1997).
Syn.: *Geranium favosum* A. Rich. var. *sublaeve* Oliv.: FTA 1: 292 (1868). [*Geranium favosum* auct., non A. Rich.: FS: 88 (1929); FPS 1: 129 (1950)].
Imatong Mountains group, Sudan side: Gilo to Iti-

bol, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* on moist slope along trail, 11.11.1980, *Friis & Vollesen* 156 (BR, C, K, KHF).
General habitat range: in medium-altitude and montane forest, evergreen bushland and grassland.
General distribution: Cameroon to Ethiopia and North Somalia, south to Zambia, Malawi and Zimbabwe; also in tropical Arabia and the Himalayas.

Fam. 51. **Oxalidaceae** R. Br.

Biophytum DC.

Biophytum abyssinicum A. Rich.
FWTA 1,1: 159 (1954); FTEA, Oxalidac.: 12 (1971); WICKENS 1976: 93; UKWF: 77 (1994).
Syn.: *Oxalis abyssinica* (A. Rich.) Walp.: FTA 1: 297 (1868).
Imatong Mountains group, Sudan side: Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees of *Terminalia laxiflora, T. brownii, Pterocarpus lucens, Combretum collinum* and *Vitex doniana* on rocky outcrop, 5.12.1980, *Friis & Vollesen* 702 (C, K, KHF).
General habitat range: in lowland and medium-altitude woodlands.
General distribution: Nigeria to Ethiopia, south to Angola, Zambia and Malawi.

Biophytum umbraculum Welw.
LOURTEIG 1981: 451.
Syn.: *Biophytum petersianum* Klotzsch: FPS 1: 133 (1950); FWTA 1,1: 159 (1957); FCB 7: 15 (1958); FZ 2,1: 158 (1963); FTEA, Oxalidac.: 16 (1971); WICKENS 1976: 93; UKWF: 77 (1994).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., woodland, 5.1.1979, *Shigeta* 6 (EA); Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 29.11.1980, *Friis & Vollesen* 523 (C, K, KHF).
General habitat range: in lowland and medium-altitude woodland.
General distribution: Senegal to Ethiopia, south to South Africa; also in tropical Asia.

Oxalis L.

Oxalis anthelmintica A. Rich.
FPS 1: 133 (1950); FCB 7: 9 (1958); FZ 2,1: 151 (1963); FTEA, Oxalidac.: 7 (1971); UKWF: 77 (1994).
Syn.: *Oxalis purpurata* Jacq. var. *anthelmintica* (A. Rich.) Knuth
Imatong Mountains group, Uganda side: Langia, 1520 m., bamboo scrub, 4.1943, *Purseglove* 1387 (EA, K).
Didinga Mountains: Iwowa, 1620 m., shady stone slope, 23.4.1939, *Myers* 11,050 (K).
General habitat range: in medium-altitude and montane grassland, mainly in disturbed places.
General distribution: Congo [previously Zaire] to Ethiopia, south to Zimbabwe and Mozambique.

Oxalis corniculata L.
FTA 1: 296 (1868), pro parte; FS: 88 (1929), pro parte; FPNA 1: 402 (1948); FPS 1: 133 (1950), pro parte; FWTA 1,1: 159 (1954); HEDBERG 1957: 126; FCB 7: 7 (1958); FZ 2,1: 150 (1963); FTEA, Oxalidac.: 3 (1971); WICKENS 1976: 94; FSo 1: 194 (1993); UKWF: 77 (1994); HYF: 205 (1997).
Imatong Mountains group, Sudan side: Gilo, 1830 m., roadside in montane woodland, 29.6.1947, *MacLeay* 115 (BM); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* on moist slope along trail, 8.11.1980, *Friis & Vollesen* 20 (BR, C, KHF); Gilo, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,*

and *Ocotea,* at forest edges and in clearings, 19.2.1982, *Friis & Vollesen* 954 (C, K, KHF).
General habitat range: in disturbed places of a wide range of lowland, medium-altitude and montane forest habitats.
General distribution: Guinée to Ethiopia and North Somalia, south to South Africa; widespread in most parts of the tropics and in many warm temperate countries.

Oxalis obliquifolia Steud. ex A. Rich.
FTA 1: 295 (1868); FPS 1: 136 (1950) {Imatong Mountains, Itibol}; FCB 7: 8 (1958); FZ 2,1: 155 (1963); FTEA, Oxalidac.: 6 (1971); UKWF: 77 (1994).
Imatong Mountains group, Sudan side: Gilo, 1800 m., on disturbed ground along track in montane woodland, 29.6.1947, *MacLeay* 120 (BM); Gilo, 1900 m., disturbed ground near water channel, 22.4.1950, *Jackson* 1408 (BM); Mt. Itibol, 1950 m., 14.6.1939, *Andrews* 1973 (K).
Imatong Mountains group, Uganda side: without further locality, 2440 m., in grassland, 4.1938, *Eggeling* 3538 (EA, K); 4 km. south-east of Mt. Lomwaga, no alt., shallow soil in tall-grass grassland, 18.7.1974, *Katende* 2130 (MHU).
General habitat range: in medium-altitude or montane grassland and woodland or as weed in cultivated ground.
General distribution: Congo [previously Zaire] to Ethiopia, south to Angola, Mozambique and South Africa (Transvaal).

Oxalis radicosa A. Rich.
FTEA, Oxalidac.: 5 (1971); WICKENS 1976: 94; HYF: 205 (1997).
Syn.: [*Oxalis corniculata* auct., non L.: FTA 1: 296 (1868), pro parte; FS: 88 (1929), pro parte; FPS 1: 133 (1950), pro parte].
Didinga Mountains: between Iwowa and Nagichot, 1920 m., grazed grassland, 24.4.1939, *Myers* 11,089 (K, WM).
General habitat range: in medium-altitude and montane grassland, in forest clearings and in cultivated ground.
General distribution: Nigeria to North Somalia, south to Zambia, Malawi and Mozambique; also in tropical Arabia and India.

Fam. 52. **Balsaminaceae** A. Rich.

Impatiens L.

Impatiens ethiopica Grey-Wilson
GREY-WILSON 1980: 95.
Imatong Mountains group, Sudan side: Gilo to Itibol, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* on moist slope along trail, 11.11.1980, *Friis & Vollesen* 153 (BR, C, K, KHF); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 58' N, 32° 53' E), 2600 m., 9.6.1984, *Kielland-Lund* 901A (C, NLH).
General habitat range: in montane forest.
General distribution: South Sudan and South West Ethiopia. First record from the Sudan.

Impatiens hochstetteri Warb.
FPS 1: 137 (1950) {Imatong Mountains, Lotti}; JACKSON 1956: 355 {Lotti}; FCB 9: 416 (1960); GREY-WILSON 1980: 145; FTEA, Balsaminac.: 45 (1982); UKWF: 78 (1994).
subsp. **hochstetteri**
GREY-WILSON 1980: 148; FTEA, Balsaminac.: 46 (1982).
Syn.: [*Impatiens capensis* auct., non Meerb.: FTA 1: 300 (1868). *Impatiens micrantha* auct., non D. Don: FTA 1: 303 (1868)].
Imatong Mountains group, Sudan side: Lotti, no alt., forest floor, 11.10.1938, *Myers* 9657 (K, WM); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* in small clearing along river, 1.12.1980, *Friis & Vollesen* 614 (BR, C, K, KHF); ravine of Kinyeti River, 1520-1830 m., 15.6. 1939, *Andrews* 2023 (K) & 2026 (K); by small tributary of Ngairigi River, 1680 m., forest,

13.6.1953, Prowse 260 (KHU); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 8.11.1980, *Friis & Vollesen* 34 (C, K, KHF); Bushbuck Hill, 2200 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum,* at brook near forest edge, 16.2.1982, *Friis & Vollesen* 903 (BR, C, K, KHF); Lowiliwili to Dumuso, 2200 m., in *Podocarpus latifolius* forest, 16.11.1949, *Jackson* 984 (BM); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 58' N, 32° 53' E), 2600 m., 9.6.1984, *Kielland-Lund* 901 (C, NLH); above Lomuleng, 2440 m., forest floor, 29.12. 1935, *Thomas* 1797 (BM, K).

General habitat range: in medium-altitude and montane forest.

General distribution: East Congo [previously Zaire], Sudan and Ethiopia south to South Africa. Species as a whole also in West Africa.

Impatiens meruensis Gilg

GREY-WILSON 1980: 122; FTEA, Balsaminac.: 31 (1982); UKWF: 78 (1994).

subsp. **septentrionalis** Grey-Wilson

GREY-WILSON 1980: 124; FTEA, Balsaminac.: 33 (1982).

Imatong Mountains group, Sudan side: above Lomuleng, 2440 m., swamp, 29.12.1935, *Thomas* 1804 (K); without further locality, no alt., 2.1936, *Johnston* 1438 (K), & 2740 m., swamp, 12.2.1936, *Johnston* 1526 (K), & 2440 m., 10.2.1936, *Johnston* 1535 (K); above Kipia, no alt., damp places, 2.1936, *Johnston* 1448 (K); Kipia, 2680 m., common ground herb in *Podocarpus latifolius* forest, 28.7.1939, *Myers* 11,681 (K, WM); Mt. Kinyeti, near summit, 2740 m., in damp places along path, 17.6.1953, *Prowse* 336 (KHU).

Didinga Mountains: Mt. Lotuke, 2130-2440 m., in *Podocarpus latifolius* forest, 18.4.1939, *Myers* 10,900 (K).

General habitat range: in montane forest.

General distribution: North Kenya and South Sudan. Species as a whole also in Uganda and Tanzania.

Impatiens tinctoria A. Rich.

FTA 1: 302 (1868); GREY-WILSON 1980: 154; FTEA, Balsaminac.: 48 (1982); UKWF: 78 (1994).

subsp. **tinctoria**

GREY-WILSON 1980: 155; FTEA, Balsaminac.: 49 (1982).

Syn.: [*Impatiens elegantissima* auct., non Gilg: FPS 1: 136 (1950) {Imatong Mountains, Garia}].

Imatong Mountains group, Sudan side: Upper Talanga Tea Project, 2000 m., in forest undergrowth, 18.6.1981, *Fison* in *Lock* 81/279 (K); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* on moist slope along trail, 13.11. 1980, *Friis & Vollesen* 211 (BR, C, EA, K, KHF); below Gilo, 1800 m., 26.12.1983, *Kielland-Lund* 471 (NLH); near Mt. Garia, 1830-2130 m., 13.6. 1939, *Andrews* 1866 (K) & 1868 (K); Ras Logoforok, 1950 m., 24.7.1939, *Myers* 11,556 (K, WM).

Imatong Mountains group, Uganda side: Langia, 1830 m., 1.4.1943, *Purseglove* 1393 (K); Agoro, 2130 m., beside stream, 15.11.1945, *Thomas* 4386 (EA).

General habitat range: in montane forest and bushland.

General distribution: Uganda, South Sudan, Ethiopia and East Congo [previously Zaire]. Species as a whole also in Kenya, Tanzania and Malawi.

Order 28. **Lythrales** Caruel

Fam. 53. **Lythraceae** J. St.-Hil.

Ammannia L.

Ammannia auriculata Willd.

FWTA 1,1: 164 (1954); FAC, Lythrac.: 22

(1967); WICKENS 1976: 94; FZ 4: 305 (1978); FSo 1: 197 (1993); FTEA, Lythrac.: 37 (1994); UKWF: 79 (1994); HYF: 172 (1997).
Syn.: *Ammannia senegalensis* auct., non Lam.: FTA 2: 477 (1871), pro parte; FS: 90 (1929), pro parte; FPNA 1: 656 (1948), pro parte; FPS 1: 138 (1950), pro parte. *Nesaea dinteri* Koehne subsp. *elata* A. Fernandes: FZ 4: 294 (1978).
Imatong Mountains group, Sudan side: Kinyeti Valley, 2 km. from junction on the Katire and the Ngarama roads along Imatong road, and 500 m. east of the road (4° 21' N, 32° 39' E), no alt., 26.5.1984, *Kielland-Lund* 755 (C, NLH).
General habitat range: in lowland, medium-altitude and montane swamps and at margins of ponds and slow-flowing streams on exposed sand, gravel or mud.
General distribution: Senegal to Ethiopia and Somalia, north to Egypt, south to Angola, Zimbabwe, Malawi and Mozambique; also in tropical Arabia and subtropical and tropical Asia, Australia and America.

Ammannia baccifera L.
FTA 2: 478 (1871); FS: 90 (1929); FPS 1: 138 (1950); FWTA 1: 165 (1954); WICKENS 1976: 94; FZ 4: 308 (1978); FTEA, Lythrac.: 45 (1994) ; FSo 1: 198 (1993); UKWF: 80 (1994); HYF: 172 (1997).
Imatong Mountains group, Sudan side: Kinyeti Valley, near Kinyeti River 7 km. south of Hiliu towards Katire, 700 m., 7.12.1983, *Kielland-Lund* 244 (C, NLH).
General habitat range: in lowland moist, open places, often at the edge of ponds and streams.
General distribution: Ghana to Ethiopia and Somalia, south to Namibia and South Africa (Transvaal, Natal, Cape Prov.); also in tropical Asia, including tropical Arabia, and in Australia.

Lythrum L.

Lythrum rotundifolium Hochst. ex A. Rich.
FPNA 1: 657 (1948); FPS 1: 141 (1950) {Imatong Mountains, Mt. Kinyeti}; FAC, Lythrac.: 13 (1967); FTEA, Lythrac.: 12 (1994); UKWF: 79 (1994).
Imatong Mountains group, Sudan side: between Kinyeti and Kipia, 2700 m., edge of swamp, 1.6.1950, *Jackson* 1535 (K); Mt. Kinyeti, 2590 m., swamp, 30.12.1935, *Thomas* 1875 (BM, K).
General habitat range: in medium-altitude and montane swamps, stream-sides, moist places in montane grassland, alpine bamboo (*Sinarundinaria*) dominated montane vegetation and ericaceous bushland.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Tanzania and Malawi.

Nesaea Kunth

Nesaea cordata Hiern
FTA 2: 475 (1871); FS: 90 (1929); FPS 1: 141 (1950); FWTA 1,1: 166 (1954); FAC, Lythrac.: 15 (1967); FZ 4: 302 (1978); FTEA, Lythrac.: 24 (1994).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 3.1.1984, *Kielland-Lund* 565 (C, NLH); Talanga, 950 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 30.11.1980, *Friis & Vollesen* 586 (BR, C, FT, K, KHF).
General habitat range: in lowland and medium-altitude moist grassland and seepage areas in grassland, woodland and open bushland.
General distribution: Central African Republic and Mali to South Sudan, Uganda and Tanzania, south to Namibia and South Africa.

Fam. 54. **Oliniaceae** Harv. & Sond.

Olinia Thunb.

Olinia rochetiana A. Juss.
FAC, Oliniac.: 1 (1973); FTEA, Oliniac.: 2 (1975); EL AMIN 1990: 367 {Imatong Mountains, Gilo}; SOMMERLATTE 1990: 322; KTSL: 94 (1994).
Syn.: *Olinia usambarensis* Gilg: FPNA 1: 650 (1948); ITU: 290 (1952). *Olinia aequipetala* (Del.) Cufod.
Imatong Mountains group, Sudan side: without further locality, 2440 m., stunted *Podocarpus latifolius-Olea capensis* forest, 3.3.1976, *Howard* IM 72 (K, KHF); 2440 m., rocky outcrop with low forest adjoining, 10.3.1976, *Howard* IM 81 (K, KHF); south-western slope of Dumuso Ridge, 2350 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, edge with rocky outcrops towards *Hagenia abyssinica* woodland, 8.3.1982, *Friis & Vollesen* 1138 (BR, C, K, KHF).
General habitat range: in medium-altitude and montane forest, especially along forest edges. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a small and medium sized tree at edges of mixed *Podocarpus latifolius* forest, usually above 2500 m.
General distribution: South Sudan and Ethiopia through eastern Africa to South Africa (Transvaal).

Fam. 55. **Onagraceae** Juss.

Epilobium L.

Epilobium salignum Hausskn.
FTEA, Onagrac.: 5 (1953); FC 5: 90 (1966); FAC, Onagrac.: 4 (1967); UKWF: 81 (1994).
Imatong Mountains group, Sudan side: Gilo to Mt. Konoro, 1850 m., seepage meadow on edge between upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea* and grassland with *Loudetia arundinacea*, 18.11.1980, *Friis & Vollesen* 315 (BR, C, EA, K, KHF).
General habitat range: in montane swamps and at stream-sides.
General distribution: Cameroon to Ethiopia, south to South Africa (Transvaal, Natal); also in Madagascar. First record from the Sudan.

Epilobium stereophyllum Fresen.
FTEA, Onagrac.: 4 (1953); HEDBERG 1957: 133; FAC, Onagrac.: 3 (1967); UKWF: 81 (1994).
Imatong Mountains group, Sudan side: below Lomuleng, 2410 m., swampy gap in *Podocarpus latifolius* forest, 25.7.1939, *Myers* 11,594 (K).
General habitat range: in montane moist places in grassland and swamps.
General distribution: East Congo [previously Zaire], South Sudan, Uganda, Kenya, Tanzania.

Ludwigia L.

Ludwigia abyssinica A. Rich.
FC 5: 120 (1966); FAC, Onagrac.: 17 (1967); UKWF: 81 (1994).
Syn.: *Jussiaea abyssinica* (A. Rich.) Dandy & Brenan: FPS 1: 145 (1950); FWTA 1,1: 170 (1954); FTEA, Onagrac.: 18 (1971).
Imatong Mountains group, Sudan side: Iribo (4° 2' N, 32° 50' E), 1500 m., *Dombeya* woodland, near stream, 25.10.1949, *Jackson* 852 (BM); at Ngairigi River, 1600 m., on alluvial ground near stream, 8.1.1950, *Jackson* 1039 (BM); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, in grassy swamp with stagnant water along the river, 21.11.1980, *Friis & Vollesen* 373 (BR, C, K, KHF).
General habitat range: in medium-altitude or montane swampy ground and at stream-sides.
General distribution: Senegal and Sierra Leone

to Ethiopia, south to Angola and South Africa (Natal); also in Madagascar.

Ludwigia erecta (L.) Hara
FC 5: 110 (1966); FAC, Onagrac.: 13 (1967); FSo 1: 200 (1993); UKWF: 81 (1994).
Syn.: *Jussiaea erecta* L.: FPS 1: 145 (1950); FWTA 1,1: 169 (1954); FTEA, Onagrac.: 12 (1971).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., near dam, 6.1.1984, *Kielland-Lund* 599 (C, NLH); Kinyeti Valley, Hiliu, between compound and river, 700 m., 28.11.1983, *Kielland-Lund* 75 (C, NLH); Katire, at Kinyeti River, 1070 m., 15.12.1935, *Thomas* 1568 (BM, K).
General habitat range: in lowland wet habitats.
General distribution: Mauritania and Senegal to Ethiopia and South Somalia, south to Angola, Zimbabwe and Mozambique; also in Madagascar, Comoro Islands and Seychelles.

Ludwigia octovalvis (Jacq.) Raven
FC 5: 103 (1966); FAC, Onagrac.: 10 (1967); WICKENS 1976: 95; UKWF: 81 (1994).
subsp. **brevisepala** (Brenan) Raven
FC 5: 104 (1966); FAC, Onagrac.: 10 (1967); WICKENS 1976: 95.
Syn.: [*Jussiaea villosa* auct., non Lam.: FTA 2: 489 (1871); FS: 91 (1921).] *Jussiaea suffruticosa* L. var. *linearis* (Willd.) Oliv. ex Kuntze: FPS 1: 145 (1950); FTEA, Onagrac.: 15 (1953); FWTA 1: 169 (1954). *Jussiaea suffruticosa* L. var. *brevisepala* Brenan: FTEA, Onagrac.: 14 (1953); FWTA 1: 169 (1954). *Jussiaea suffruticosa* L. var. *pilosa-linearis* Brenan: FTEA, Onagrac.: 15 (1953); FWTA 1: 169 (1954).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 2.1.1984, *Kielland-Lund* 537 (C, NLH) & 3.1.1984, *Kielland-Lund* 571 (C, NLH).
General habitat range: in lowland wet habitats.
General distribution: Cape Verde Islands and Senegal to Ethiopia, south to Angola and Mozambique; also in Madagascar. Species as a whole pantropical.

Fam. 56. **Gunneraceae** Meisn.

Gunnera L.

Gunnera perpensa L.
FPS 1: 147 (1950) {Imatong Mountains, Kipia}; FAC, Haloragac.: 2 (1968); FTEA, Haloragac.: 3 (1973); UKWF: 82 (1994).
Imatong Mountains group, Sudan side: Kipia, 2590 m., swamp, 30.12.1935, *Thomas* 1878 (BM, K); below Kipia, 2650 m., mountain moor, 28.7.1939, *Myers* 11,695 (K).
General habitat range: in medium-altitude and montane swamps and stream-sides.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Zimbabwe and South Africa (Cape Prov.); also in Madagascar.

Fam. 57. **Callitrichaceae** Link.

Callitriche L.

Callitriche stagnalis Scop.
FPNA 1: 484 (1948); HEDBERG 1957: 127; UKWF: 82 (1994).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* in grassy swamp with stagnant water along the river, 21.11.1980, *Friis & Vollesen* 374 (BR, C, EA, K, KHF).
General habitat range: in stagnant or slow flowing water or on damp ground.
General distribution: almost cosmopolitan.

Order 29. **Thymelaeales** Willk.

Fam. 58. **Thymelaeaceae** Juss.

Gnidia L.

Gnidia glauca (Fresen.) Gilg
FPS 1: 150 (1950) {Imatong Mountains, Itibol and summit of Mt. Kinyeti}; FC 5: 69 (1966); FAC, Thymelaeac.: 60 (1975); FTEA, Thymelaeac.: 32 (1978); SOMMERLATTE 1990: 352; UKWF: 82 (1994); KTSL: 96 (1994).
Syn.: *Lasiosiphon glaucus* Fresen.: FTA 6,1: 230 (1910); CHIPP 1929: 188; ITU: 424 (1952); FWTA 1,1: 176 (1954); EL AMIN 1990: 51.
Imatong Mountains group, Sudan side: without further locality, 2140 m., rocky outcrop in forest, 3.3.1976, *Howard* IM 84 (K, KHF); without further locality, 2290 m., *Hagenia* woodland, 10.3.1976, *Howard* IM 75 (K, KHF); without further locality [Mt. Kinyeti], 3060 m., 12.2.1936, *Johnston* 1518 (K), & 12.2.1936, *Johnston* 1481 (K), & 2.1936, *Johnston* 1450 (K); Lotti (Mt. Lotti), 1370 m., in long grass, 8.10.1938, *Myers* 9606 (K, WM); Mt. Itibol, 1960 m., 14.6.1939, *Andrews* 1982 (K); Iribo (4° 2' N, 32° 50' E), 1500 m., *Maesa-Rubus* tangle, 25.10.1949, *Jackson* 863 (BM, pro parte, mixed with indeterminable Malvaceous plant); Bushbuck Hill, east of Itibol, 2100 m., *Hagenia abyssinica-Gnidia glauca* woodland in ecotone between upland forest with *Podocarpus latifolius*, *Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum* and *Loudetia arundinacea* grassland, 21.11.1980, *Friis & Vollesen* 392 (BR, C, K, KHF); Kipia, 2650 m., *Podocarpus latifolius* forest, clearings, 28.7.1939, *Myers* 11,692 (K); top of Mt. Kinyeti, 3170 m., 3 m. high shrub on the mountain top, becoming a tree 15 m. high at 2440-2740 m., with *Anthospermum usambarense* and *Hypericum revolutum*, it forms the topmost scrub on the mountain, 1929, *Chipp* 78 (K, KHF, WM); summit of Mt. Kinyeti, 3170 m., 21.9.1940, *Tothill* in *Myers* 13,507 (K).
Imatong Mountains group, Uganda side: Agoro, 1990 m., 12.1932, *Eggeling* 817 (K, MHU).
General habitat range: in medium-altitude and montane forest, especially at margins, evergreen bushland and wooded grassland. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a shrub or a small tree in montane grassland, in *Hagenia* woodland and in *Erica arborea* thicket.
General distribution: Nigeria and Cameroon to Ethiopia, south to Zambia and Malawi.

Gnidia involucrata A. Rich.
FTEA, Thymelaeac.: 25 (1978); UKWF: 83 (1994).
Syn.: *Gnidia macrorrhiza* Gilg: FTA 6,1: 218 (1910); FPS 1: 148 (1950); FWTA 1,1: 174 (1954).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1830-2140 m., montane grassland, 4.1960, *Wilson* 996 (EA).
Didinga Mountains: Nagichot, 1980 m., grassland, 26.4.1939, *Myers* 11,139 (K, WM).
General habitat range: in medium-altitude and montane wooded grassland and woodland, often subjected to annual burning.
General distribution: Nigeria and Cameroon to Ethiopia, south to Angola, Zambia, Zimbabwe, Malawi and Mozambique.

Gnidia kraussiana Meisn.
FPS 1: 150 (1950); FAC, Thymelaeac.: 50 (1975); FTEA, Thymelaeac.: 29 (1978); FC 5: 64 (1966); UKWF: 82 (1994).
Syn.: *Lasiosiphon kraussii* Meisn.: FTA 6,1: 231 (1913); FS: 93 (1929). *Lasiosiphon kraussianus* (Meisn.) Burtt Davy: FWTA 1,1: 176 (1954); WICKENS 1976: 95. *Lasiosiphon kraussianus* (Meisn.) Burtt Davy var. *villosus* Burtt Davy: ITU: 409 (1952).
Imatong Mountains group, Uganda side: without further locality, 2140 m., grassland, 4.1938,

Eggeling 3612 (K); Aringa River, watershed, 2440 m., grassland, 7.4.1945, *Greenway & Hummel* 7312 (EA, K); 2 km. north-east of Lututuru, near end of road, 1800 m., grassland, 17.2. 1969, *Lye* 2069 (K, MHU, NLH, UPS).
General habitat range: in medium-altitude and upland grassland, wooded grassland and woodland, often following burning.
General distribution: Guinée to Ethiopia, south to Angola and South Africa (Transvaal, Orange, Natal, East Cape Prov.).

Gnidia lamprantha Gilg
FPS 1: 150 (1950) {Imatong Mountains}; FTEA, Thymelaeac.: 31 (1978); UKWF: 82 (1994); KTSL: 96 (1994).
Syn.: *Lasiosiphon lampranthus* Gilg: FTA 6,1: 233 (1910); ITU: 425 (1952).
Imatong Mountains group, Sudan side: Issore, 1400 m., grassland, 16.11.1948, *Jackson* 536 (BM); Lomariti, 1280 m., grassland, 23.12. 1935, *Thomas* 1751 (BM, K); near Itibol, 1950 m., in scrub, 20.12.1935, *Thomas* 1714 (BM, K).
Imatong Mountains group, Uganda side: Agoro, 2100 m., 12.1932, *Eggeling* 805 (MHU); Agoro, 2140 m., woodland, 15.11.1945, *Thomas* 4384 (K).
General habitat range: in medium-altitude and montane wooded grassland and bushland.
General distribution: South Sudan and Ethiopia south to Uganda, Kenya and Tanzania.

Gnidia subcordata Meisn.
FTEA, Thymelaeac.: 21 (1978); UKWF: 83 (1994).
Syn.: *Englerodaphne leiosiphon* Gilg: FTA 6,1: 238 (1910); FPS 1: 148 (1950) {Didinga Mountains, Iwowa}.
Didinga Mountains: Iwowa, 1620 m., 22.4.1939, *Myers* 11,048 (?K, not traced).
General habitat range: in medium-altitude and montane dry evergreen forest and associated woodland, evergreen bushland and wooded grassland.
General distribution: Sudan, Uganda and Kenya south to South Africa (Natal, East Cape Prov.)

Peddiea Harv. ex Hook.

Peddiea fischeri Engl.
FTA 6,1: 249 (1910); FPNA 1: 654 (1948); FPS 1: 150 (1950) {Laboni}; ITU: 425 (1952); FWTA 1,1: 174 (1954); JACKSON 1956: 354 {Talanga, Lotti, Laboni}; FC 5: 45 (1966); FAC, Thymelaeac.: 34 (1975); FTEA, Thymelaeac.: 12 (1978); EL AMIN 1990: 51; KTSL: 97 (1994).
Syn.: *Peddiea longiflora* Gilg: FTA 6,1: 249 (1909). *Peddiea zenkeri* Gilg: FTA 6,1: 252 (1909).
Imatong Mountains group, Sudan side: Laboni 1100 m., in forest, 22.12.1935, *Thomas* 1738 (K); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 19.11.1980, *Friis & Vollesen* 328 (BR, C, K, KHF); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 27.11.1980, *Friis & Vollesen* 505 (C, K); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* in forest, 6.12.1980, *Friis & Vollesen* 727 (C, K).
General habitat range: in lowland, medium-altitude and montane forest, including riverine forest, and in dense evergreen bushland.
General distribution: Guinée and Cameroon to South Sudan, Uganda and Kenya, south to Angola, Zambia, Tanzania and Malawi.

Fam. 59. **Nyctaginaceae** Juss.

Boerhavia L.

Boerhavia diffusa L.
FWTA 1,1: 178 (1954); WICKENS 1976: 96; FZ

9,1: 21 (1988); FSo 1: 171 (1993); UKWF: 83 (1994); FTEA, Nyctaginac.: 3 (1996); HYF: 76 (1997).
Syn.: *Boerhavia adscendens* Willd.: FTA 6,1: 4 (1909); FCap 5,1: 395 (1910). *Boerhavia repens* L. var. *diffusa* (L.) Hook. f.: FTA 6,1: 5 (1909); FS: 94 (1929); FPS 1: 151 (1950).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, 700 m., in compound, 26.11.1983, *Kielland-Lund* 45 & 10.12.1983, *Kielland-Lund* 293 (C, NLH).
General habitat range: in lowland and medium-altitude open grassland, open woodland and scrub, often at old cultivations or in disturbed places.
General distribution: A pantropical species, often a weed.

Boerhavia erecta L.
FWTA 1: 178 (1954); FZ 9,1: 21 (1988); FSo 1: 170 (1993); UKWF: 83 (1994); FTEA, Nyctaginac.: 2 (1996).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 3.1.1984, *Kielland-Lund* 551 (C, NLH); Kinyeti Valley, Hiliu, near compound, 700 m., 10.12.1983, *Kielland-Lund* 292 (C, NLH).
General habitat range: in lowland and medium-altitude deciduous bushland, mostly in open places, weed in cultivations, in waste ground and along roadsides.
General distribution: a pantropical weed.

Commicarpus Standl.

Commicarpus grandiflorus (A. Rich.) Standl.
FZ 9,1: 20 (1988); FSo 1: 172 (1993); UKWF: 83 (1994); FTEA, Nyctaginac.: 9 (1996); HYF: 77 (1997).
Syn.: *Boerhavia pentandra* Burch.: FTA 6,1: 7 (1909); FS: 95 (1929). *Commicarpus pentandrus* (Burch.) Heimerl: FPNA 1: 142 (1948); FCB 2: 89 (1951); WICKENS 1976: 96. [*Commicarpus africanus* auct., non (Lour.) Dandy ex Andrews: FPS 1: 152 (1950), pro parte, quoad syn. *Boerhavia pentandra* Burch.]
Imatong Mountains group, Uganda side: Agoro, 1370 m., abandoned farmland, 12.11.1945, *Thomas* 4358 (EA, K).
General habitat range: in medium-altitude and montane grassland, open woodland and scrub, often in disturbed places.
General distribution: Egypt and South Sahara (Tibesti) to Ethiopia and North Somalia, south to North East Uganda, Central Tanzania and Malawi; also in tropical Arabia and western India.

Commicarpus plumbagineus (Cav.) Standl.
FPNA 1: 140 (1948); FCB 2: 88 (1951); FWTA 1,1: 177 (1954); FZ 9,1: 16 (1988); FSo 1: 172 (1993); UKWF: 84 (1994); FTEA, Nyctaginac.: 12 (1996); HYF: 78 (1997).
Syn.: *Boerhavia plumbaginea* Cav.: FTA 6,1: 6 (1909), pro parte; FS: 95 (1929), pro parte.
Imatong Mountains group, Uganda side: Agoro, riverine bush, no alt., 12.1932, *Eggeling* 799 (K, MHU); Agoro, no alt., 3.1935, *Eggeling* 1750 (MHU).
General habitat range: in a wide range of lowland and medium-altitude habitats in woodland, wooded grassland and deciduous bushland, often in disturbed places.
General distribution: Senegal to Ethiopia and Somalia, south to South Africa; also in South Spain, North Africa, tropical Arabia, and widespread in the Middle East.

Pisonia L.

Pisonia aculeata L.
FTA 6,1: 8 (1909); FWTA 1,1: 177 (1954); JACKSON 1956: 354 {Talanga}; FZ 9,1: 25 (1988); FTEA, Nyctaginac.: 17 (1996); UKWF: 83 (1994); KTSL: 99 (1994); HYF: 78 (1997).
Imatong Mountains group, Sudan side: Talanga,

900 m., lowland rain forest, along path, 1980, *Friis & Vollesen* (sight record).
General habitat range: in a wide range of lowland and medium-altitude habitats, often associated with forest.
General distribution: Ghana to Ethiopia, south to South Africa; also in tropical Arabia, and widespread in tropical Asia and America.

Order 30. **Proteales** Dumort.

Fam. 60. **Proteaceae** Juss.

Faurea Harv.

Faurea rochetiana (A. Rich.) Pichi Serm.
FTEA, Proteac.: 3 (1993); KTSL: 99 (1994).
Syn.: *Faurea speciosa* Welw.: FTA 6,1: 211 (1909); FCB 1: 232 (1948); FPS 1: 154 (1950) {Imatong Mountains, Loyaru}; ITU: 321 (1952); FWTA 1,1: 178 (1954); El Amin 1990: 51; Sommerlatte 1990: 250.
Imatong Mountains group, Sudan side: Loyaru, 1770 m., in scrub, 31.12.1935, *Thomas* 1896 (BM, K); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered *Combretum molle, Erythrina abyssinica* and *Protea gaguedi*, 17.2.1982, *Friis & Vollesen* 936 (C, K); Gilo, 1880 m., in grassland, 20.11.1947, *Jackson* 228 (FHO); Observation Hill above Gilo, 2000 m., wooded grassland on rocky ground, 5.1984, *Sommerlatte* 75 (EA); near Mt. Kinyeti, 1830-2130 m., 15.6.1939, *Andrews* 2035 (K).
Imatong Mountains group, Uganda side: Agoro, 1690 m., in *Terminalia* wooded grassland, 12.1932, *Eggeling* 807 (MHU); above Agoro, 2140 m., *Protea* bushland on dry, rocky slope, 8.4.1945, *Greenway & Hummel* 7318 (EA, K, MHU).
Didinga Mountains: north of Duguru village, Nagichot (4° 17' N, 33° 35' E), 2000 m., 18.12.1983, *Kielland-Lund* 368 (C, NLH).
General habitat range: in lowland, medium-altitude and montane woodland and wooded grassland, often on rocky slopes. According to Sommerlatte 1990 it occurs at the Imatong Mountains as a small tree in *Loudetia* grassland and in *Hagenia* woodland; it is most common below 2400 m.
General distribution: Nigeria to Ethiopia, south to Angola and South Africa.

Protea L.

Protea gaguedi J.F. Gmel.
FPS 1: 154 (1950); Jackson 1956: 362; El Amin 1990: 53; Sommerlatte 1990: 248; FTEA, Proteac.: 17 (1993); KTSL: 100 (1994).
Syn.: *Protea abyssinica* Willd., nom. illeg.: FTA 6,1: 199 (1910); FS: 95 (1929); Chipp 1929: 188; FCB 1: 239 (1948); ITU: 321 (1952).
Imatong Mountains group, Sudan side: without further locality, no alt., on rocky grassy ridgetops, 7.1946, *Sangster* 838 (MHU); without further locality, 1830-2130 m., 13.6.1939, *Andrews* 1873 (K, WM); near Gilo, 2130 m., grassland, 14.6.1953, *Prowse* 284 (KHU); Mt. Garia, near rocky summit, 2500 m., grassland, 1.4.1948, *Jackson* 288 (FHO); Bushbuck Hill, 2300 m., *Loudetia arundinacea* grassland on shallow soil and frequently burnt, 21.2.1982, *Friis & Vollesen* 976 (C, K); Bushbuck Ridge, 2200 m., grassland, 5.1984, *Sommerlatte* 74 (EA); below Ras Logoforok, 1830 m., in ravines, 12.2.1929, *Chipp* 108 (K, KHF, WM); above Lomuleng, 2130 m., 2.1936, *Johnston* 1439 (K).
Imatong Mountains group, Uganda side: without further locality, no alt., 4.1945, *Hummel* 757 (FHO); Aringa River watershed, 2290 m., *Hyparrhenia-Exotheca-Elionurus* grassland, 7.4.1945, *Greenway & Hummel* 7314 (EA, MHU).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1830 m., montane grassland, 4.1960, *Wilson* 854 (EA); Mt. Lonyili,

upper slopes, 2000 m., open woodland, 17.5.1972, *Synnott* 1057 (EA, MHU).
Didinga Mountains: above Duguru village, Nagichot (4° 16' N, 33° 35' E), 2100 m., 17.12.1983, *Kielland-Lund* 365 (C, NLH); Mt. Lotuke, 1830 m., wooded grassland on rocky slopes, 18.4.1939, *Myers* 10,905 (K); Mt. Lotuke, 1900 m., in grassland, 29.3.1950, *Jackson* 1326 (BM, WM).
General habitat range: in medium-altitude and montane grassland, often susceptible to frequent burning. According to JACKSON 1956 and SOMMERLATTE 1990 it occurs at the Imatong Mountains as a shrub or small tree scattered in *Loudetia* grassland, usually between 1700 and 2300 m.
General distribution: South Sudan and East Congo [previously Zaire] to Ethiopia, south to Swaziland, Namibia and South Africa (Transvaal).

Protea madiensis Oliv.
FTA 6,1: 204 (1910); FS: 95 (1929); FCB 1: 245 (1948); FPS 1: 154 (1950); ITU: 322 (1952); FWTA 1,1: 179 (1954); JACKSON 1956: 362; EL AMIN 1990: 53; SOMMERLATTE 1990: 246; FTEA, Proteac.: 10 (1993); KTSL: 100 (1994).
Imatong Mountains group, Sudan side: without further locality, 1520 m., 11.4.1933, *Smith* 16 (K, KHF); near Gilo, 2130 m., in grassland, 14.6.1953, *Prowse* 285 (KHU); Mt. Itibol, 1950 m., 14.6.1939, *Andrews* 1970 (K); Gilo to Mt. Konoro, 2000 m., *Loudetia arundinacea* grassland with scattered trees, 16.11.1980, *Friis & Vollesen* 258 (C, KHF).
Imatong Mountains group, Uganda side: above Agoro, 1530 m.,12.1932, *Eggeling* 815 (K, MHU); 2 km. north-east of Lututuru, near end of road, 1800 m., grassland, 17.2.1969, *Lye* 2085 (MHU); 5 km. south-east of Lomwaga, no alt., tall-grass grassland with scattered trees, 18.7. 1974, *Katende* 2182 (EA, MHU).
Didinga Mountains: between Nagichot and Duguru village (4° 16' N, 33° 35' E), 2000 m., 17.12.1983, *Kielland-Lund* 359 (NLH).
General habitat range: in lowland and medium-altitude grassland or wooded grassland. According to JACKSON 1956 and SOMMERLATTE 1990 it occurs at the Imatong Mountains as a shrub or small tree in *Loudetia* grassland; it is most common between 1700 and 1900 m.
General distribution: Nigeria to Ethiopia, south to Angola and Mozambique.

Protea sp.
Didinga Mountains: Mt. Lotuke, Char, 1830 m., 19.4.1939, *Myers* 10,940 (?K, not traced).

Order 31. **Dilleniales** Hutch.

Fam. 61. **Dilleniaceae** Salisb.

Tetracera L.

Tetracera stuhlmanniana Gilg
Syn.: [*Tetracera potatoria* auct., non Afzel. ex Don: FPS 1: 154 (1950); JACKSON 1956: 354 {Lotti}; FAC, Dilleniac.: 8 (1967). *Tetracera alnifolia* auct., non Willd.: FS: 96 (1929); FTEA, Dilleniac.: 5 (1968); EL AMIN 1990: 53].
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber at forest edge, 3.12.1980, *Friis & Vollesen* 650 (C).
General habitat range: in lowland and medium-altitude forest.
General distribution: Congo [previously Zaire] to South West Ethiopia, south to Tanzania.

Order 32. **Pittosporales** Lindl.

Fam. 62. **Pittosporaceae** R. Br.

Pittosporum Banks ex Solander in Gaertn.

Pittosporum viridiflorum Sims
FWTA 1,1: 182 (1954); KTSL: 102 (1994); FE 3: 2 (1989); HYF: 132 (1997).
Syn.: *Pittosporum mannii* Hook. f.: FTA 1: 124 (1868); FWTA 1,1: 182 (1954); EL AMIN 1990: 54; KTSL: 102 (1994).
Imatong Mountains group, Sudan side: lower southern slope of Mt. Konoro, 2100 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum,* in scrub at forest edge, bordering on *Loudetia* grassland, 2.3.1982, *Friis & Vollesen* 1078 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: Lututuru, no alt. 1992, *Katende* (sight record).
Didinga Mountains: north of Duguru village, Nagichot (4° 17' N, 33° 35' E), 2000 m., 18.12.1983, *Kielland-Lund* 372 (C, NLH).
General habitat range: in montane forest, often along rivers or in swamps.
General distribution: Cameroon to Ethiopia and Somalia, south to South Africa; also in tropical Arabia.

Order 33. **Bixales** Lindl.

Fam. 63. **Flacourtiaceae** Rich. ex DC.

Caloncoba Gilg

Caloncoba crepiniana (De Wild. & T. Durand) Gilg
FAC, Flacourtiac. 1: 24 (1968); FTEA, Flacourtiac.: 24 (1973); EL AMIN 1990: 57.
Syn.: *Caloncoba schweinfurthii* Gilg: FS: 97 (1929); CHIPP 1929: 188; FPS 1: 156 (1950); ITU: 144 (1952); JACKSON 1956: 351.
Imatong Mountains group, Sudan side: Lotti, 1220 m., at edge of fringing forest, small tree 6 m. high, 5.2.1929, *Chipp* 17 (K, KHF, WM); Talanga, 900 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* at forest edge along trail, 1.3.1982, *Friis & Vollesen* 1055 (C, K, KHF); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* understorey and forest edges, 3.12.1980, *Friis & Vollesen* 649 (BR, C, K, KHF); Imeila, 700 m., edge of gallery forest, 26.1.1949, *Jackson* 578 (FHO, KHF).
General habitat range: in lowland and medium-altitude forest, often as a pioneer tree.
General distribution: Central African Republic and Congo [previously Zaire] to South Sudan and Uganda.

Casearia Jacq.

Casearia runssorica Gilg
FPNA 1: 636 (1948); FTEA, Flacourtiac.: 48 (1975); FAC, Flacourtiac. 2: 41 (1976); EL AMIN 1990: 57 {Bahr el Ghazal}.
Syn.: [*Casearia engleri* auct., non Gilg: FPS 1: 158 (1950); ITU: 372 (1952); JACKSON 1956: 353 {Lotti}].
Imatong Mountains group, Sudan side: no specimen traced; recorded by JACKSON 1956 from forest at Lotti.
General habitat range: in lowland and medium-altitude forest, often in forest swamps.
General distribution: Congo [previously Zaire] to South Sudan, Uganda and Tanzania (Bukoba).
Note. This is the most probable interpretation of the record reported by JACKSON 1956, apparently a sight record. True *Casearia engleri* Gilg is

restricted to the Usambara Mountains of Tanzania. A similarly unconfirmed sight record of a tree referred to as *Casearia battiscombei* by Katende was made near Lututuru; the latter species occurs in many places elsewhere in Uganda and Kenya.

Dovyalis Arn.

Dovyalis abyssinica (A. Rich.) Warb.
ITU: 147 (1952); FTEA, Flacourtiac.: 61 (1975); FSo 1: 206 (1993); KTSL: 105 (1994).
Imatong Mountains group, Sudan side: at Ngairigi River north-east of Gilo, 2000 m., in riparian scrub in *Loudetia* grassland, 28.2.1982, *Friis & Vollesen* 1050 (BR, C, EA, K).
General habitat range: in medium-altitude and montane forest and bushland.
General distribution: Sudan to Ethiopia and North Somalia, south to Tanzania and Malawi; also on Socotra. First record from the Sudan.

Dovyalis macrocalyx (Oliv.) Warb.
CHIPP 1929: 189; FPS 1: 157 (1950) {Lotti}; ITU: 147 (1952); JACKSON 1956: 354 {Talanga, Lotti}; FAC, Flacourtiac. 1: 50 (1968); FTEA, Flacourtiac.: 64 (1973); EL AMIN 1990: 58; KTSL: 106 (1994).
Imatong Mountains group, Sudan side: Lotti, 1220 m., at edge of the closed fringing forest, 5.2.1929, *Chipp* 18 (K, WM); Mt. Konoro, 2100 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, common shrub on forest floor, 2.3.1982, *Friis & Vollesen* 1080 (C, K, KHF); Gilo, 1900 m., undergrowth in montane forest, 23.3.1950, *Jackson* 1266 (K); along path from Gilo to Mt. Garia, 1700 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, on forest floor. 12.3.1982, *Friis & Vollesen* 1173 (BR, C, K, KHF); along path from Gilo to Mt. Garia, 1800 m., upland rain forest with *Albizia, Macaranga, Croton, Ocotea*, and *Pouteria adolfi-friederici*, on forest floor. 19.3.1982, *Friis & Vollesen* 1256 (C, K, KHF).
Imatong Mountains group, Uganda side: Lututuru, 1800 m., stream edge, 2.1938, *Eggeling* 3501 (EA, K); Mt. Lomwaga, 2600 m., small tree at edge of *Podocarpus latifolius-Ilex mitis-Rapanea* forest, 5.4.1945, *Greenway & Hummel* 7292 (EA, FHO, K, MHU).
General habitat range: in medium-altitude and montane forest and evergreen bushland.
General distribution: Central African Republic and Congo [previously Zaire] to South Sudan and Uganda, south to Angola, Zambia, Malawi, Zimbabwe and Mozambique.

Flacourtia L'Hér.

Flacourtia indica (Burm. f.) Merr.
ITU: 148 (1952); FZ 1: 286 (1960); FCB, Flacourtiac.: 48 (1968); FTEA, Flacourtiac.: 57 (1973); FSA 22: 82 (1976); FSo 1: 206 (1993); KTSL: 106 (1994); FG 34: 7 (1995).
Imatong Mountains group, Sudan side: below Lobeke, 1770 m., gallery forest, 31.7.1939, *Myers* 11,739 (K); Katire to Gilo, near road forking off towards Itibol, 1500 m., secondary transitional forest with much *Harungana madagascariensis*. 17.11.1980, *Friis & Vollesen* 300 (BR, C, K, KHF).
General habitat range: in lowland, medium-altitude and montane forest, especially along edges or in riverine habitats, in evergreen bushland and woodland.
General distribution: Senegal to Ethiopia and South Somalia, south to South Africa (Cape Prov.); also in Madagascar, Mascarene Islands, Seychelles, India and Indonesia.

Lindackeria C. Presl

Lindackeria schweinfurthii Gilg
FS: 97 (1929); FPNA 1: 635 (1948); FPS 1: 157

(1950); FAC, Flacourtiac. 1: 30 (1968); FTEA, Flacourtiac.: 27 (1973); EL AMIN 1990: 59.
Imatong Mountains group, Sudan side: Lotti, 1000 m., in forest, 23.6.1953, *Jackson* 3021 (KHF); Talanga, 910 m., in forest undergrowth with *Coffea canephora*, 20.3.1948, *Jackson* 281 (FHO).
General habitat range: in lowland and medium-altitude forest, sometimes riverine.
General distribution: Cameroon to South Sudan and Uganda, south to Congo [previously Zaire] and Tanzania.

Oncoba Forssk.

Oncoba spinosa Forssk.
FTA 1: 115 (1868); FS: 97 (1929); FPS 1: 158 (1950); ITU: 149 (1952); FWTA 1,1: 188 (1954); FAC, Flacourtiac. 1: 16 (1968); FTEA, Flacourtiac.: 16 (1973); FSA 22: 56 (1976); EL AMIN 1990: 55; FSo 1: 205 (1993); KTSL: 109 (1994); HYF: 112 (1997).
Imatong Mountains group, Sudan side: Palotaka, 1200 m. 1979, *Shigeta* 220 (?EA, identified and listed by M.G. Gilbert, not traced).
General habitat range: in lowland woodland, at forest edges, most often riverine.
General distribution: Senegal to Ethiopia and South Somalia, south to Botswana and South Africa (Transvaal); also in tropical Arabia.

Rawsonia Harv. & Sond.

Rawsonia lucida Harv. & Sond.
FZ 1,1: 264 (1960); FAC, Flacourtiac. 1: 4 (1968); FTEA, Flacourtiac.: 4 (1973); FSA 22: 54 (1976); EL AMIN 1990: 59; FSo 1: 204 (1993); KTSL: 110 (1994).
Syn.: *Rawsonia ugandensis* Dawe & Sprague: ITU: 150 (1952).
Didinga Mountains: Mt. Lotuke, 1980 m., forest, 20.4.1939, *Myers* 10,961 (K).
General habitat range: in lowland and medium-altitude forest, sometimes riverine.
General distribution: Congo [previously Zaire] to South Somalia, south to Angola and South Africa (Transvaal, Natal, East Cape Prov.).

Scolopia Schreb.

Scolopia theifolia Gilg.
FTEA, Flacourtiac.: 57 (1973); KTSL: 111 (1994).
Didinga Mountains: Mt. Lotuke, 1980 m., forest, 20.4.1939, *Myers* 10,960 (K, WM).
General habitat range: in medium-altitude and montane dry forest and evergreen bushland.
General distribution: Uganda to Ethiopia, south to Tanzania.

Order 34. **Passiflorales** Dumort.

Fam. 64. **Passifloraceae** Juss. ex Kunth

Adenia Forssk.

Adenia cissampeloides (Planch. ex Benth.) Harms
FWTA 1,1: 203 (1954); FTEA, Passiflorac.: 49 (1975); UKWF: 84 (1994); KTSL: 115 (1994).
Syn.: *Ophiocaulon cissampeloides* (Planch. ex Benth.) Mast.: FTA 2: 518 (1871).
Imatong Mountains group, Sudan side: Lotti, near rest house, no alt., 8.6.1939, *Andrews* 1711 (K); Katire, near Kinyeti River, 900 m., gallery forest, 15.6.1961, *Jackson* 4242 (K).
General habitat range: in lowland and medium-altitude forest.
General distribution: Guinée to South Sudan and Kenya, south to Congo [previously Zaire].

Adenia schweinfurthii Engl.
FPS 1: 162 (1950); FTEA, Passiflorac.: 36 (1975); KTSL: 116 (1994); FE 2,2: 9 (1995).

Imatong Mountains group, Sudan side: in river bed near Mt. Baghanj, 1830-2130 m., 13.6. 1939, *Andrews* 1915 (K).
General habitat range: in medium-altitude and montane forest.
General distribution: Cameroon to South Sudan and Ethiopia, south to Congo [previously Zaire] and Tanzania.

Adenia venenata Forssk.
FTA 2: 514 (1871); FS: 98 (1929); FPS 1: 161 (1950); FWTA 1,1: 203 (1954); FTEA, Passiflorac.: 30 (1975); WICKENS 1976: 96; EL AMIN 1990: 63; KTSL: 116 (1994); FE 2,2: 7 (1995); HYF: 113 (1997).
Imatong Mountains group, Sudan side: northernmost point of the continuous mountain chain, just south-east of Ngarama along the road to Molongori, 700 m., open woodland with *Acacia seyal, Albizia amara* subsp. *sericocephala, Lannea humilis,* etc., on sandy soil. 13.3.1982, *Friis & Vollesen* 1193 (C, K, KHF).
Imatong Mountains group, Uganda side: Agoro, arid hills, no date, *Eggeling* 843 (K).
General habitat range: in lowland and medium-altitude dry grassland, bushland and woodland.
General distribution: Nigeria to Somalia, south to Tanzania; also in tropical Arabia.

Basananthe Peyr.

Basananthe hanningtoniana (Mast.) De Wilde
FTEA, Passiflorac.: 59 (1975); UKWF: 85 (1994); FE 2,2: 12 (1995).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber at edge of small clearing, 4.12.1980, *Friis & Vollesen* 685 (C, KHF).
General habitat range: at the edge of medium-altitude and montane forest and in bushland.
General distribution: South Sudan to Ethiopia, south to Zimbabwe and Mozambique.

Passiflora L.

Passiflora edulis Sims
FTEA, Passiflorac.: 15 (1975); FSo 1: 215 (1993); FE 2,2: 15 (1995).
Imatong Mountains group, Sudan side: Gilo, 1900 m., escaped or naturalised. 10.5.1954, *Jackson* 3160 (KHF).
General habitat range: widely cultivated and escaped.
General distribution: presumably indigenous in Brazil, but recorded from all parts of the tropics.

Order 35. **Cucurbitales** Dumort.

Fam. 65. **Cucurbitaceae** Juss.

Coccinia Wight. & Arn.

Coccinia schliebenii Harms
FTEA, Cucurbitac.: 63 (1967); FE 2,2: 52 (1995).
Didinga Mountains: Mt. Lotuke, Char, 1830 m., climber at edge of clearing in valley forest. 19.4.1939, *Myers* 10,918 (K, WM).
General habitat range: in lowland and medium-altitude forest, including riverine vegetation, woodland and edges of evergreen bushland.
General distribution: South Sudan, South West Ethiopia, South Tanzania and North Mozambique.

Coccinia subsessiliflora Cogn.
FAC, Cucurbitac. 1: 85 (1975).
Syn.: *Coccinia sp. D*: FTEA, Cucurbitac.: 70 (1967).
Imatong Mountains group, Sudan side: Lotti, 1000

m., understorey in forest, 23.6.1953, *Jackson* 3026 (K).
General habitat range: in lowland and medium-altitude forest.
General distribution: Central African Republic, South Sudan, West Uganda, East Congo [previously Zaire] and Burundi.

Cucumella Chiov.

Cucumella engleri (Gilg) C. Jeffrey
FTEA, Cucurbitac.: 113 (1967); FAC, Cucurbitac. 1: 63 (1975); UKWF: 90 (1994).
Syn.: *Kedrostis engleri* Gilg
Imatong Mountains group, Sudan side: Kinyeti Valley, near Imeila, 850 m., woodland with *Albizia zygia, Annona senegalensis, Combretum collinum, Lonchocarpus laxiflorus,* etc., 24.2.1982, *Friis & Vollesen* 1024 (BR, C, K, KHF); Talanga, 950 m., open woodland with *Albizia zygia, Combretum collinum,* etc., recently burnt. 17.3.1982, *Friis & Vollesen* 1234 (C, K, KHF); Kinyeti Valley, near Lofoha forest ranger post, 1400 m., wooded grassland with *Combretum molle, Cussonia arborea, Stereospermum kunthianum, Erythrina abyssinica, Entada abyssinica,* etc., grass cover with *Hyparrhenia* and *Pennisetum purpureum,* 21.3.1982, *Friis & Vollesen* 1271 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: 1 km. south of Aringa river, north-west of Mingaro Peak, no alt., grassland, 9.6.1973, *Katende* 1865 (MHU).
General habitat range: in lowland and medium-altitude woodland and bushland.
General distribution: East Congo [previously Zaire] and South Sudan to Kenya, south to Tanzania and Malawi.

Cucumis L.

Cucumis pustulatus Hook. f.
FTA 2: 544 (1871); FPS 1: 172 (1950); FWTA 1: 213 (1954); FSo 1: 224 (1993); FE 2,2: 34 (1995).
Syn.: [*Cucumis figarei* auct., non Naud.: FTEA, Cucurbitac.: 99 (1967).]
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, near farm houses, 700 m., 29.11. 1983, *Kielland-Lund* 90 (C, NLH); village about 500 m. south west of Hiliu (4° 15' N, 32° 40' E), no alt., in savannah, 7.6.1984, *Kielland-Lund* 874 (C, NLH).
General habitat range: in lowland and medium-altitude open deciduous bushland, sometimes a weed in cultivations.
General distribution: Nigeria to Ethiopia and Somalia, south to Tanzania; probably also in tropical Arabia.

Kedrostis Medic.

Kedrostis foetidissima (Jacq.) Cogn.
FS: 103 (1929); FPS 1: 175 (1950); FWTA 1,1: 210 (1954); FC 6: 57 (1967); FTEA, Cucurbitac.: 137 (1967); FAC, Cucurbitac. 1: 59 (1975); FSo 1: 218 (1993); UKWF: 91 (1994); FE 2,2: 23 (1995).
Syn.: *Rhynchocarpa foetida* Schrad.: FTA 2: 564 (1871).
Imatong Mountains group, Uganda side: 1 km. south-east of Aringa River, no alt., grassland, 9.6.1973, *Katende* 1868 (MHU).
General habitat range: in lowland and medium-altitude woodland and wooded grassland.
General distribution: Senegal to Ethiopia and Somalia, south to Angola and South Africa; also in tropical Arabia and India.

Lagenaria Ser.

Lagenaria abyssinica (Hook. f.) C. Jeffrey
FPS 1: 181 (1950); FTEA, Cucurbitac.: 50 (1967); FAC, Cucurbitac. 1: 125 (1975); UKWF: 88 (1994); FE 2,2: 49 (1995).

Imatong Mountains group, Sudan side: Mt. Garia, 1830-2140 m., in swamp. 13.6.1939, *Andrews* 1870 (K) & 1871 (K).
Imatong Mountains group, Uganda side: 2 km. east of Lututuru, near a rivulet, 1400 m., in open woodland. 17.2.1969, *Lye* 2101 (MHU).
General habitat range: in medium-altitude and montane rain forest, thicket and bushland, often riverine.
General distribution: East Congo [previously Zaire] to South Sudan and Ethiopia, south to South Tanzania.

Luffa Mill.

Luffa cylindrica (L.) M.J. Roem.
FS: 99 (1929); FTEA, Cucurbitac.: 76 (1967); FC 6: 84 (1967); WICKENS 1976: 97; FZ 4: 454 (1978); FSo 1: 238 (1993); UKWF: 89 (1994); FE 2,2: 56 (1995); HYF: 114 (1997).
Syn.: *Luffa aegyptiaca* Mill.: FTA 2: 530 (1871); FPS 1: 175 (1950); FWTA 1: 207 (1954).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., near dam, 6.1.1984, *Kielland-Lund* 592 (C, NLH); Kinyeti Valley, Hiliu, in compound, 700 m., on shallow soil on rocks, 2.12.1983, *Kielland-Lund* 167 (C, NLH).
General habitat range: in lowland and medium-altitude cultivations, often at villages, naturalised in rocky places, on streambanks, and in riverine forest.
General distribution: widely cultivated and naturalised throughout the tropics and subtropics; probably originating in the Old World.

Momordica L.

Momordica boivinii Baill.
FTEA, Cucurbitac.: 34 (1967); FSo 1: 231 (1993); UKWF: 87 (1994); FE 2,2: 44 (1995).
Imatong Mountains group, Uganda side: southern foothills of the mountains (3° 44' N, 32° 55' E), no alt., grassland. 10.6.1973, *Katende* 1883 (EA, MHU).
General habitat range: in lowland and medium-altitude woodland, thicket and deciduous bushland.
General distribution: South Sudan, South Ethiopia and South Somalia through eastern Africa to South Africa (Natal).

Momordica charantia L.
FTA 2: 537 (1871); FS: 101 (1929); FPNA 2: 396 (1947); FPS 1: 181 (1950); FWTA 1,1: 212 (1954); FC 6: 172 (1967); FTEA, Cucurbitac.: 31 (1967); FAC, Cucurbitac. 1: 38 (1975); WICKENS 1976: 97; FE 2,2: 42 (1995).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* herbaceous climber in forest, 6.12.1980, *Friis & Vollesen* 725 (C).
General habitat range: in lowland and medium-altitude forest and evergreen bushland, often in riverine vegetation or weed in plantations.
General distribution: Senegal to Ethiopia, south to South Africa; indigenous in the palaeotropics, but now widespread throughout the tropics; often cultivated as a vegetable.

Momordica cissoides Benth.
FTA 2: 535 (1871); FPS 1: 179 (1950); FWTA 1,1: 211 (1954); FC 6: 160 (1967); FTEA, Cucurbitac.: 26 (1967); FAC, Cucurbitac. 1: 49 (1975); UKWF: 87 (1994).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* herbaceous climber in forest, 6.12.1980, *Friis & Vollesen* 726 (C, K, KHF).

General habitat range: in lowland and medium-altitude forest, often riverine.
General distribution: Guinée and Guinea Bissau to South Sudan, Uganda and Kenya, south to Angola, Congo [previously Zaire] and Tanzania.

Momordica foetida Schumach. & Thonn.
FPNA 2: 396 (1947); FPS 1: 181 (1950); FC 6: 180 (1967); FTEA, Cucurbitac.: 29 (1967); FAC, Cucurbitac. 1: 44 (1975); UKWF: 87 (1994); FE 2,2: 42 (1995).
Syn.: *Momordica morkorra* A. Rich.: FTA 2: 538 (1871). *Momordica mannii* Hook. f.: FTA 2: 539 (1871).
Imatong Mountains group, Sudan side: without further locality, 1520-1830 m., 12.6.1939, *Andrews* 1834 (K); Torit, c. 500 m., 9.6.1939, *Andrews* 1720 (K); Palotaka, 1200 m., woodland. 1979, *Shigeta* 12 (?EA, identified and listed by M.G. Gilbert, not traced); Talanga, 1000 m., *Hyparrhenia* grassland, 9.3.1950, *Jackson* 1213 (BM); Kinyeti Valley, near Imeila, 850 m., woodland with *Albizia zygia, Annona senegalensis, Combretum collinum* and *Lonchocarpus laxiflorus*, climber, 24.2.1982, *Friis & Vollesen* 1018 (C, K, KHF); Kinyeti Valley, near Lofoha forest ranger post, 1400 m., wooded grassland with *Combretum molle, Cussonia arborea, Stereospermum kunthianum, Erythrina abyssinica, Entada abyssinica*, etc., grass cover with *Hyparrhenia* and *Pennisetum purpureum*, 21.3.1982, *Friis & Vollesen* 1269 (C, KHF); Issore, 1200 m., edge between bamboo thicket and *Hyparrhenia* grassland, following burning, 3.3.1951, *Jackson* 1763 (WM); second rest house from Ras Logoforok, 2070 m., in clearing and secondary grassland, 24.7.1939, *Myers* 11,567 (K).
General habitat range: in clearings and along edges of lowland, medium-altitude and montane forest, and in woodland, bushland and grassland; often associated with human disturbance of the natural vegetation.
General distribution: Sierra Leone to Ethiopia, south to South Africa (Transvaal, Natal, Cape Prov.).

Momordica pterocarpa A. Rich.
FS: 100 (1929); FPS 1: 179 (1950); FTEA, Cucurbitac.: 23 (1967); FAC, Cucurbitac. 1: 51 (1975); UKWF: 87 (1994); FE 2,2: 41 (1995).
Syn.: *Momordica runssorica* Gilg.: FPNA 2: 394 (1947); FPS 1: 179 (1950) {Imatong Mountains}.
Imatong Mountains group, Sudan side: without further locality, 1520-1830 m., 12.6.1939, *Andrews* 1831 (K); just outside Gilo, along road to Itibol, 1900 m., *Harungana madagascariensis* thicket with tangle of *Rubus spp.*, 14.3.1982, *Friis & Vollesen* 1213 (C, K); along the path from Gilo to Mt. Garia, 1700 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, at forest edge towards tangle following old cultivation. 12.3.1982, *Friis & Vollesen* 1175 (C, K, KHF).
Imatong Mountains group, Uganda side: Langia, 1830 m., grassland, 4.1943, *Purseglove* 1394 (EA, K); south slope of the mountains (3° 44' N, 32° 55' E), no alt., in shade under bamboo, 10.6.1973, *Katende* 1884 (EA, MHU).
General habitat range: in medium-altitude and montane grassland, evergreen bushland and at forest edges; sometimes in cultivated places.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Tanzania, Malawi and Mozambique.

Mukia Arn.

Mukia maderaspatana (L.) M.J. Roem.
FTEA, Cucurbitac.: 115 (1967); FC &: 69 (1967); FZ 4: 475 (1978); UKWF: 90 (1994); FE 2,2: 29 (1995).
Syn.: *Mukia scabrella* (L.) Arn.: FCap 2: 489 (1862); FTA 2: 561 (1871). *Melothria maderaspatana* (L.) Cogn.: FWTA 1: 209 (1954); FPNA 2: 390 (1947); FPS 1: 178 (1950).
Imatong Mountains group, Sudan side: Kinyeti

Valley, near river 1 km. north of Hiliu, 700 m., at seasonal stream, 3.12.1983, *Kielland-Lund* 179 (C, NLH); 20 km. south of Hiliu along Katire road (4° 05' N, 32° 43' E), no alt., in teak plantation, 1.6.1984, *Kielland-Lund* 827 (C, NLH).

General habitat range: in lowland and medium-altitude woodland, especially in moist places, evergreen bushland, forest margins, riverine forest, and as a weed of cultivations and plantations.

General distribution: Senegal and Gambia to Ethiopia, south to South Africa; also in Madagascar, Mascarene Islands, tropical Asia and Australia.

Oreosyce Hook. f.

Oreosyce africana Hook. f.

FTA 2: 548 (1871); FWTA 1,1: 210 (1954); FC 6: 65 (1967); FTEA, Cucurbitac.: 110 (1967); FAC, Cucurbitac. 1: 28 (1975); UKWF: 90 (1994); FE 2,2: 30 (1995).

Imatong Mountains group, Sudan side: Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 21.11.1980, *Friis & Vollesen* 390 (BR, C, EA, K, KHF).

Imatong Mountains group, Uganda side: 2 km. north-east of Lututuru, near end of road, 1800 m., grassland. 17.2.1969, *Lye* 2056 (MHU).

General habitat range: in medium-altitude and montane grassland, evergreen bushland and along forest edges.

General distribution: Cameroon to Ethiopia, south to Angola, Tanzania and Mozambique; also in Madagascar. First record from the Sudan.

Peponium Engl.

Peponium cienkowskii (Schweinf.) Engl.

FS: 99 (1929); FPS 1: 183 (1950); FTEA, Cucurbitac.: 83 (1967); FE 2,2: 47 (1995).

Imatong Mountains group, Sudan side: Bushbuck Hill, 2300 m., rocky outcrop in *Loudetia* grassland, 21.2.1982, *Friis & Vollesen* 975 (C, K).

Imatong Mountains group, Uganda side: 1 km. south of Aringa River (3° 44' N, 32° 55' E), 1750 m., crevices in rocky outcrop. 11.6.1973, *Katende* 1891 (EA, MHU).

Didinga Mountains: Boya Hill, 1200 m., rocky outcrop, 22.12.1982, *Fukui* 82-20 (EA).

General habitat range: in medium-altitude and montane grassland, deciduous and evergreen bushland, often among rocks.

General distribution: West Ethiopia, Sudan, North Uganda and Kenya.

Peponium vogelii (Hook. f.) Engl.

FWTA 1,1: 215 (1954); FTEA, Cucurbitac.: 81 (1967); FAC, Cucurbitac. 1: 100 (1975); UKWF: 89 (1994); FE 2,2: 46 (1995).

Syn.: *Peponia vogelii* Hook. f.: FTA 2: 526 (1871).

Imatong Mountains group, Sudan side: Talanga, 900 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* forest edge. 1.3.1982, *Friis & Vollesen* 1063 (BR, C, also carpological collection, accession no. 15952, K, KHF).

General habitat range: in lowland, medium-altitude and montane forest, evergreen bushland and grassland.

General distribution: Ghana to Ethiopia, south to Angola, Zimbabwe and Mozambique; also in Seychelles. First record from the Sudan.

Trochomeria Hook. f.

Trochomeria macrocarpa (Sond.) Hook. f.

FC 6: 111 (1967); FTEA, Cucurbitac.: 87 (1967); FAC, Cucurbitac. 1: 75 (1975); FE 2,2: 37 (1995).

Syn.: *Trochomeria djurensis* Gilg: FS: 99 (1929); FPS 1: 183 (1950).

subsp. **macrocarpa**
FTEA, Cucurbitac.: 87 (1967).
Imatong Mountains group, Sudan side: Kinyeti Valley, c. 15 km. north of Katire, open woodland with *Combretum collinum, C. molle, Steganotaenia araliacea,* etc., on rocky outcrop, 6.3. 1982, *Friis & Vollesen* 1112 (C, K).
Imatong Mountains group, Uganda side: 2 km. north-east of Lututuru, near end of road, 1800 m., grassland. 17.2.1969, *Lye* 2054 (K, MHU, NLH, UPS).
General habitat range: in lowland and medium-altitude deciduous woodland, wooded grassland and bushland.
General distribution: Senegal to Ethiopia, south to South Africa (Transvaal). Species as a whole also in Angola and Namibia.

Zehneria Endl.

Zehneria minutiflora (Cogn.) C. Jeffrey
FC 6: 37 (1967); FTEA, Cucurbitac.: 126 (1967); FAC, Cucurbitac. 1: 21 (1975); WICKENS 1976: 98; UKWF: 91 (1994); FE 2,2: 27 (1995).
Syn.: *Zehneria micrantha* Hook. f. (1871), non F. Muell. (1860): FTA 2: 560 (1871). *Melothria minutiflora* Cogn.: FWTA 1,1: 209 (1954).
Imatong Mountains group, Sudan side: Palotaka, no alt., 1979, *Shigeta* 191 (?EA, identified and listed by M.G. Gilbert, not traced).
General habitat range: in medium-altitude and montane forest, evergreen bushland and grassland.
General distribution: Cameroon to Ethiopia, south to Zimbabwe and Mozambique.

Zehneria scabra (L. f.) Sond.
FC 6: 44 (1967); FTEA, Cucurbitac.: 122 (1967); FAC, Cucurbitac. 1: 14 (1975); FSo 1: 221 (1993); UKWF: 91 (1994); FE 2,2: 27 (1995); HYF: 116 (1997).
Imatong Mountains group, Sudan side: Gilo, 1710 m., forest edge, 27.6.1947, *MacLeay* 85 (BM); Gilo, near Ngairigi River, 1700 m., climbing on *Schefflera abyssinica* at stream, 2.3.1950, *Jackson* 1177 (BM); Gilo, 1830 m., roadside and forest edges. 11.7.1947, *MacLeay* 204 (BM); Gilo, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* climber at forest edge. 19.2.1982, *Friis & Vollesen* 960 (C, K, KHF); Bushbuck Hill, 2100 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum,* climber at forest edge, 16.2.1982, *Friis & Vollesen* 902 (C, K).
Imatong Mountains group, Uganda side: 5 km. south-east of Lomwaga, no alt., tall grassland with scattered trees, 18.7.1974, *Katende* 2176 (EA, MHU); 1 km. south of Aringa River, no alt., grassland, 9.6.1973, *Katende* 1869 (MHU).
Didinga Mountains: Nagichot, 1980 m., creeper in rest house garden, 26.4.1939, *Myers* 11,153 (K).
General habitat range: in a wide range of lowland, medium-altitude and montane habitats.
General distribution: Ivory Coast to Ethiopia and North Somalia, south to South Africa (Cape Prov.); also in tropical Arabia, India, Java and Philippines.

Zehneria thwaitesii (Schweinf.) C. Jeffrey
FC 6: 35 (1967); FTEA, Cucurbitac.: 128 (1967); FAC, Cucurbitac. 1: 19 (1975).
Syn.: *Melothria tridactyla* Hook. f.: FS: 103 (1929); FPS 1: 177 (1950); FTEA, Cucurbitac.: 128 (1967); UKWF: 91 (1994).
Imatong Mountains group, Sudan side: Talanga, 950 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 30.11. 1980, *Friis & Vollesen* 587 (C).
General habitat range: in lowland and medium-altitude grassland, swamps and clearings in forest.
General distribution: Congo [previously Zaire] to South Sudan, Uganda and Kenya, south to

Angola, Tanzania and Mozambique; also in Madagascar, Sri Lanka and India.

Fam. 66. **Begoniaceae** C. Agardh

Begonia L.

Begonia eminii Warb.
FPS 1: 183 (1950) {Lotti}; JACKSON 1956: 355 {Lotti}; FAC, Begoniac.: 27 (1969); UKWF: 92 (1994).
Imatong Mountains group, Sudan side: Lotti, no alt., forest, scarce scrambling epiphyte in shrub layer, 11.10.1938, *Myers* 9654 (K, WM); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* scrambling herb or epiphyte near stream, 9.12.1980, *Friis & Vollesen* 785 (C, K); Talanga, 1000 m., in forest, climbing on large trunk of *Chrysophyllum,* 5.4.1950, *Jackson* 1378 (BM); at Issore, 1340 m., in gallery forest, 3.8.1939, *Myers* 11,774 (WM); Lotti, no alt., in forest, epiphytic, 24.6.1953, *Prowse* 381 (KHU).
General habitat range: in lowland and medium-altitude forest.
General distribution: Ghana, Nigeria and Cameroon to South Sudan, south to Burundi, Uganda, West Kenya, North Tanzania.

Order 36. **Theales** Lindl.

Fam. 67. **Ochnaceae** DC.

Campylospermum van Tiegh.
Syn.: *Ouratea* Aubl., pro parte

Campylospermum bukobense (Gilg) Farron
FAC, Ochnac.: 50 (1967).
Syn.: *Ouratea bukobensis* Gilg: FPS 1: 187 (1950); JACKSON 1956: 354 {Talanga, Lotti}; EL AMIN 1990: 67. *Ouratea hiernii* (van Tiegh.) Exell: KTSL: 124 (1994).
Imatong Mountains group, Sudan side: no specimen from the study area traced; recorded by JACKSON 1956 from the forests at Lotti and Talanga.
General habitat range: in lowland forest.
General distribution: Cameroon to South Sudan, through Uganda and West Kenya to North West Tanzania.

Campylospermum calanthum (Gilg) Farron
Syn.: *Ouratea calantha* Gilg: FPS 1: 188 (1950) {Imatong Mountains, Laboni}; FWTA 1,1: 228 (1954); EL AMIN 1990: 69 {Laboni}.
Imatong Mountains group, Sudan side: no specimen from the study area traced; the references by FPS (1950) and EL AMIN 1990 may refer to the following taxon.
General habitat range: in lowland swamp forest and riverine forest.
General distribution: Nigeria to South Sudan, south to Angola.

Campylospermum densiflorum (De Wild. & T. Durand) Farron.
FAC, Ochnac.: 46 (1967).
Syn.: *Ouratea densiflora* De Wild. & T. Durand: FS: 107 (1929); CHIPP 1929: 189; FPNA 1: 616 (1948); FPS 1: 188 (1950); JACKSON 1956: 354 {Talanga, Lotti, Laboni}; FZ 2,1: 256 (1963); SOMMERLATTE 1990: 234; EL AMIN 1990: 69; KTSL: 124 (1994).
Imatong Mountains group, Sudan side: without further locality [probably near Gilo], 1980 m., *Podocarpus latifolius-Olea* forest, 31.1.1976, *Howard* IM 24 (K) & IM 30 (KHF); Laboni, 1220 m., in closed forest, 8.2.1929, *Chipp* 39 (K, WM); Lotti, 1000 m., in forest understorey, 17.1.1949, *Jackson* 590 (FHO, KHF); Palotaka, 1200 m., forest [Lotti], 31.1.1979, *Shigeta* 156 (EA); Talanga to Upper Talanga, 1100 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia*

boonei, Parinari excelsa and *Milicia excelsa,* 7.12. 1980, *Friis & Vollesen* 752 (C, K, KHF); Opari, Acholi Hills near Issore, in fringing forest, 20.4.1930, *Snowden* 1693 (BM, K) & 1694 (BM, K); at the Iyedo River [4° 04' N, 32° 34' E), 1450 m., in damp forest with *Polyscias* and *Albizia.* 12.2.1948, *Jackson* 262 (FHO); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 9.11.1980, *Friis & Vollesen* 78 (C, K).

General habitat range: in lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a shrub in the forests from 1000 to 2400 m.

General distribution: Nigeria and Cameroon to South Sudan, through Congo [previously Zaire], Uganda and West Kenya to North West and West Tanzania and Zambia.

Lophira C.F. Gaertn.

Lophira lanceolata van Tiegh. ex Keay

FWTA 1,1: 231 (1954); FAC, Ochnac.: 56 (1967).

Syn.: [*Lophira alata* auct., non C.F. Gaertn.: FPS 1: 185 (1950); EL AMIN 1990: 65].

Imatong Mountains group, Sudan side: no specimen traced; recorded from the area around the Imatong Mountains by EL AMIN 1990.

General habitat range: in lowland forest.

General distribution: Guinée to Congo [previously Zaire], South Sudan and North West Uganda.

Ochna L.

Ochna bracteosa Robyns & Lawalree

FPNA 1: 614 (1948); ITU: 279 (1952); FAC, Ochnac.: 20 (1967); FE 2,2: 67 (1995).

Imatong Mountains group, Sudan side: Lotti, c. 1000 m., in forest near rest house, 9.6.1939, *Andrews* 1765 (K); Lotti, 1000 m., undergrowth in rain forest, 25.2.1951, *Jackson* 1747 (K); Talanga, 900 m., in closed forest, 21.3.1959, *Jackson* 1260 (BM); Talanga, 1000 m., in forest, 6.5.1950, *Jackson* 1387 (BM); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 26.11. 1980, *Friis & Vollesen* 468 (BR, C, K, KHF).

General habitat range: in lowland forest.

General distribution: Cameroon to South Sudan and South West Ethiopia, south to Congo [previously Zaire] and Uganda.

Ochna holstii Engl.

FPS 1: 187 (1950) {Imatong Mountains}; ITU: 279 (1952); JACKSON 1956: 365-366; FZ 2,1: 240 (1963); FAC, Ochnac.: 8 (1967); FSA 22: 5 (1976); SOMMERLATTE 1990: 312; EL AMIN 1990: 66; KTSL: 121 (1994); FE 2,2: 66 (1995).

Syn.: *Ochna prunifolia* Engl. *Ochna densicoma* Engl. & Gilg. [*Ochna mossambicensis* auct., non Klotzsch. (fide N. Robson in FZ): FPS 1: 187 (1952)].

Imatong Mountains group, Sudan side: without further locality, 1980 m., large tree in hill forest, 13.4.1933, *Smith* 25 (K, KHF); without further locality, 1980 m., *Olea capensis-Podocarpus latifolius* forest, 10.2.1976, *Howard* IM 21 (EA, K, KHF); Palotaka, 1200 m., forest [Lotti], 25.1.1979, *Shigeta* 102 (EA); Upper Talanga, 2000 m., mixed *Podocarpus latifolius* forest. 19.3.1984, *Sommerlatte* 28 (EA); Upper Talanga, 2000 m., *Podocarpus latifolius* forest, 27.4.1984, *Sommerlatte* 62 (EA); Gilo, in forest. 15.2.1947, *Jackson* 215 (KHF); Kedong (4° 02' N, 32° 38' E), no alt., edge of forest. 11.2.1948, *Jackson* 261 (FHO); Bushbuck Hill, 2300 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum,* 21.2.1982, *Friis & Vollesen* 982 (C, K); lower southern slope of Mt. Konoro, 2100 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum,* at forest edge,

2.3.1982, *Friis & Vollesen* 1076 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: without further locality, 2380 m., 4.1938, *Eggeling* 3539 (K, MHU); upper reach of Aringa River, 2140 m., in thicket, 6.4.1945, *Hummel* 663 (FHO, MHU); Lomwaga, Aringa River, head-waters, 2290 m., montane forest along rocky stream, 6.4.1945, *Greenway & Hummel* 7296 (EA, K, MHU).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1800 m., high forest, 16.5.1972, *Synnott* 984 (MHU).
Didinga Mountains: Mt. Lotuke, 1980 m., 20.4.1939, *Myers* 10,959 (K, WM); Mt. Lotuke, 1950-2070 m., 20.4.1939, *Myers* 10,964 (K, WM).
General habitat range: in medium-altitude and montane rain forest. According to JACKSON 1956 it occurs commonly in *Podocarpus latifolius* forest on the Imatong Mountains between 1800 and 2600 m; according to SOMMERLATTE 1990 it occurs as a slender tree which is common in *Albizia* forest and in mixed *Podocarpus latifolius* forest of the Imatong Mountains.
General distribution: East Congo [previously Zaire] to South Sudan and South Ethiopia through eastern Africa to South Africa (Transvaal, Natal, East Cape Prov.).

Ochna schweinfurthiana F. Hoffm.
FS: 106 (1929); FPS 1: 185 (1950); ITU: 282 (1952); FWTA 1,1: 223 (1954); FZ 2,1: 248 (1963); EL AMIN 1990: 67; FE 2,2: 67 (1995).
Imatong Mountains group, Sudan side: no specimen from study area traced; recorded from "hilly forests" of the Imatong Mountains group, according to EL AMIN 1990.
General habitat range: in lowland and medium-altitude woodland and wooded grassland.
General distribution: Mali to South Sudan and South Ethiopia, south to Angola and Zimbabwe.

Ochna sp.
Didinga Mountains: Nagichot, 1980 m., 25.4.1939, *Myers* 11,141 (?K, not traced); Nathilani, foothills, 1200 m., in grove of *Euphorbia candelabrum*, 9.4.1949, *Jackson* 668 (KHF).

Fam. 68. **Dipterocarpaceae** Blume

Monotes A. DC.

Monotes kerstingii Gilg
FS: 107 (1929); FPS 1: 189 (1950); FWTA 1,1: 235 (1954); EL AMIN 1990: 71; FC 33: 52 (1991).
Syn.: *Caraipa (?) africana* Oliv.: FTA 1: 172 (1868).
Imatong Mountains group, Sudan side: Gilo, 1830 m., rocky outcrop, 14.7.1947, *MacLeay* 283 (BM).
General habitat range: in lowland and medium-altitude woodland.
General distribution: Guinée to South Sudan.

Order 37. **Myrtales** Rchb.f.

Fam. 69. **Myrtaceae** Juss.

Syzygium Gaertn.

Syzygium guineense (Willd.) DC.
FS: 107 (1929); FPNA 1: 667 (1948); FPS 1: 190 (1950); ITU: 273 (1952); FWTA 1,1: 240 (1954); JACKSON 1956: 355; FG 11: 13 (1966); FAC, Myrtac.: 13 (1968); WICKENS 1976: 98; SOMMERLATTE 1990: 300; FSo 1: 244 (1993); KTSL: 127 (1994); FE 2,2: 77 (1995); HYF: 173 (1997).
subsp. **guineense**
FAC, Myrtac.: 13 (1968); WICKENS 1976: 98; FZ 4: 201 (1978); FSo 1.:244 (1993); KTSL: 127 (1994); FE 2,2: 77 (1995); HYF: 173 (1997).

Syn.: *Syzygium guineense* (Willd.) DC. var. *guineense*: FWTA 1,1: 240 (1954); FG 11: 14 (1966).

Imatong Mountains group, Sudan side: Katire, 1100 m., streambank, 4.3.1949, *Jackson* 751 (KHF); Kinyeti Valley, 10 km. north of Katire, 700 m., riverine forest with *Khaya grandifoliola, Ficus sur, F. vallis-choudae, and Cola,* along temporary stream. 11.3.1982, *Friis & Vollesen* 1169 (BR, C, K, KHF); Mt. Baghanj, near rest house, 1830-2130 m., 13.6.1939, *Andrews* 1919 (K); Gilo, 1700 m., in *Loudetia* grassland, 2.3.1950, *Jackson* 1178 (K, KHF); near pool in Kinyeti River near Gilo, 1750 m., 26.12.1983, *Kielland-Lund* 487 (C, NLH).

Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).

General habitat range: in lowland and medium-altitude bushland, woodland and riverine forest. According to JACKSON 1956 it occurs at the Imatong Mountains in riverine and swamp forests of the lowlands, and according to SOMMERLATTE 1990 it occurs at the Imatong Mountains in gallery forest in the lowland.

General distribution: Senegal to Ethiopia and Somalia, south to South Africa; also in tropical Arabia.

subsp. **afromontanum** F. White

FAC, Myrtac.: 14 (1968); FZ 4: 199 (1978); EL AMIN 1990: 75; KTSL: 127 (1994); FE 2,2: 78 (1995).

Imatong Mountains group, Sudan side: without specified locality [probably Gilo], 1830 m., 7.1946, *Sangster* 829 (MHU); without specified locality, 2130 m., forest, 23.1.1976, *Howard* IM 2 (EA, K, KHF); without specified locality, 1980 m., *Podocarpus latifolius-Syzygium* forest, 21.2. 1976, *Howard* IM 64 (K, KHF); at the Ngairigi River, 1740 m., in forest associated with *Albizia gummifera* and *Macaranga,* 30.1.1947, *Jackson* 167 (KHF); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 9.11.1980, *Friis & Vollesen* 79 (C, K, KHF) & 80 (C, K); Gilo, 1900 m., in montane forest, 20.11.1947, *Jackson* 229 (KHF); Gilo, 1830 m., 7.1946, *Sangster* 836 (MHU); Itibol, 1980 m., *Podocarpus latifolius-Olea* forest. 19.8.1940, *Myers* 13,423 (K).

Imatong Mountains group, Uganda side: without further locality, 2290-2380 m., forest, tree to 25 m. tall, 4.1938, *Eggeling* 3568 (K, MHU); Lututuru, no alt., 1992, *Katende* (sight record).

Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., Mt. Emogadung, 2140 m., forest, 28.10.1941, *Myers* 14,192 (K).

General habitat range: in montane forest. According to SOMMERLATTE 1990 it occurs in the Imatong Mountains as one of the dominant canopy species in the mixed *Podocarpus latifolius* forest at around 2000 m.

General distribution: Senegal and Cameroon to Ethiopia, south to Namibia and South Africa (Transvaal, East Cape Prov.).

Fam. 70. **Melastomataceae** Juss.

Antherotoma (Naudin) Hook. f.

Antherotoma naudinii Hook. f.

FTA 2: 444 (1871); FS: 108 (1929); FPS 1: 191 (1950); FWTA 1,1: 247 (1954); FTEA, Melastomatac.: 9 (1975); FC 24: 10 (1983); UKWF: 93 (1994); FE 2,2: 111 (1995).

Imatong Mountains group, Sudan side: Gilo, above bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 13.11.1980, *Friis & Vollesen* 208 (C, K).

Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 2250 m., open short turf over rock, 26.8.1966, *Lock* K 6 (EA, MHU).

General habitat range: in lowland and medium-altitude grassland, evergreen bushland and in forest clearings.

General distribution: Guinée to Ethiopia, south to Angola and South Africa (Transvaal); also in Madagascar.

Dissotis Benth.

Dissotis brazzae Cogn.
FPNA 1: 674 (1948); FWTA 1,1: 258 (1954); FTEA, Melastomatac.: 41 (1975); FC 24: 22 (1983); FG 25: 15 (1983); UKWF: 93 (1994); FE 2,2: 109 (1995).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 13.11.1980, *Friis & Vollesen* 200 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude grassland, bushland and at forest margins.
General distribution: Sierra Leone to South Sudan and South West Ethiopia, south to Angola, Zambia and Tanzania. First record from the Sudan.

Dissotis canescens (Graham) Hook. f.
FTEA, Melastomatac.: 40 (1975); UKWF: 93 (1994); FE 2,2: 110 (1995).
Syn.: *Heterotis canescens* (Graham) Jacques-Félix: FC 24: 44 (1983).
Imatong Mountains group, Uganda side: 2 km. east of Lututuru, 1400 m., open woodland, 17.12.1969, *Lye* 2090 (K, MHU).
General habitat range: in medium-altitude grassland and swamps.
General distribution: Nigeria to Ethiopia, south to South Africa (East Cape Prov.).

Dissotis decumbens (P. Beauv.) Triana
FPS 1: 194 (1950); FWTA 1,1: 257 (1954); FTEA, Melastomatac.: 38 (1975); FE 2,2: 111 (1995).
Syn.: *Dissotis laevis* (Benth.) Hook. f.: FTA 2: 451 (1871). *Heterotis decumbens* (P. Beauv.) Jacques-Félix: FC 24: 44 (1983); FG 25: 26 (1983).
Imatong Mountains group, Sudan side: Talanga, 900 m., trailing in undergrowth of gallery forest, 24.4.1949, *Jackson* 716 (KHF); Talanga, 900 m., in forest swamp, 21.3.1950, *Jackson* 1252 (BM); Talanga, 950 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, along small brook between rocks, 2.12.1980, *Friis & Vollesen* 638 (C, K, KHF).
General habitat range: in medium-altitude grassland and at forest margins.
General distribution: Nigeria to South Sudan and South West Ethiopia, south to Angola, Congo [previously Zaire] and Tanzania.

Dissotis perkinsiae Gilg
FWTA 1,1: 258 (9154); FTEA, Melastomatac.: 56 (1975); FC 24: 30 (1983); El Amin 1990: 77.
Syn.: *Dissotis schweinfurthii* Gilg: FS: 109 (1929). *Dissotis scabra* Gilg: FS: 109 (1929); FPS 1: 192 (1950).
Imatong Mountains group, Sudan side: Laboni, 1300 m., shrub layer in forest, 21.12.1935, *Thomas* 1732 (K) & 1732 A (BM, K); Gilo, 1800 m., grassland, 20.6.1961, *Jackson* 4252 (K); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 13.11.1980, *Friis & Vollesen* 198 (C, K, KHF).
Didinga Mountains: Nagichot, 1920 m., 28.4.1939, *Myers* 11,210 (K); north of Naperatang Valley (4° 19' N, 33° 30' E), 1900 m., 18.12.1983, *Kielland-Lund* 383 (C, NLH).
General habitat range: in medium-altitude grassland.
General distribution: Ghana to South Sudan, south to Congo [previously Zaire] and Uganda.

Dissotis rotundifolia (Sm.) Triana
FS: 108 (1929); FPNA 1: 674 (1948); FWTA 1,1: 257 (1954); FTEA, Melastomatac.: 39 (1975); UKWF: 93 (1994).
Syn.: *Heterotis rotundifolia* (Sm.) Jacques-Félix: FC 24: 44 (1983).
Imatong Mountains group, Sudan side: Kinyeti Valley, at Kinyeti River near Katire, 900 m., riverine scrub, 23.3.1982, *Friis & Vollesen* 1298 (BR, C, K).

General habitat range: in lowland and medium-altitude grassland and forest, often riverine.
General distribution: Sierra Leone to South Sudan, Uganda and Kenya, south to Angola, Zambia, Zimbabwe and Mozambique. First record from the Sudan.

Dissotis senegambiensis (Guill. & Perr.) Triana
FTEA, Melastomatac.: 48 (1975); EL AMIN 1990: 77; UKWF: 93 (1994); FE 2,2: 109 (1995).
var. **senegambiensis**
FTEA, Melastomatac.: 49 (1975); FE 2,2: 109 (1995).
Syn.: *Osbeckia abyssinica* Gilg: FPS 1: 194 (1950) {Imatong Mountains}. *Osbeckia senegambiensis* Guill. & Perr.: FTA 2: 443 (1871); FS: 108 (1929); FPS 1: 194 (1950); FWTA 1,1: 249 (1954). *Osbeckia saxicola* Gilg: FS: 108 (1929); FPS 1: 194 (1950).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 2.1.1984, *Kielland-Lund* 536 (C, NLH); Talanga, 950 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 30.11.1980, *Friis & Vollesen* 559 (C, K, KHF); Talanga, 1000 m., at old road with forest regrowth, 28.12.1949, *Jackson* 1007 (BM); Gilo, 1700 m., in scrub near stream, 9.11.1949, *Jackson* 889 (BM); between Katire and Gilo, 1700 m., 26.12.1983, *Kielland-Lund* 465 (C, NLH); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 8.11.1980, *Friis & Vollesen* 23 (BR, C, K, KHF); Itibol, 1830 m., in scrub, 17.12.1935, *Thomas* 1623 (BM, K); Lomuleng, 2440 m., grassland, 29.12.1935, *Thomas* 1805 (BM, K).
Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., near Moimoi (4° 13' N, 32° 05' E), 1800 m., *Acacia abyssinica* woodland, 21.1.1950, *Jackson* 1099 (BM).
Didinga Mountains: north of Duguru village, Nagichot (4° 17' N, 33° 35' E), 2000 m., 18.12.1983, *Kielland-Lund* 374 (C, NLH).
General habitat range: in lowland, medium-altitude and montane grassland, evergreen bushland and in clearings, and at margins of medium-altitude or montane forest.
General distribution: Senegal to Ethiopia, south to Tanzania and Mozambique.
Note. The taxonomy of FTEA, Melastomatac. (1975) has been followed here. *Jackson* 1007, *Friis & Vollesen* 559 and *Kielland-Lund* 536 match the original material of *Osbeckia saxicola* Gilg, and may represent a separate taxon.

Melastomastrum Naudin

Melastomastrum capitatum (Vahl) A. & R. Fernandes
FTEA, Melastomatac.: 20 (1975); FC 24: 48 (1983); FE 2,2: 111 (1995).
Syn.: *Dissotis erecta* (Guill. & Perr.) Dandy in FPS 1: 192 (1950); FWTA 1,1: 259 (1954). *Dissotis capitata* (Benth.) Hook. f.: FTA 2: 450 (1871); FS: 108 (1929); FPNA 1: 673 (1948).
Imatong Mountains group, Sudan side: Talanga, 950 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, along small brook between rocks, 2.12.1980, *Friis & Vollesen* 639 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude grassland and at forest edges.
General distribution: Senegal to Ethiopia, south to Angola, Zambia and Tanzania.

Warneckea Gilg

Warneckea jasminoides (Gilg) Jacq.-Félix
FC 24: 169 (1983).
Syn.: *Memecylon jasminoides* Gilg: JACKSON 1956: 354 {Talanga, Lotti}; FTEA, Melastomatac.: 83 (1975).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., forest, 1.1979, *Shigeta* 136 (EA, K); Ta-

langa, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 1.12.1980, *Friis & Vollesen* 594 (C, K, KHF) & 595 (C, K, KHF).
General habitat range: in lowland and medium-altitude forest.
General distribution: Cameroon, Angola, Congo [previously Zaire], South Sudan, Uganda and Tanzania.

Fam. 71. **Combretaceae** R. Br.

Combretum Loefl.

Combretum aculeatum Vent.
FTA 2: 423 (1871); FS: 115 (1929); FPS 1: 199 (1950); FWTA 1,1: 273 (1954); FAC, Combretac.: 25 (1968); FTEA, Combretac.: 60 (1973); WICKENS 1976: 98; FC 25: 25 (1983); EL AMIN 1990: 81; FSo 1: 250 (1993); KTSL: 132 (1994); FE 2,2: 120 (1995).
Imatong Mountains group, Sudan side: between Katire and Torit, 700 m., *Acacia senegal, Grewia villosa* woodland near rocky outcrop, no date, *Jackson* 503 (FHO, KHF); at the northern point of the continuous mountain chain, just south-east of Ngarama towards Molongori, 700 m., open woodland with *Acacia seyal, Albizia amara* subsp. *sericocephala, Lannea humilis,* etc., on sandy soil, 13.3.1982, *Friis & Vollesen* 1194 (C, K, KHF); Kinyeti Valley, Hiliu, no alt., 13.3.1984, *Kielland-Lund* 1009 (C, NLH).
Imatong Mountains group, Uganda side: Agoro, no alt., 12.1932, *Eggeling* 790 (MHU); north of Madi Opei, no alt., 12.1932, *Eggeling* 857 (EA, MHU).
General habitat range: in lowland and medium-altitude woodland or bushland, sometimes with *Acacia* and *Commiphora.*
General distribution: Senegal to Ethiopia and Somalia, south to Tanzania.

Combretum adenogonium A. Rich.
FS: 114 (1929); FPS 1: 204 (1950); KTSL: 132 (1994); FE 2,2: 117 (1995).
Syn.: *Combretum fragrans* F. Hoffm.: FTEA, Combretac.: 29 (1973); FC 25: 22 (1983). *Combretum undulatum* Engl. & Diels: FS: 113 (1929); FPS 1: 204 (1950). *Combretum ghasalense* Engl. & Diels: FS: 113 (1929); FPS 1: 206 (1950); ITU: 86 (1952); FWTA 1,1: 271 (1954); FAC, Combretac.: 75 (1968). *Combretum multispicatum* Engl. & Diels: FS: 113 (1929); FPS 1: 204 (1950).
Imatong Mountains group, Sudan side: south west side of Acholi Mts., Palwar (3° 55' N, 32° 36' E), 1100 m., rocky hill with *Strychnos, Annona* and *Vitex,* 15.1.1948, *Jackson* 235 (FHO); Talanga, 1000 m., on rocks in woodland with *Vitex doniana, Annona senegalensis,* etc., 4.3.1950, *Jackson* 1185 (FHO); Kinyeti Valley, Hiliu, no alt., 2.6.1984, *Kielland-Lund* 835 (NLH); Kinyeti Valley, 1200-1400 m., deciduous woodland, 4.1982, *Friis & Vollesen* (sight record); Logoforok, 700 m., co-dominant in scrub and woodland with *Maytenus,* 2.2.1949, *Jackson* 620 (FHO, KHF).
Imatong Mountains group, Uganda side: Lututuru, Aringa Valley, no alt., woodland with *Combretum, Lonchocarpus, Rhus, Grewia molle,* and *Acacia,* 25.1.1946, *Dawkins* 164 (EA, FHO, MHU).
General habitat range: in lowland and medium-altitude woodland, often on heavy clay soils.
General distribution: Senegal and Mali to Ethiopia, south to Botswana, Zimbabwe and Mozambique.

Combretum capituliflorum Fenzl
FS: 115 (1929); FPS 1: 203 (1950); FAC, Combretac.: 53 (1968); FTEA, Combretac.: 46 (1973); EL AMIN 1990: 81; KTSL: 133 (1994); FE 2,2: 120 (1995).
Imatong Mountains group, Sudan side: West of Acholi Mountains, Opari, no alt., 31.12.1932, *Trought* s.n. (BM); Torit, near bridge to one of the suburbs of the town (4° 24' N, 32° 34' E),

no alt., 12.1.1984, *Kielland-Lund* 610 (C, NLH); Talanga, 900 m., at edge of closed forest, 27.4.1949, *Jackson* 749 (BM, FHO); Loboya, near Ingawi River (4° 2' N, 32° 59' E), 780 m., gallery forest of *Rauvolfia* and *Milicia*, with *Caloncoba crepiniana* on wet ground near stream, 18.1.1950, *Jackson* 1062 (FHO, KHF); Kinyeti Valley, c. 6 km. south of Hiliu, 750 m., riparian scrub along temporary stream, 27.2.1982, *Friis & Vollesen* 1045 (BR, C, K, KHF).

Lafit, Dongotona and Nangeya Mountains: lower slope of the Dongotona Mts., at the River Lonyori, 1200 m., in rocky stream-bed with forest of *Lannea barteri, Albizia grandibracteata*, etc., 26.1.1950, *Jackson* 1122 (FHO, KHF).

General habitat range: in lowland and medium-altitude riverine forest.

General distribution: East Congo [previously Zaire] to Ethiopia, south to Kenya.

Combretum collinum Fresen.

FS: 115 (1929); FPS 1: 201 (1950); FTEA, Combretac.: 24 (973); WICKENS 1976: 98; FC 25: 20 (1983); SOMMERLATTE 1990: 102; EL AMIN 1990: 82; KTSL: 133 (1994); FE 2,2: 116 (1995).

subsp. **binderianum** (Kotschy) Okafor

FTEA, Combretac.: 26 (1973); WICKENS 1976: 98; EL AMIN 1990: 82; FE 2,2: 116 (1995).

Syn.: *Combretum binderianum* Kotschy: FPS 1: 199 (1950); ITU: 86 (1952); FWTA 1,1: 271 (1954); JACKSON 1956: 349; FAC, Combretac.: 25 (1968).

Imatong Mountains group, Sudan side: between Palwar and Talanga (3° 53' M, 32° 39' E), 1000 m., woodland dominated by *Combretum spp.*, 29.3.1984, *Sommerlatte* 41 (EA); Kinyeti Valley, Hiliu, 700 m., edge of compound, 23.11.1983, *Kielland-Lund* 40 (C, NLH); Hiliu, no alt., 2.6.1984, *Kielland-Lund* 834 (NLH); near rest-house at Mt. Baghanj, 1830-2130 m., 13.6.1939, *Andrews* A1908 (K).

General habitat range: in lowland and medium-altitude woodlands. According to JACKSON 1956 it occurs frequently in moist woodland to the east and north of the Imatong Mountains, and according to SOMMERLATTE 1990 it occurs as a tree in lowland woodland, and as an early coloniser of abandoned cultivated land.

General distribution: Ivory Coast to Ethiopia, south to Tanzania.

subsp. **elgonense** (Exell) Okafor

FTEA, Combretac.: 25 (973); EL AMIN 1990: 83; FE 2,2: 116 (1995).

Syn.: *Combretum laboniense* M.B. Moss in CHIPP 1929: 189 & 195; FPS 1: 202 (1950) {Imatong Mountains, near Laboni}.

Imatong Mountains group, Sudan side: near Laboni, 1220 m., in fire swept wooded grassland, 8.2.1929, *Chipp* 45 (K, holotype of *Combretum laboniense*, KHF, WM, isotypes); at Lomariti, 1280 m., woodland, 4.8.1939, *Myers* 11,802 (K, WM); between Palwar and Talanga (3° 53' M, 32° 39' E), 1000 m., woodland dominated by *Combretum spp.*, 29.3.1984, *Sommerlatte* 40 (EA); Talanga, 950 m., open woodland with *Albizia zygia, Combretum collinum*, etc., recently burnt, 17.3.1982, *Friis & Vollesen* 1236 (C, K, KHF); Kinyeti Valley, Lorohoi village near Hiliu, 14 km. south of Torit, 700 m., rocky outcrop with woodland in cultivated area, 14.2.1986, *Bodoegaard* 1 (EA, in part [only fruits of *Bodoegaard* 1 are *C. collinum*; leaves are *C. molle*]).

General habitat range: in lowland and medium-altitude woodlands.

General distribution: Congo [previously Zaire] to South Sudan, Uganda and Kenya, south to Tanzania and Zambia. The species as a whole occurs from Guinée to Ethiopia and south to South Africa.

Combretum molle G. Don

FS: 115 (1929); FPS 1: 201 (1950); ITU: 88 (1952); FWTA 1,1: 270 (1954); FAC, Combretac.: 67 (1968); FTEA, Combretac.: 33 (1973); WICKENS 1976: 99; FC 25: 18 (1983); SOMMERLATTE 1990: 92; EL AMIN 1990: 86; FSo 1: 249 (1993); KTSL: 134 (1994); FE 2,2: 118 (1995); HYF: 174 (1997).

Syn.: *Combretum trichanthum* Fresen.: FTA 2: 431 (1871); FS: 112 (1929). *Combretum splendens* Engl.: FS: 114 (1929); CHIPP 1929: 189; FPNA 1: 663 (1948). *Combretum gueinzii* Sond.: FPS 1: 202 (1950); ITU: 88 (1952); JACKSON 1956: 356. *Combretum hobol* Engl. & Diels.

Imatong Mountains group, Sudan side: without further locality, no alt., no date, *Maxwell Forbes* 74 (K); without further locality, 1080 m., 12.6.1939, *Andrews* 1817 (K); west of Acholi Mountains, Payito, 1400 m., in fire swept grassland at edge of fringing forest, a 15 m. tall tree, 1929, *Chipp* 23 (K, KHF, WM); Acholi Hills, below Upper Talanga Tea project, 1100 m., woodland on rocky slope, dominated by *Combretum collinum*, 3.3.1984, *Sommerlatte* 44 (EA); Kinyeti Valley, Lorohoi village near Hiliu, 14 km. south of Torit, 700 m., rocky outcrop with woodland in cultivated area, 14.2.1986, *Bodoegaard* 1 (EA, in part [only leaves of *Bodoegaard* 1 are *C. molle*; fruits are *C. collinum*]); Kinyeti Valley, Hiliu, 700 m., edge of compound, 26.11.1983, *Kielland-Lund* 41 (C, NLH); Hiliu, no alt., 2.6.1984, *Kielland-Lund* 833 (C, NLH); Hiliu, no alt., 12.3.1984, *Kielland-Lund* 1006 (C, NLH); hill 2 km. south of Hiliu, 700 m., 28.11.1983, *Kielland-Lund* 83 (C, NLH); 3 km. south of Hiliu along Katire road, no alt., north face of rocks, 26.5.1984, *Kielland-Lund* 747 (C, NLH); Katire, 940 m., flat ground near river, 10.1.1947, *Jackson* 164 (KHF); Katire, at Kinyeti River, 900 m., edge of gallery forest, 8.2.1950, *Jackson* 1126 (FHO, KHF); Katire, at R. Kinyeti, 1070 m., 15.12.1935, *Thomas* 1563 (K); Katire, 1220 m., woodland, 17.1.1947, *Dawkins* 224 (K, MHU); Mt. Konyi, near Loka, no alt., 4.11.1937, *Myers* 9497 (BM); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 13.11.1980, *Friis & Vollesen* 192 (C); Mt. Itibol, 1960 m., 14.6.1939, *Andrews* 1983 (K).

Imatong Mountains group, Uganda side: north of Madi Opei, no alt., 12.1932, *Eggeling* 858 (MHU); Agoro, no alt., 3.1935, *Eggeling* 1722 (MHU) & 1724 (MHU); Lututuru, east bank of Aringa River, no alt., 27.4.1947, *Dawkins* 257 (MHU); 4 km. south-east of Lomwaga, no alt., tall grass grassland, 18.7.1974, *Katende* 2152 (MHU).

Didinga Mountains: Boya Hill, Kimatong, 640 m., 31.12.1984, *Fukui* 84-15 (EA); near Loming north of Nagichot (4° 19' N, 33° 33' E), 2000 m., 18.12.1983, *Kielland-Lund* 378 (NLH); Mt. Lotuke, Char, 1830 m., wooded grassland, 18.4.1939, *Myers* 10,886 (K).

General habitat range: in lowland and medium-altitude woodlands throughout the area of this vegetation type in tropical Africa. According to JACKSON 1956 it occurs at the Imatong Mountains in the transition from moist lowland woodland to the west and north of the mountains to montane vegetation; according to SOMMERLATTE 1990 it occurs as a small to medium sized tree in lowland woodland, most common on rocky sites.

General distribution: Senegal to Ethiopia and Somalia, south to South Africa; also in tropical Arabia.

Combretum paniculatum Vent.

FTA 2: 425 (1871); FS: 115 (1929); FPNA 1: 664 (1948); FPS 1: 203 (1950); FWTA 1,1: 273 (1954); FAC, Combretac.: 34 (1968); FTEA, Combretac.: 52 (1973); WICKENS 1976: 99; FC 25: 37 (1983); EL AMIN 1990: 86; KTSL: 135 (1994); FE 2,2: 120 (1995).

subsp. **paniculatum**

FTEA, Combretac.: 53 (1973); WICKENS 1976: 99.

Imatong Mountains group, Sudan side: without further locality [possibly Gilo], 1980 m., open forest, 31.1.1976, *Howard* IM 22 (EA, K, KHF); Palotaka, 1200 m., 1979, *Shigeta* 106 (?EA, identified and listed by M.G. Gilbert, not traced); Issore to Laboni, Issore, 1430 m., riverine forest, 21.12.1935, *Thomas* 1727 (BM, K); near Gilo Pool (4° 02' N, 32° 50' E), no alt., 15.1.1984, *Kielland-Lund* 648 (C, NLH); near

Ngairigi River below Gilo, 1700 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* climber at forest edge, 11.3.1982, *Friis & Vollesen* 1171 (C).
General habitat range: in lowland and medium-altitude moist woodland, at forest edges and in open forest.
General distribution: Senegal to Ethiopia, south to Angola, Zimbabwe and Mozambique. Species as a whole also in Mozambique, Botswana and South Africa (Transvaal).

Combretum racemosum P. Beauv.
FTA 2: 424 (1871); FS: 115 (1929); FPNA 1: 664 (1948); FPS 1: 203 (1950); FWTA 1,1: 272 (1954); FAC, Combretac.: 30 (1968); FTEA, Combretac.: 55 (1973); FC 25: 38 (1983).
Imatong Mountains group, Sudan side: Kinyeti Valley, below Lawurong, 1100 m., broken fringing forest with *Khaya,* 16.12.1948, *Jackson* 569 (FHO).
General habitat range: in lowland and medium-altitude riverine forest and at margins of rain forest, also in secondary bushland.
General distribution: Senegal to South Sudan and Uganda, south to Angola.
Combretum rhodanthum Engl. & Diels
FPNA 1: 666 (1948); FWTA 1,1: 274 (1954); FAC, Combretac.: 32 (1968); FTEA, Combretac.: 59 (1973); FC 25: 32 (1983).
Imatong Mountains group, Sudan side: Kinyeti Valley, Imeila Forest, 700 m., degraded gallery forest, 26.1.1949, *Jackson* 577 (FHO).
General habitat range: in lowland and medium-altitude rain forest, gallery forest and secondary vegetation.
General distribution: Sierra Leone to South Sudan and Uganda, south to Congo [previously Zaire].

Combretum sp. cf. C. tanaense J. J. Clark
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber in forest, 6.12.1980, *Friis & Vollesen* 724 (BR, C, KHF).

Terminalia L.

Terminalia brownii Fresen.
FTA 2: 415 (1871); FS: 111 (1929); FPS 1: 210 (1950); ITU: 90 (1952); FWTA 1,1: 279 (1954); FAC, Combretac.: 100 (1968); FTEA, Combretac.: 90 (1973); WICKENS 1976: 99; FC 25: 72 (1983); EL AMIN 1990: 91; FSo 1: 253 (1993); KTSL: 139 (1994); FE 2,2: 127 (1995); HYF: 174 (1997).
Imatong Mountains group, Sudan side: without further locality, 1080 m., 12.6.1939, *Andrews* 1815 (K); Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees of *Terminalia laxiflora, T. brownii, Pterocarpus lucens, Combretum collinum* and *Vitex doniana* on rocky outcrop, 5.12.1980, *Friis & Vollesen* 697 (C, K, KHF); 10 km. south-east of Torit, 700 m., in cracks in rocks with *Sclerocarya* and *Cordyla,* 16.5.1948, *Jackson* 295 (FHO); Kinyeti Valley, east of the junction between roads to Ngarama and Katire north of Hiliu, 700 m., , 3.12.1983, *Kielland-Lund* 188 (C, NLH) & 189 (C, NLH); Lorohoi village near Hiliu, 700 m., rocky outcrop in cultivated land, 14.2.1986, *Bodoegaard* 6/4 (EA); 3 km. south of Hiliu along Katire road (4° 14' N, 32° 40' E), north face of rocks, no alt., 26.5. 1984, *Kielland-Lund* 742 (C, NLH); north-eastern side of mountains, near Molongori, 750 m., almost bare rocky slope with *Boswellia papyrifera, Terminalia brownii, Lannea fulva, Euphorbia magnicapsula, Xerophyta simulans,* etc., 10.3. 1982, *Friis & Vollesen* 1149 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: Agoro, 1370-1530 m., lower mountain slopes, 12.1932, *Eggeling* 809 (K, MHU); Agoro, arid hill, no date, *Eggeling* 842 (EA, K); Lututuru, 1990 m., 11.1934, *Brassnett* s.n. (MHU); Lututuru, east of upper falls of Lakure River, 1470 m., on bare

granite rocks, 28.4.1947, *Dawkins* 258 (FHO, MHU).
Didinga Mountains: Boya Hill, Karauili, 1200 m., rocky outcrop, 22.12.1982, *Fukui* 82-13 (EA); Boya Hill, Kimatong, 640 m., near foot of mountain, 31.12.1984, *Fukui* 84-10 (EA); Boya Hill, Thuguru region (4° 40' N, 33° 17' E), no alt., 12.6.1984, *Kielland-Lund* 928 (C, NLH) & 935 (C, NLH).
General habitat range: in lowland, medium-altitude and montane woodland.
General distribution: Nigeria to Ethiopia and Somalia, south to Tanzania; also in tropical Arabia.

Terminalia laxiflora Engl. & Diels
FS: 110 (1929); FPS 1: 208 (1950); FWTA 1,1: 279 (1954); FAC, Combretac.: 98 (1968); FTEA, Combretac.: 87 (1973); WICKENS 1976: 99; FC 25: 74 (1983); EL AMIN 1990: 93.
Syn.: *Terminalia schweinfurthii* Engl. & Diels: FS: 110 (1929); FPS 1: 210 (1950).
Imatong Mountains group, Sudan side: Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 8.12.1980, *Friis & Vollesen* 782 (BR, C, EA, K, KHF); Katire to Gilo, at road to Itibol, 1400 m., wooded grassland with *Combretum molle, C. collinum, Entada abyssinica* and *Erythrina abyssinica,* the grasses *Pennisetum purpureum* and *Hyparrhenia rufa* dominant, 12.11. 1980, *Friis & Vollesen* 166 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude woodland.
General distribution: Mali and Guinea Bissau to Ethiopia, south to North East Congo [previously Zaire], Uganda, Kenya and North East Tanzania.

Terminalia mollis Laws.
FTA 2: 417 (1871); FPS 1: 210 (1950); FWTA 1: 279 (1954); FCB, Combretac.: 98 (1968); FTEA, Combretac.: 88 (1973); FZ 4: 177 (1978); KTSL: 140 (1994).
Syn.: *Terminalia torulosa* F. Hoffm.: ITU: 93 (1952).
Imatong Mountains group, Sudan side: Kinyeti Valley, 10 km. north of Hiliu towards Torit, 650 m., 8.12.1983, *Kielland-Lund* 270 (C, NLH).
General habitat range: in lowland, medium-altitude and montane woodland or wooded grassland, often dominant.
General distribution: Ghana to South Sudan, Uganda, and Kenya, south to Angola, Congo [previously Zaire], and Zambia.

Terminalia schimperiana Hochst.
FE 2,2: 128 (1995).
Syn.: *Terminalia glaucescens* Planch.: FTA 2: 416 (1871); FPS 1: 210 (1950); FWTA 1,1: 279 (1954); JACKSON 1956: 349; FAC, Combretac.: 100 (1968); FTEA, Combretac.: 89 (1973); SOMMERLATTE 1990: 80; EL AMIN 1990: 93.
Imatong Mountains group, Sudan side: Palotaka, 900 m., in *Albizia zygia-Combretum* woodland, 31.10.1949, *Jackson* 883 (FHO); Kinyeti Valley, Hiliu, 700 m., in *Eucalyptus* plantation near road, 30.11.1983, *Kielland-Lund* 109 (C, NLH); Katire, at Katire River, 1070 m., 15.12.1935, *Thomas* 1564 (K); near Buthi (3° 31' N, 34° 15' E), in thicket with lowland bamboo, *Cussonia, Dombeya,* etc., 2.4.1949, *Jackson* 692 (KHF).
Imatong Mountains group, Uganda side: Agoro, 1830 m., rocky woodland, 14.11.1945, *Thomas* 4375 (EA, K).
Didinga Mountains: Mt. Lotuke, Char, 1830 m., wooded grassland, 19.4.1939, *Myers* 10,945 (K, WM) & 10,949 (K).
General habitat range: in lowland, medium-altitude and montane woodland. According to both JACKSON 1956 and SOMMERLATTE 1990 it occurs at the Imatong Mountains as a common small to medium sized tree in lowland woodlands.
General distribution: Guinée to Ethiopia, south to Uganda and North West Tanzania.

Terminalia spinosa Engl.
FPS 1: 208 (1950) {Kapoeta}; ITU: 92 (1952); FTEA, Combretac.: 82 (1973); EL AMIN 1990: 95; KTSL: 141 (1994); FE 2,2: 125 (1995).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, 700 m., *Combretum* woodland on small, rocky hills, 28.8.1986, *Bodoegaard & Francis* 27 (EA).
Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., Ikoto (4° 7' N, 33° 7' E), dry savannah on sandy soil, 2.2.1949, *Jackson* 625 (FHO, KHF).
Didinga Mountains: Lauru, at foot of Didinga Mts., near Kapoeta, no alt., in grassland, 9.9.1940, *Myers* 13,465 (K); Boya Hill, Kimatong, 640 m., woodland, 31.12.1984, *Fukui* 84-39 (EA); Boya Hill, Thuguru region (4° 40' N, 33° 17' E), no alt., 12.6.1984, *Kielland-Lund* 931 (C, NLH).
General habitat range: in deciduous bushland with *Acacia* and *Commiphora.*
General distribution: Uganda and South Sudan to Somalia, south to North Tanzania.

Fam. 72. **Rhizophoraceae** R. Br.

Cassipourea Aubl.

Cassipourea malosana (Bak.) Alston
FTEA, Rhizophorac.: 11 (1956); FAC, Rhizophorac.: 27 (1987); SOMMERLATTE 1990: 330; EL AMIN 1990: 97; FSo 1: 258 (1993); KTSL: 143 (1994); FE 2,2: 134 (1995).
Syn.: *Cassipourea elliotii* (Engl.) Alston: FPS 1: 211 (1950) {Didinga Mountains, Nagichot}; ITU: 330 (1952).
Imatong Mountains group, Sudan side: without further locality [possibly Gilo], 1980 m., *Podocarpus latifolius-Olea* forest, 27.1.1976, *Howard* IM 23 (K, KHF); without further locality, no alt., 13.2.1976, *Howard* IM 48 (K, KHF); Acholi Hills, Upper Talanga Tea project (3° 57' N, 32° 46' E), 2000 m., in mixed *Podocarpus latifolius* forest with *Olea, Syzygium, Maytenus undata, Vepris nobilis,* etc., 21.3.1984, *Sommerlatte* 30 (EA); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 20.11. 1980, *Friis & Vollesen* 359 (BR, C, EA, K, KHF); Gilo, 1830 m., forest understorey, 7.1946, *Sangster* 823 (MHU); Itibol, 1930 m., *Podocarpus latifolius-Olea* forest, 30.1.1947, *Jackson* 168 (FHO, KHF).
Imatong Mountains group, Uganda side: without further locality, 2140 m., *Podocarpus latifolius* forest, 4.1938, *Eggeling* 3556 (K, MHU); headwaters of Aringa River, 2440 m., in *Podocarpus latifolius-Syzygium* forest, 7.4.1945, *Greenway & Hummel* 7302 (EA, FHO, K, MHU).
Didinga Mountains: Nagichot, 1980 m., forest, 25.4.1939, *Myers* 11,123 (K, WM).
General habitat range: in medium-altitude and montane forest. According to SOMMERLATTE 1990 it occurs in the Imatong Mountains as an understorey tree in mixed *Podocarpus latifolius* forest.
General distribution: East Congo [previously Zaire] to Ethiopia and North Somalia, south to South East Tanzania and Malawi.

Cassipourea ruwenzoriensis (Engl.) Alston
FPNA 1: 659 (1948); ITU: 331 (1952); JACKSON 1956: 353 {Talanga, Lotti}; FTEA, Rhizophorac.: 14 (1956); FAC, Rhizophorac.: 30 (1987); EL AMIN 1990: 97; KTSL: 144 (1994).
Imatong Mountains group, Sudan side: Talanga, 1000 m., forest on steep slope, 5.4.1950, *Jackson* 1375 (K, WM); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 29.11.1980, *Friis & Vollesen* 546 (C, K, KHF).
General habitat range: in medium-altitude and montane forest.
General distribution: Central African Republic and East Congo [previously Zaire] to Kenya, south to Tanzania.

Order 38. **Hypericales** Dum. (*Guttiferae* F.C.L. Spenner, nom. altern. [as order])

Fam. 73. **Clusiaceae** Lindl.
(*Guttiferae* Juss., nom. altern. [as family]
Syn.: *Hypericaceae* Juss.)

Garcinia L.

Garcinia buchananii Bak.
FPS 1: 214 (1950); ITU: 153 (1952); JACKSON 1956: 353 {Talanga}; FAC, Guttiferae: 66 (1970); FTEA, Guttiferae: 24 (1978); KTSL: 146 (1994); FE 2,2: 142 (1995).
Imatong Mountains group, Sudan side: Talanga to Upper Talanga, 950 m., medium-altitude rain forest with *Diospyros abyssinica, Garcinia buchananii, Uvariopsis congoensis, Turraea floribunda, Manilkara butugi,* etc., 10.12.1980, *Friis & Vollesen* 797 (C, KHF).
Imatong Mountains group, Uganda side: Lututuru, 1530 m., 3.4.1945, *Hummel* 668 (FHO, MHU).
General habitat range: in lowland and medium-altitude forest, often riverine, and evergreen bushland.
General distribution: Congo [previously Zaire] to Ethiopia, south to Zambia, Malawi, Zimbabwe and Mozambique.
Note. See Friis (1992) for discussion of relationship between *Garcinia buchananii* and *G. huillensis* Oliv.

Harungana Lam. ex Poir.

Harungana madagascariensis Lam.
FTA 1: 160 (1868); FPNA 1: 625 (1948); FPS 1: 212 (1950); ITU: 156 (1952); FTEA, Hypericac.: 19 (1953); FWTA 1,1: 290 (1954); JACKSON 1956: 352; FZ 1,2: 392 (1961); FAC, Guttiferae: 14 (1970); SOMMERLATTE 1990: 222; EL AMIN 1990: 99; KTSL: 147 (1994).
Syn.: *Haronga madagascariensis* Choisy: FS: 117 (1929).
Imatong Mountains group, Sudan side: Talanga, 1100 m., edge of forest, 22.9.1948, *Jackson* 352 (FHO, KHF); Issore, 1200 m., gallery forest, 15.1.1949, *Jackson* 594 (FHO, KHF); at Issore, 1340 m., gallery forest, 3.8.1939, *Myers* 11,773 (K, WM); Katire to Gilo, near road forking off towards Itibol, 1500 m., secondary transitional forest dominated by *Harungana madagascariensis,* 17.11.1980, *Friis & Vollesen* 298 (C, K, KHF); Gilo to Itibol, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* sapling at forest edge near the upper limit for the species, 11.11.1980, *Friis & Vollesen* 162 (C); near Gilo (4° 03' N, 32° 47' E), 1600 m., scrub at roadside, 20.4.1984, *Sommerlatte* 66 (EA).
General habitat range: in lowland and medium-altitude forest as a pioneer tree. According to both JACKSON 1956 and SOMMERLATTE 1990 it occurs at the Imatong Mountains as a pioneer tree at edges of lowland and medium-altitude forest; SOMMERLATTE points out that it is especially common round the human habitations at 1500 m.
General distribution: Senegal to South Sudan, south to South Africa (Transvaal); also in Madagascar and Mascarene Islands.

Hypericum L.

Hypericum peplidifolium A. Rich.
FTA 1: 155 (1868); FPNA 1: 618 (1948); FPS 1: 212 (1950) {Imatong Mountains}; FWTA 1,1: 287 (1954); FTEA, Hypericac.: 9 (1953); FZ 1,2: 383 (1961); FAC, Guttiferae: 3 (1970); UKWF: 94 (1994); FE 2,2: 140 (1995).
Imatong Mountains group, Sudan side: Mt. Itibol, 1950 m., forest, 15.6.1939, *Andrews* 2012 (K); mountain moor below Kipia, 2650 m., 28.7.1939, *Myers* 11,700 (K, WM); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* on moist slope along trail,

20.11.1980, *Friis & Vollesen* 367 (C, K, KHF); Gilo, 1830 m., along track in montane woodland, 29.6.1947, *MacLeay* 117 (BM); near Gilo, 1980 m., in short grassland, 14.6.1953, *Osman & Aziz* 267 (KHU); Gilo to Mt. Konoro, 1800 m., seepage meadow on edge between upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea* and grassland with *Loudetia arundinacea*, 24.11.1980, *Friis & Vollesen* 435 (BR, C, K, KHF).

General habitat range: in medium-altitude and montane grassland and evergreen bushland.

General distribution: Cameroon to Ethiopia, south to Angola, Zambia, Zimbabwe and Mozambique.

Hypericum quartinianum A. Rich.

FTA 1: 156 (1868); ITU: 157 (1952); FTEA, Hypericac.: 3 (1953); FZ 1,2: 380 (1961); FAC, Guttiferae: 13 (1970); KTSL: 147 (1994); FE 2,2: 136 (1995); HYF: 97 (1997).

Imatong Mountains group, Sudan side: Gilo, 2100 m., colonising *Loudetia* grassland, 7.5.1954, *Jackson* 3139 (K); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 19.11.1980, *Friis & Vollesen* 335 (BR, C, K, KHF).

Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., near Moimoi, 1800 m., *Acacia abyssinica* woodland, 21.1.1950, *Jackson* 1096 (BM).

Didinga Mountains: near Loming north of Nagichot (4° 19' N, 33° 33' E), 2000 m., 18.12.1983, *Kielland-Lund* 378 (NLH).

General habitat range: in medium-altitude and montane evergreen bushland and grassland, often in rocky places.

General distribution: South Sudan to Ethiopia, south to Malawi and Mozambique; also in tropical Arabia.

Hypericum revolutum Vahl

FZ 1,2: 381 (1961); FAC, Guttiferae: 8 (1970); FSA 22: 15 (1976); FTEA, Guttiferae: 28 (1978); SOMMERLATTE 1990: 264; EL AMIN 1990: 99; KTSL: 147 (1994); FE 2,2: 136 (1995); HYF: 97 (1997).

subsp. **revolutum**

FTEA, Guttiferae: 28 (1978).

Syn.: *Hypericum lanceolatum* Lam.: FTA 1: 156 (1868); CHIPP 1929: 189; FPNA 1: 620 (1948); FTEA, Hypericac.: 4 (1953); FWTA 1,1: 287 (1954). *Hypericum leucoptycoides* Steud. ex A. Rich.: FPS 1: 213 (1950) {Imatong Mountains, Mt. Kinyeti}; ITU: 157 (1952).

Imatong Mountains group, Sudan side: without further locality, 2130 m., 10.2.1936, *Johnston* 1491 (K); without further locality, 2290 m., *Hagenia abyssinica* forest, 13.3.1976, *Howard* IM 45 (EA, K, KHF); Itibol, 1900 m., forest, 11.1948, *Jackson* 375 (KHF); Observation Hill above Gilo (4° 01' N, 32° 52' E), 2000 m., rocky area at edge of plantation, 18.4.1984, *Sommerlatte* 58 (EA); Kipia, 2680 m., forest edge, 12.1938, *MacDonald* 21 (BM); top of Mt. Kinyeti, 3170 m., forming scrub, here a 3 m. high shrub, at lower levels the species reach a height of 12 m. in forest ravines, 11.2.1929, *Chipp* 82 (K, WM).

Imatong Mountains group, Uganda side: summit of Lomwaga Mts., 2750 m., scrub, 5.4.1945, *Hummel* 775 (FHO).

Didinga Mountains: summit of Mt. Lotuke, 2740 m., among rocks, 3.1939, *MacDonald* 100 (BM); summit of Mt. Lotuke, 2600 m., *Podocarpus latifolius* forest, 18.4.1939, *Myers* 10,893 (K).

General habitat range: in montane forest and evergreen bushland. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as tree in montane grassland, in colonising thickets and at forest edges; it is most common between 1700 and 3000 m.

General distribution: Nigeria, Cameroon and Bioko [previously Fernando Po] to Ethiopia, south to South Africa (Cape Prov.); also in tropical Arabia, Madagascar and the Mascarene Islands.

Hypericum roeperianum A. Rich.

ITU: 159 (1952); FTEA, Hypericac.: 3 (1953);

FZ 1,2: 380 (1961); FAC, Guttiferae: 12 (1970) ; FSA 22: 16 (1976); EL AMIN 1990: 101 {Imatong Mountains, along streams in montane forest}; KTSL: 148 (1994).

Imatong Mountains group, Sudan side: Acholi Hills, between Kedong and Gomia (4° 02' N, 32° 36' E), 1800 m., secondary evergreen scrub, 11.2.1948, *Jackson* 256 (FHO).

General habitat range: in medium-altitude and montane forest.

General distribution: Guinée, Nigeria and Cameroon to Ethiopia, south to South Africa (Cape Prov.); also in Madagascar, Comoro Islands, and Mascarene Islands.

Psorospermum Spach.

Psorospermum febrifugum Spach

FTA 1: 158 (1868); ITU: 159 (1952); FWTA 1,1: 290 (1954); FZ 1,2: 387 (1961); FAC, Guttiferae: 20 (1970); FTEA, Hypericac.: 16 (1971); FTEA, Guttiferae: 32 (1978); EL AMIN 1990: 101; KTSL: 148 (1994); FE 2,2: 140 (1995).

Syn.: *Psorospermum febrifugum* Spach var. *ferrugineum* (Hook. f.) Keay & Milne-Redh.: FWTA 1,1: 290 (1954); FTEA, Hypericac.: 18 (1971).

Imatong Mountains group, Sudan side: Talanga, 900 m., deciduous woodland with *Albizia zygia, Lannea barteri,* etc., 1.3.1982, *Friis & Vollesen* 1065 (C, K, KHF).

Imatong Mountains group, Uganda side: Lututuru, 1530 m., 4.4.1945, *Hummel* 701 (FHO).

Didinga Mountains: between Naligede and Iwowa, 1710 m., 22.4.1939, *Myers* 11,013 (K).

General habitat range: in lowland and medium-altitude woodlands.

General distribution: Guinée and Sierra Leone to Ethiopia, south to Angola and South Africa (Transvaal).

Order 39. **Tiliales** Caruel

Fam. 74. **Tiliaceae** Juss.

Corchorus L.

Corchorus tridens L.

FTA 1: 264 (1868); FS: 121 (1929); FPS 1: 217 (1950); FWTA 1,2: 308 (1958); FZ 2,1. 88 (1963); UKWF: 95 (1994); FE 2,2: 156 (1995); HYF: 102 (1997).

Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 3.1.1984, *Kielland-Lund* 554 (C; NLH).

General habitat range: in lowland and medium-altitude deciduous bushland and woodland, often along roadsides, in waste places and as a weed in cultivations.

General distribution: Senegal to Ethiopia, south to South Africa; also in tropical Asia, including Arabia.

Corchorus trilocularis L.

FTA 1: 262 (1868); FS: 122 (1929); FPS 1: 217 (1950); FWTA 1,2: 308 (1956); FZ 2,1: 84 (1963); WICKENS 1976: 100; UKWF: 94 (1994); FE 2,2: 155 (1995); HYF: 102 (1997).

Lafit, Dongotona and Nangeya Mountains: Lafon Regional District Centre (5° 02' N, 32° 27-28' E), no alt., 29.12.1983, *Kielland-Lund* 518 (C, NLH).

General habitat range: in lowland and medium-altitude deciduous bushland and woodland, often along roadsides, in waste places and as a weed in cultivations.

General distribution: Senegal to Ethiopia, south to South Africa; also in tropical Asia, including Arabia.

Glyphaea Hook. f.

Glyphaea brevis (Spreng.) Monachino
FWTA 1,2: 308 (1954); FCB 10: 82 (1963).
Syn.: *Glyphaea lateriflora* (D. Don) Hutch. & Dalziel: FPNA 1: 578 (1948); FPS 1: 218 (1950); ITU: 426 (1952).
Imatong Mountains group, Sudan side: original data lost, 1950, *Jackson* 1492 (KHF); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 26.11.1980, *Friis & Vollesen* 471 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude forest, usually along forest edges and in regrowth.
General distribution: Guinea Bissau to South Sudan, south to Angola and North West Tanzania.

Grewia L.

Grewia bicolor Juss.
FPS 1: 222 (1950); ITU: 427 (1952); FWTA 1,2: 304 (1958); FCB 10: 35 (1963); FZ 2,1: 49 (1963); Wickens 1976: 100; El Amin 1990: 105; KTSL: 153 (1994); FE 2,2: 146 (1995).
Syn.: *Grewia salvifolia* Roth: FTA 1: 247 (1868); FS: 118 (1929).
Imatong Mountains group, Sudan side: at northernmost point of the continuous mountain chain, just south-east of Ngarama on the track to Molongori, 700 m., on rocky outcrop with *Sterculia setigera, Cordyla richardii, Ficus arbutilifolia,* etc., 13.3.1982, *Friis & Vollesen* 1188 (C, K, KHF); 2 km. from junction of the Katire and the Ngarama roads (4° 21' N, 32° 39' E), no alt., 26.5.1984, *Kielland-Lund* 753 (C, NLH).
Imatong Mountains group, Uganda side: Agoro, no alt., 12.1932, *Eggeling* 836 (EA); on Agoro-Logoforok path, 1070 m., in *Acacia senegal-Balanites aegyptiaca-Dichrostachys cinerea* deciduous woodland, 9.10.47, *Dawkins* 280 (FHO, MHU).
Didinga Mountains: near Kiduru north of Chukudum (4° 17' N, 33° 26' E), 1100 m., 20.12. 1983, *Kielland-Lund* 409 (C, NLH); above Chukudum, 1280 m., 28.4.1939, *Myers* 11,216 (?K, not traced, WM); Kidepo Rest House, Torit-Kapoeta road, 760 m., wooded grassland, 29.4.1939, *Myers* 11,235 (?K, not traced); Boya Hill, Karauili, 1200 m., woodland on rock, 22.12.1982, *Fukui* 82-9 (EA).
General habitat range: in lowland and medium-altitude deciduous bushland and woodland, often associated with termite mounds.
General distribution: Senegal to Ethiopia and Somalia, south to Angola, Botswana, Zimbabwe and Mozambique; also in tropical Arabia and India.
Note. None of the previously proposed infraspecific taxa have been accepted here.

Grewia mollis Juss.
FTA 1: 248 (1868); FS: 118 (1929); FPNA 1: 565 (1948); FPS 1: 220 (1950); ITU: 428 (1952); Jackson 1956: 349; FWTA 1,2: 304 (1958); FCB 10: 34 (1963); FZ 2,1: 49 (1963); Wickens 1976: 100; Sommerlatte 1990: 104; El Amin 1990: 106; KTSL: 156 (1994); FE 2,2: 146 (1995); HYF: 99 (1997).
Imatong Mountains group, Sudan side: Loa, Molitokoro village north of Kerepi (3° 55' N, 31° 55' E), no alt., 5.6.1984, *Kielland-Lund* 858 (C, NLH); Palotaka, no alt., 1979, *Shigeta* 63 & 213 (?EA, identified and listed by M.G. Gilbert, not traced); between Palwar and Talanga (3° 53' N, 32° 39' E), 1000 m., *Combretum* wooded grassland, 28.3.1984, *Sommerlatte* 32 (EA); Kinyeti Valley, hills near junction between roads to Ngarama and Katire north of Hiliu, 650 m., 11.12.1983, *Kielland-Lund* 297 (C, NLH); Hiliu, 13 km. south of Torit, 700 m., small rocky hills, 28.2.1986, *Bodoegaard & Francis* 28 (EA); Lorohoi village near Hiliu, 14 km. south of Torit, 700 m., rocky outcrop in cultivated land, 14.2.1986, *Bodoegaard* 3 (EA); 10 km. north of

Katire, 850 m., woodland with *Combretum collinum, C. molle* and *Annona senegalensis*, 3.3.1982, *Friis & Vollesen* 1089 (BR, C, K, KHF); Logoforok, 860 m., woodland with *Acacia hockii, Vitex doniana* and *Combretum collinum* subsp. *binderianum*, 6.2.1947, *Jackson* 183 (FHO).

General habitat range: in lowland and medium-altitude deciduous bushland and woodland. According to JACKSON 1956 it occurs at the Imatong Mountains in moist medium-altitude woodland to the west and north of the mountains; according to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a shrub or small tree in lowland woodland.

General distribution: Senegal to Ethiopia, south to Tanzania and North Zambia; also in tropical Arabia.

Grewia stolzii Ulbr.

FCB 10: 31 (1963); FZ 2,1: 57 (1963).

Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, forest edge, 19.11.1980, *Friis & Vollesen* 343 (BR, C, K, KHF).

General habitat range: in medium-altitude end montane forest, evergreen bushland and dense woodland.

General distribution: South Sudan, Uganda and Kenya south to Zimbabwe, Malawi and Mozambique. First record from the Sudan.

Note. Close to *Grewia ferruginea* A. Rich. which occurs in Ethiopia, Erkowit, Kordofan and Blue Nile Prov. (FPS 1: 223 (1950); EL AMIN 1990: 105).

Grewia tenax (Forssk.) Fiori

FPS 1: 222 (1950); FWTA 1,2: 305 (1958); FZ 2,1: 59 (1963); WICKENS 1976: 100; EL AMIN 1990: 106; KTSL: 158 (1994); FE 2,2: 152 (1995); HYF: 100 (1997).

Syn.: *Grewia betulaefolia* Juss.: FTA 1: 246 (1868); FS: 119 (1929). *Grewia populifolia* Vahl: FTA 1: 246 (1868).

Imatong Mountains group, Sudan side: near the northernmost point of the continuous mountain chain, 8 km. south-east of Ngarama along track to Molongori, 700 m., open *Acacia seyal-Combretum* deciduous bushland, 10.3.1982, *Friis & Vollesen* 1162 (BR, C, K, KHF); Kinyeti Valley, 6 km. north of Hiliu, south of Imatong junction (4° 20' N, 32° 38' E), no alt., 31.5.1984, *Kielland-Lund* 814 (C, NLH).

Didinga Mountains: Boya Hill, Kimatong, 640 m., woodland, 31.12.1984, *Fukui* 84-48 (EA).

General habitat range: in lowland and medium-altitude dry deciduous bushland and woodland.

General distribution: Senegal to Ethiopia and Somalia, south to Namibia and South Africa (Transvaal); also in tropical Arabia.

Grewia trichocarpa Hochst. ex A. Rich.

FTA 1: 247 (1868); ITU: 428 (1952); KTSL: 158 (1994); FE 2,2: 148 (1995); HYF: 100 (1997).

Imatong Mountains group, Sudan side: Kinyeti Valley, 3 km. south of Hiliu along Katire road (4° 14' N, 32° 40' E), no alt., north face of rock, 26.5.1984, *Kielland-Lund* 748 (C, NLH).

Imatong Mountains group, Uganda side: 2 km. south-south-east of Lututuru Rest House, Aringa River, 1070 m., riverine forest with *Acacia poylacantha*, 27.4.1947, *Dawkins* 254 (FHO, MHU).

General habitat range: in lowland and medium-altitude woodland, bushland and riverine forest.

General distribution: Ethiopia and Somalia through Uganda, Rwanda and Kenya to Central Tanzania; also in tropical Arabia.

Grewia velutina (Forssk.) Vahl

FE 2,2: 148 (1995); HYF: 100 (1997).

Imatong Mountains group, Uganda side: Agoro, arid hills, 12.1932, *Eggeling* 836 (K); Agoro, no alt., 3.1935, *Eggeling* 1705 (EA, K); Agoro, 1220 m., rocky hillside, 14.6.1944, *Maxwell Forbes* 144 (K).

General habitat range: in lowland and medium-altitude dry woodland and bushland.
General distribution: Sudan, Ethiopia, Somalia, North Uganda and North West Kenya; also in tropical Arabia and Saudi Arabia.

Grewia villosa Willd.
FTA 1: 249 (1868); FS: 119 (1929); FPS 1: 220 (1950); FWTA 1,2: 304 (1958); FCB 10: 30 (1963); FZ 2,1: 62 (1963); WICKENS 1976: 100; EL AMIN 1990: 107; KTSL: 159 (1994); FE 2,2: 152 (1995); HYF: 100 (1997).
Imatong Mountains group, Sudan side: near northernmost point of continuous mountain chain, just south-east of Ngarama along track to Molongori, 700 m., open woodland with *Acacia seyal, Albizia amara* subsp. *sericocephala, Lannea humilis*, etc., on sandy soil, 13.3.1982, *Friis & Vollesen* 1200 (BR, C, EA, K, KHF); Kinyeti Valley, 1 km. south of Hiliu along Katire road (4° 16' N, 32° 48' E), no alt., 31.5.1984, *Kielland-Lund* 815 (C, NLH).
Imatong Mountains group, Uganda side: Agoro, no alt., arid hills, 12.1932, *Eggeling* 834 (MHU); Agoro, near the Forest Department's trials, 1500 m., on rocky outcrop in grassland, 2.6.1973, *Katende* 1849 (EA, MHU).
General habitat range: in lowland and medium-altitude deciduous bushland and woodland, and in wooded grassland.
General distribution: Cape Verde Islands and Senegal to Ethiopia and Somalia, south to Botswana, Zimbabwe and Mozambique; also in tropical Arabia and India.

Grewia sp. cf. G. similis K. Schum.
Imatong Mountains group, Sudan side: Palotaka, 1200 m., 1979, *Shigeta* 183 (?EA, identified and listed by M.G. Gilbert, not traced).
Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).

Grewia sp.
Imatong Mountains group, Sudan side: Torit, 10.6.1939, *Andrews* 1771 (K).

Sparrmannia L. f.

Sparrmannia ricinocarpa (Eckl. & Zeyh.) Kuntze
FPNA 1: 574 (1948); FPS 1: 224 (1950) {Imatong Mountains, Mt. Kinyeti}; FCB 10: 77 (1963); FZ 2,1: 78 (1963); UKWF: 95 (1994); KTSL: 159 (1994); FE 2,2: 158 (1995).
Imatong Mountains group, Sudan side: without further locality, 2440 m., 2.1936, *Johnston* 1418 (K); above Lomuleng, 2500 m., edge of *Podocarpus latifolius* forest, 25.7.1939, *Myers* 11,578 (K); Kipia, 2680 m., edge of montane forest, 1.1939, *MacDonald* 56 (BM); Kipia, 2590 m., clearings in montane forest, 4.7.1947, *MacLeay* 145 (BM).
Imatong Mountains group, Uganda side: just below summit of Mt. Lomwaga, 2400 m., 6.1963, *Morrison* s.n. (MHU).
General habitat range: in medium-altitude and montane evergreen bushland, at forest edges and in clearings.
General distribution: Cameroon to Ethiopia, south to Angola and South Africa (Cape Prov., Natal, Transvaal).

Triumfetta L.

Triumfetta annua L.
FTA 1: 256 (1868); FS: 120 (1929); FPNA 1: 572 (1948); FPS 1: 227 (1950); FZ 2,1: 75 (1963); FCB 10: 53 (1963); WICKENS 1976: 100; UKWF: 96 (1994); FE 2,2: 160 (1995).
Imatong Mountains group, Sudan side: Katire to Gilo, at road to Itibol, 1500 m., secondary transitional forest dominated by *Harungana madagascariensis*, forest edge, 17.11.1980, *Friis & Vollesen* 301 (BR, C, K, KHF).

General habitat range: in lowland and medium-altitude evergreen bushland and forest, often in disturbed places.
General distribution: Nigeria and Cameroon to South Sudan and Ethiopia, south to Namibia and South Africa (Transvaal, Natal); also in Madagascar and tropical Asia to China.

Triumfetta brachyceras K. Schum.
FPS 1: 227 (1950); FCB 10: 55 (1963); UKWF: 96 (1994); FE 2,2: 161 (1995).
Syn.: *Triumfetta macrophylla* K. Schum. (1892), non Vahl (1792).: FPNA 1: 572 (1948).
Imatong Mountains group, Sudan side: without further locality, 1939, *Andrews* 1959 (K); without further locality, 30.1.1976, *Howard* IM 20 (K, KHF); Itibol to Issore, Kimisu [= Dumuso] Forest, 2100 m., 20.12.1935, *Thomas* 1722 (BM, K); Mt. Agnargi, 1830-2130 m., 14.6.1939, *Andrews* 1950 (K); Gilo, tangle in open forest, c. 1900 m., 7.5.1954, *Jackson* 3138 (K, KHF); just outside Gilo along road to Itibol, 1900 m., *Harungana madagascariensis* scrub with tangle of *Rubus spp.*, 14.3.1982, *Friis & Vollesen* 1214 (C, K, KHF).
General habitat range: in medium-altitude and montane forest, especially along edges and in clearings.
General distribution: East Congo [previously Zaire], Rwanda and Burundi to Ethiopia, south to Tanzania.

Triumfetta cordifolia Guill., Perr. & A. Rich.
FPNA 1: 573 (1948); FWTA 1,2: 310 (1958); FZ 2,1: 76 (1963); FCB 10: 55 (1963); SOMMERLATTE 1990: 230; FE 2,2: 161 (1995).
var. **tomentosa** Sprague
FPS 1: 227 (1950); JACKSON 1956: 354 {Talanga, Lotti}.
Imatong Mountains group, Sudan side: without further locality, 1200 m., forest edge, 3.1.1983, *Kosper* 208 (EA, K); Laboni, no alt., forest, 14.10.1938, *Myers* 9709 (K); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* at edge of forest clearing, 11.12.1980, *Friis & Vollesen* 810 (C, K, KHF); Talanga, 1000 m., understorey of cleared forest in swampy places, no date, *Jackson* 481 (BM, KHF).
General habitat range: in lowland and medium-altitude forest, especially in clearings and along edges. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a shrub in scrub of clearings and at edges of lowland forest.
General distribution: Nigeria to South Sudan and Kenya, south to Angola, Congo [previously Zaire] and Tanzania. Species as a whole also in West Africa, extending to Senegal.

Triumfetta pilosa Roth
FTA 1: 257 (1868); FCap 1: 227 (1860); FZ 2,1: 76 (1963); FCB 10: 54 (1963); UKWF: 96 (1994); FE 2,2: 161 (1995).
Imatong Mountains group, Sudan side: Kinyeti Valley, near Kinyieti River 13 km. south of Hiliu towards Katire, 700 m., northernmost part of teak-plantation, 7.12.1983, *Kielland-Lund* 249 (C, NLH).
General habitat range: in lowland, medium-altitude and montane woodland, wooded grassland and bushland, sometimes as a weed in cultivations and plantations.
General distribution: South Sudan to Ethiopia, south to South Africa (Transvaal, Natal); also in Madagascar and tropical Asia.

Triumfetta rhomboidea Jacq.
FTA 1: 257 (1868), pro parte; FS: 120 (1929); FPNA 1: 571 (1948); FPS 1: 227 (1950); FWTA 1,2: 309 (1958); FZ 2: 73 (1963); GCB 10: 49 (1963); WICKENS 1976: 101; UKWF: 96 (1994); KTSL: 160 (1994); FE 2,2: 162 (1995); HYF: 102 (1997).
Imatong Mountains group, Sudan side: above Palotaka, 1200 m., open woodland, 5.1.1979, *Shigeta* 2 (EA); Kinyeti Valley, Hiliu, near

bridge west of town, 700 m., 30.11.1983, *Kielland-Lund* 124 (C, NLH); Hiliu, east of and stream, 700 m., 9.12.1983, *Kielland-Lund* 282 (C, NLH).
General habitat range: in lowland, medium-altitude and montane woodland, wooded grassland and forest, usually in disturbed sites.
General distribution: Senegal to Ethiopia, south to South Africa; also in tropical Asia, including tropical Arabia, and tropical America.

Triumfetta setulosa Mast.
FTA 1: 259 (1868); FZ 2: 70 (1963); FCB 10: 62 (1963); FE 2,2: 160 (1995).
Imatong Mountains group, Sudan side: Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 29.11.1980, *Friis & Vollesen* 528 (C, K, KHF).
General habitat range: in lowland and medium-altitude woodland and grassland.
General distribution: Central African Republic to Ethiopia, south to Angola, Zimbabwe, Malawi and Tanzania.

Triumfetta sp.
Syn.: [*Triumfetta flavescens* ? auct., non Hochst. ex A. Rich.: FPS 1: 227 (1950) {Imatong Mountains}].
No specimen seen. The record in FPS may represent a misidentification, as no specimen of *Triumfetta flavescens* has been seen among material from the study area, although it is known from Karamoja in Uganda and the Boma Plateau in Sudan.

Fam. 75. **Sterculiaceae** (DC.) Bartl.

Byttneria Loefl.

Byttneria catalpifolia Jacq.
FWTA 1,2: 314 (1958); FCB 10: 219 (1963); FE 2,2: 166 (1995).
subsp. **africana** (Mast.) Exell & Mendonca
FWTA 1,2: 314 (1958); FCB 10: 219 (1963); El Amin 1990: 107; FE 2,2: 166 (1995).
Syn.: *Byttneria africana* Mast.: FTA 1: 239 (1868); FPS 2: 2 (1952).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* scandent shrub in forest, 29.11.1980, *Friis & Vollesen* 543 (C, KHF).
General habitat range: in lowland and medium-altitude forest, usually along edges and in secondary growth.
General distribution: Ghana to Sudan, Uganda and South West Ethiopia, south to Angola. Subsp. *catalpifolia* occurs in tropical South America.

Cola Schott & Endl.

Cola gigantea A. Chev.
FWTA 1,2: 330 (1958); FCB 10: 315 (1963); Sommerlatte 1990: 148; El Amin 1990: 107.
Syn.: [*Cola cordifolia* auct., non (Cav.) R. Br.: FS: 124 (1929); ITU: 415 (1952); FPS 2: 2 (1952); Jackson 1956: 353 {Talanga, Lotti, Laboni}; FWTA 1,2: 330 (1958)].
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 27.11.1980, *Friis & Vollesen* 496 (C).
General habitat range: in lowland and medium-altitude forest. According to both Jackson 1956 and Sommerlatte 1990 it occurs at the Imatong Mountains as a canopy tree of lowland forest, but is particularly common in gallery forest.
General distribution: Senegal to Sudan, south to Congo [previously Zaire].

Note. No material has been seen at Kew to verify the identification of Andrew's and Jackson's usage of the name *Cola cordifolia* with *C. gigantea*, but all trees of the genus *Cola* which we observed in the forest at Talanga seemed taxonomically identical, and we see therefore no reason to assume the presence of another species.

Dombeya Cav.

Dombeya buettneri K. Schum.
FWTA 1,2: 317 (1958); SEYANI 1991: 75.
Syn.: *Dombeya bagshawei* Bak. f.: ITU: 416 (1952); FPS 2: 4 (1952) {Imatong Mountains}; FCB 10: 244 (1963); EL AMIN 1990: 108; FE 2,2: 168 (1995).
Imatong Mountains group, Sudan side: no material seen. Recorded on the authority of the FPS 2 (1952).
General habitat range: in lowland, medium-altitude and montane evergreen bushland, at forest edges, and in riparian vegetation.
General distribution: Guinée to Ethiopia, south to Congo [previously Zaire] and Zimbabwe.

Dombeya burgessiae Harv.
FTA 1: 228 (1868); FZ 1,2: 522 (1961); FCB 10: 246 (1963); EL AMIN 1990: 108; SEYANI 1991: 66; KTSL: 163 (1994).
Syn.: *Dombeya dawei* Sprague: ITU: 418 (1952); JACKSON 1956: 352.
Imatong Mountains group, Sudan side: Palotaka, 1200 m., open woodland, 9.1.1979, *Shigeta* 69 (EA); Talanga, 1000 m., savannah being colonised by forest, 8.11.1948, *Jackson* 483 (FHO, KHF); Kinyeti Valley, 14 km. south of Hiliu towards Katire, teak-plantation, 700 m., 7.12. 1983, *Kielland-Lund* 252 (C, NLH); Imeila forest, 750 m., in forest regrowth, 12.11.1947, *Jackson* 234 (FHO, KHF).
General habitat range: in medium-altitude and montane evergreen bushland and at forest edges. According to JACKSON 1956 it occurs at the Imatong Mountains as a lowland forest pioneer.
General distribution: South Sudan, Uganda and Kenya south to South Africa (Transvaal, Natal).

Dombeya quinqueseta (Del.) Exell
FPNA 1: 608 (1948); FPS 2: 2 (1952); JACKSON 1956: 349; FWTA 1,2: 317 (1958); FCB 10: 249 (1963); WICKENS 1976: 101; SOMMERLATTE 1990: 108; EL AMIN 1990: 109; SEYANI 1991: 105; KTSL: 164 (1994); FE 2,2: 170 (1995).
Syn.: *Dombeya reticulata* Mast.: FTA 1: 228 (1868); CHIPP 1929: 189. [*Dombeya mukole* auct., non Sprague: FPNA 1: 606 (1948); ITU: 419 (1952); FPS 2: 3 (1952) {Imatong Mountains, forest at Talanga (record based on *Thomas* 1603) and near Opari (record based on *Snowden* 1676)}; EL AMIN 1990: 109].
Imatong Mountains group, Sudan side: between Torit/Magwe and Opari Loa, no alt., 2.1.1984, *Kielland-Lund* 531 (C, NLH); Lotti, 1250 m., a 12 m. high tree, or shrub in burnt country, associated with open fire-swept woodland, from western Mongalla and Opari to Lotti, and on the mountain sides above Lotti, 5.2.1929, *Chipp* 21 (K, WM); near Lotti, 1250 m., in open woodland, 15.4.1930, *Snowden* 1676 (BM, EA, K); between Palwar and Talanga (3° 52' N, 32° 39' E), 1100 m., in *Combretum* woodland and wooded grassland, 28.3.1984, *Sommerlatte* 18 (EA); Talanga to Katire, 910 m., deciduous woodland, 16.12.1935, *Thomas* 1603 (BM, K); above Katire, 1000 m., in *Combretum* savannah, 2.2.1950, *Jackson* 1129 (KHF); Kinyeti Valley, above Katire, 1200 m., woodland with *Combretum molle, Cussonia arborea, Stereospermum kunthianum, Erythrina abyssinica, Entada abyssinica*, etc., 24.3.1982, *Friis & Vollesen* 1304 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: near Agoro, 1830 m., 12.1932, *Eggeling* 810 (EA, K); Agoro, 1980 m., slope with *Protea-Combretum* wooded grassland, 8.4.1945, *Greenway & Hum-*

mel 7319 (EA, K, MHU); 3 km. south-west of Lututuru, near Patika, 1600 m., scrub along road, 17.2.1969, *Lye* 2036 (EA, MHU, NLH) & 2037 (MHU).

Didinga Mountains: Boya Hill, Faraksika, 800 m., near the river, 21.12.1982, *Fukui* 82-2 (EA); Char, near Mt. Lotuke, 1710 m., open woodland, 3.1939, *MacDonald* 86 (BM); Mt. Lotuke, Char, 1830 m., wooded grassland, 19.4.1939, *Myers* 10,931 (K).

General habitat range: widespread in lowland and medium-altitude woodlands. According to JACKSON 1956 it occurs at the Imatong Mountains as a common tree in moist woodland west and north of the mountains; according to SOMMERLATTE 1990 it occurs in lowland woodland.

General distribution: Senegal to West Ethiopia, south to Uganda and Kenya.

Dombeya torrida (J.F. Gmel.) Bamps

SOMMERLATTE 1990: 282; SEYANI 1991: 80; KTSL: 165 (1994); FE 2,2: 168 (1995).

subsp. **torrida**

SEYANI 1991: 82; KTSL: 165 (1994).

Syn.: *Dombeya schimperiana* A. Rich.: FTA 1: 229 (1868); HYF: 103 (1997). *Dombeya elliotii* K. Schum. & Engl.: FPS 2: 4 (1952) {Imatong Mountains}; EL AMIN 1990: 109. *Dombeya goetzenii* K. Schum.: FPNA 1: 605 (1948); ITU: 418 (1952); FPS 2: 5 (1952) {Didinga Mountains, Nagichot}; FCB 10: 242 (1963); EL AMIN 1990: 109.

Imatong Mountains group, Sudan side: without further locality, no alt., 13.4.1933, *Smith* 28 (K, WM); without further locality, no alt., secondary forest, 13.2.1976, *Howard* IM 88 (K, KHF); Lotti, 1100 m., colonising grassland, 14.1.1948, *Jackson* 236 (FHO, KHF); Upper Talanga (3° 57' N, 32° 47' E), 1800 m., common in *Albizia* forest, 4.4.1984, *Sommerlatte* 47 (EA); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 9.11.1980, *Friis & Vollesen* 77 (C, KHF); Mt. Garia, 1830-2140 m., 13.6.1939, *Andrews* 1867 (K); Itibol, 1550 m., at forest edge, 17.12.1935, *Thomas* 1618 (BM, K); Lowiliwili, 2400 m., 14.11.1949, *Jackson* 904 (KHF); Mt. Kinyeti, 2590 m., ravine forest, 30.12.1935, *Thomas* 1876 (BM, BR, K).

Imatong Mountains group, Uganda side: Mt. Lomwaga, 2140 m., forest edge, 4.1945, *Hummel* 662 (MHU).

Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., 1330 m., dry stream-bed, 20.1.1050, *Jackson* 1072 (FHO).

Didinga Mountains: Nagichot, 1980 m., 27.4. 1939, *Myers* 11,157 (K, WM); Mt. Lotuke, 2130-2230 m., locally abundant tree, 18.4.1939, *Myers* 10,902 (?K, not traced, WM).

General habitat range: in montane forest and evergreen bushland. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains in *Vernonia* thicket, *Hagenia* woodland and in mixed *Podocarpus latifolius* woodland, it is especially common above 2400 m.

General distribution: East Congo [previously Zaire] to Ethiopia, south to Tanzania; also in tropical Arabia. In Tanzania, Malawi and Zambia replaced by subsp. *erythroleuca* (K. Schum.) Seyani.

Melhania Forssk.

Melhania velutina Forssk.

UKWF: 97 (1994); FE 2,2: 174 (1995); HYF: 104 (1997).

Syn.: *Melhania ferruginea* A. Rich.: FTA 1: 231 (1868); FS: 122 (1929); FPNA 1: 604 (1948); FPS 2: 5 (1952); FCB 10: 253 (1963).

Imatong Mountains group, Uganda side: Agoro, 910 m., savannah, 4.1943, *Purseglove* 1375 (K).

General habitat range: in lowland and medium-altitude woodland and wooded grassland.

General distribution: East Congo [previously Zaire] to Ethiopia, south to Angola, Zambia and Malawi; also in tropical Arabia.

Melochia L.

Melochia corchorifolia L.
FTA 1: 236 (1868); FS: 122 (1929); FPNA 1: 608 (1948); FPS 2: 6 (1952); FWTA 1,2: 318 (1958); FZ 1,2: 535 (1961); FCB 10: 256 (1963); FE 2,2: 178 (1995); UKWF: 97 (1994).
Imatong Mountains group, Sudan side: Kinyeti Valley, south west of Hiliu (4° 16' N, 32° 48' E), no alt., at big stone in flat area, 25.5.1984, *Kielland-Lund* 734 (C, NLH).
General habitat range: in lowland grassland, sandy river beds, river banks and at rocky outcrops, weed in sandy soil.
General distribution: Senegal to Ethiopia, south to Angola, Zimbabwe and Mozambique, also in tropical Asia and Australia; introduced in tropical America.

Melochia melissifolia Benth.
FTA 1: 236 (1868); FWTA 1,2: 318 (1958); FZ 1,2: 535 (1961); FCB 10: 257 (1963).
Syn.: *Melochia melissifolia* Benth. var. *mollis* K. Schum.: FWTA 1,2: 318 (1958). *Melochia mollis* (K. Schum.) Hutch. & Dalziel: FPNA 1: 608 (1948); FPS 2: 6 (1952).
Imatong Mountains group, Sudan side: Talanga, 900 m., swamp, 21.3.1950, *Jackson* 1254bis (K).
General habitat range: in lowland swamp grassland, in other swampy places and waste ground.
General distribution: Senegal to South Sudan, south to Botswana and Angola; also in Madagascar, on the Mascarene Islands, and in tropical America.

Sterculia L.

Sterculia setigera Del.
ITU: 423 (1952); FPS 2: 7 (1950); FWTA 1,2: 320 (1958); FCB 10: 266 (1963); El Amin 1990: 111; FE 2,2: 183 (1995).
Syn.: *Sterculia tomentosa* Guill. & Perr.: FTA 1: 217 (1868); FS: 123 (1929).
Imatong Mountains group, Sudan side: without further locality, no alt. or date, *Trought* s.n. (according to Aylmer [unpublished], specimen not traced); near the northernmost point of the continuous mountain chain, just south-east of Ngarama on the track to Molongori, 700 m., on rocky outcrop with *Sterculia setigera, Cordyla richardii, Ficus arbutilifolia,* etc., 13.3.1982, *Friis & Vollesen* 1187 (BR, C, also carpological collection, accession no. 15950, K, KHF); Kinyeti Valley, Hiliu, between compound and Kinyeti River, no alt., 12.3.1984, *Kielland-Lund* 1007 (C, NLH); 10 km. north of Katire, 850 m., woodland with *Combretum collinum, Combretum molle, Annona senegalensis, Vitellaria paradoxa,* etc., with many rocky outcrops, 3.3.1982, *Friis & Vollesen* 1091 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).
General habitat range: in lowland and medium-altitude woodland and deciduous bushland.
General distribution: Senegal to West Ethiopia, south to West Tanzania.

Waltheria L.

Waltheria indica L.
FCap 1: 180 (1860); FPS 2: 8 (1952); FWTA 1,2: 319 (1958); FZ 1,2: 536 (1961); FCB 10: 258 (1968); Wickens 1976: 101; UKWF (ed. 2): 97 (1994); FE 2,2: 178 (1995); HYF: 104 (1997).
Syn.: *Waltheria americana* L.: FTA 1: 235 (1868); FS: 123 (1929); FPNA 1: 609 (1948).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, 700 m., between compound and river, 23.11.1983, *Kielland-Lund* 37 (C, NLH); rocks near Hiliu (4° 16' N, 32° 48' E), no alt., 30.5.1984, *Kielland-Lund* 803 (C, NLH).
Lafit, Dongotona and Nangeya Mountains: on the south-eastern side of Lafon (5°00' N, 32° 27-28' E), no alt., 28.12.1983, *Kielland-Lund* 494 (NLH).
General habitat range: In lowland and interme-

diate deciduous woodland and bushland, frequently on rocky hills and on gravelly soil, in river beds, waste places and as a weed of cultivations.
General distribution: widely distributed through the tropics and subtropics.

Fam. 76. **Bombacaceae** Kunth

Ceiba Mill.

Ceiba pentandra (L.) Gaertn.
FS: 124 (1929); FPS 2: 10 (1952); FWTA 1,2: 335 (1958); FZ 1,2: 516 (1961); FCB 10: 204 (1963); FG 22: 36 (1973); FC 19: 76 (1975); WICKENS 1976: 101; FTEA, Bombacac.: 7 (1989); EL AMIN 1990: 113; FE 2,2: 186 (1995); HYF: 104 (1997).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* tall tree near edge of forest, 2.12.1980, *Friis & Vollesen* 647 (C, K, KHF).
General habitat range: in lowland forest, often in clearings or in lacustrine or riverine habitats.
General distribution: Senegal and Sierra Leone to South Sudan, south to Angola and Zimbabwe; also in tropical America and tropical Asia, including tropical Arabia. Cultivated in many places for its kapok; all other species of *Ceiba* are native of tropical America, but *C. pentandra* is very well established in Africa and Asia and is either an indigenous species or a very old established escape.

Order 40. **Malvales** Dumort.

Fam. 77. **Malvaceae** Juss.

Abelmoschus Medic.

Abelmoschus ficulneus (L.) Wight & Arn.
FE 2,2: 212 (1995).
Syn.: *Hibiscus ficulneus* L.: FPS 2: 31 (1952); FWTA 1,2: 348 (1958).
Didinga Mountains: 8 km. south of Kapoeta on Torit road, no alt., black cotton soil, 29.8.1953, *Peers* T01 (K, WM).
General habitat range: in lowland and medium-altitude grassland and bushland on black cotton soil.
General distribution: Niger to Sudan and West Ethiopia, south to North Mozambique and East Zambia; also in Madagascar and tropical Asia.

Abutilon Mill.

Abutilon figarianum Webb
FPS 2: 15 (1952); FE 2,2: 246 (1995).
Syn.: [*Abutilon graveolens* auct., non Wight & Arn.: FS: 127 (1929).]
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, near compound, 700 m., agricultural land, 3.12.1983, *Kielland-Lund* 196 (C, NLH).
General habitat range: in lowland and medium-altitude alluvial bushland, riverine forest, clay plains; also as a weed in cultivations.
General distribution: Egypt, Sudan, Ethiopia, Uganda, Kenya.

Abutilon longicuspe Hochst. ex A. Rich.
FTA 1: 184 (1868); FPS 2: 12 (1952) {Imatong Mountains, Ibahin}; FZ 1,2: 489 (1961); UKWF: 101 (1994); KTSL: 170 (1994); FE 2,2: 241 (1995); HYF: 107 (1997).

Imatong Mountains group, Sudan side: Ibahin, 1980 m., edge of forest, 19.12.1935, *Thomas* 1675 (BM, K); Gilo, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* at forest edges and in clearings, 19.2.1982, *Friis & Vollesen* 963 (C, K, KHF); Itibol, 1890 m., *Albizia gummifera* regrowth in old cultivations, 31.1. 1947, *Jackson* 173 (FHO).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, no alt., 6.12.1970, *C.R. Field* 13 (EA).
Didinga Mountains: Naligede, 1770 m., secondary growth and at edge of gallery forest, 21.4.1939, *Myers* 10,990 (K).
General habitat range: in medium-altitude and montane evergreen bushland and at forest edges.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Angola, Zambia, Zimbabwe and Mozambique; also in tropical Arabia.

Abutilon mauritianum (Jacq.) Medic.
FPS 2: 15 (1952); FWTA 1,2: 337 (1958); FZ 1,2: 493 (1961); UKWF: 101 (1994); KTSL: 170 (1994); FE 2,2: 246 (1995).
Syn.: *Pavonia patens* (Andrews) Chiov. (see note below under *Pavonia burchellii* (DC.) R.A. Dyer).
Imatong Mountains group, Uganda side: Agoro, 910 m., savannah, 4.1943, *Purseglove* 1378 (EA, ?K).
Didinga Mountains: Mt. Lotuke, Char, 1830 m., edge of cultivation, 19.4.1939, *Myers* 10,916 (K, WM).
General habitat range: in a wide range of lowland, medium-altitude and montane habitats, especially in disturbed places.
General distribution: Senegal to Ethiopia, south to South Africa (Transvaal, Natal) and Swaziland; also in Mauritius.

Hibiscus L.

Hibiscus acetosella Welw. ex Hiern
FZ 1,2: 438 (1961); FCB 10: 116 (1963); FE 2,2: 198 (1995).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., riverine habitats, 22.2.1979, *Shigeta* 200 B (EA); Palotaka, 1200 m., open woodland, 2.1979, *Shigeta* 214 (EA).
General habitat range: in a range of disturbed lowland habitats, and a weed in cultivations.
General distribution: indigenous in Angola and Zambia, perhaps also Congo [previously Zaire], Angola and Tanzania; widely cultivated and naturalised.
Note. *Shigeta* 200 is mixed; the EA-specimen has forked bracteoles of the outer calyx, as characteristic of *H. acetosella*; the specimen of the same collection at Kew is different, and is here referred to *H. cannabinus.*

Hibiscus aponeurus Sprague & Hutch.
FPNA 1: 596 (1948); FPS 2: 31 (1952); FZ 1,2: 455 (1961); FCB 10: 123 (1963); UKWF: 98 (1994); FE 2,2: 209 (1995); HYF: 109 (1997).
Didinga Mountains: above Chukudum, 1280 m., in gorge 28.4.1939, *Myers* 11,214 (K).
General habitat range: in lowland and medium-altitude grassland and secondary bushland.
General distribution: Sudan, South West Ethiopia, Uganda, Kenya, East Congo [previously Zaire], Rwanda, Burundi, Tanzania and North Mozambique; also in tropical Arabia.

Hibiscus articulatus Hochst. ex A. Rich.
FTA 1: 200 (1868); FS: 130 (1929); FPS 2: 26 (1952); FWTA 1,2: 347 (1958); FZ 1,2: 463 (1961); FCB 10: 116 (1963); WICKENS 1976: 102; UKWF: 99 (1994); FE 2,2: 204 (1995).
Imatong Mountains group, Sudan side: Abara between Loa and Magwe (4° 05' N, 32° 13' E), no alt., 6.6.1984, *Kielland-Lund* 865 (C, NLH).
Imatong Mountains group, Uganda side: north of Madi Opei, 910 m., woodland, 4.1943, *Purse-*

glove 1502 (EA); 3 km. south-west of Lututuru, near Patika, 1600 m., grassland and scrub along road, 17.2.1969, *Lye* 2033 (MHU).
General habitat range: in lowland and medium-altitude woodland.
General distribution: Ivory Coast to Ethiopia, south to South Africa (Transvaal).

Hibiscus calyphyllus Cav.
FPNA 1: 598 (1948); FPS 2: 27 (1952); FZ 1,2: 459 (1961); FCB 10: 99 (1963); UKWF: 99 (1994); KTSL: 172 (1994); FE 2,2: 192 (1995).
Imatong Mountains group, Sudan side: Lotti, 1000 m., undergrowth of closed forest, 30.10.1949, *Jackson* 884 (BM, KHF); Talanga, 890 m., edge of forest, 16.12.1935, *Thomas* 1588 (BM, K); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* along trails in forest, 5.12.1980, *Friis & Vollesen* 715 (C, K, KHF).
General habitat range: in lowland and medium-altitude deciduous woodland and open forest.
General distribution: Congo [previously Zaire] to South Sudan and Ethiopia, south to Botswana and South Africa; also in tropical Arabia, Madagascar, and on the Mascarene Islands.

Hibiscus cannabinus L.
FTA 1: 204 (1868); FS: 132 (1929); FPNA 1: 600 (1948); FPS 2: 28 (1952); FZ 1,2: 441 (1961); FCB 10: 108 (1963); WICKENS 1976: 102; UKWF: 99 (1994); FE 2,2: 198 (1995); HYF: 109 (1997).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), in dam, 800 m., 6.1.1984, *Kielland-Lund* 598 (C, NLH); Palotaka, 1200 m., 22.2.1979, *Shigeta* 200 A (K); Kinyeti Valley, Hiliu, 700 m., in agricultural land, 28.11.1983, *Kielland-Lund* 58 (C, NLH); hills near junction between roads to Ngarama and Katire north of Hiliu, 650 m., 10.12.1983, *Kielland-Lund* 288 (C, NLH).
Didinga Mountains: Chukudum Regional District Centre (4° 14' N, 33° 29' E), 1100 m., 16.12.1983, *Kielland-Lund* 328 (C, NLH).
General habitat range: in lowland and medium-altitude grassland and bushland.
General distribution: Congo [previously Zaire] to Ethiopia, south to Angola, Zambia and Zimbabwe.

Hibiscus corymbosus Hochst. ex A. Rich.
FTA 1: 199 (1868); FS: 130 (1929); FPNA 1: 598 (1948); FPS 2: 24 (1952); FCB 10: 115 (1963); UKWF: 99 (1994); FE 2,2: 204 (1995).
Imatong Mountains group, Uganda side: bamboo area near the Forest Department's trial plots (3° 44' N, 32° 55' E), 1500 m., grassland, 10.6.1973, *Katende* 1885 (MHU).
General habitat range: in medium-altitude woodland, bushland and grassland.
General distribution: South Sudan and Ethiopia to North East Congo [previously Zaire] and Tanzania; also in tropical Arabia.

Hibiscus crassinervius Hochst. ex A. Rich.
FTA 1: 205 (1868); FPNA 1: 596 (1948); FPS 2: 28 (1952), {Didinga Mountains, Mt. Lotuke, Char}; FE 2,2: 209 (1995).
Didinga Mountains: Mt. Lotuke, Char, 1830 m., 19.4.1939, *Myers* 10,938 (K).
General habitat range: in medium-altitude woodland, bushland and grassland.
General distribution: East and South Sudan through Ethiopia to North Somalia.

Hibiscus macranthus A. Rich.
FWTA 1,2: 347 (1958); FCB 10: 102 (1963); UKWF: 99 (1994); FE 2,2: 194 (1995).
Syn.: [*Hibiscus ludwigii* auct., non Eckl. & Zeyh.: FPS 2: 27 (1952) {Didinga Mountains, Nagichot}].
Imatong Mountains group, Sudan side: without further locality, 1200 m., 3.1.1982, *Kosper* 196 (K).
Didinga Mountains: above Duguru village near Nagichot (4° 16' N, 33° 35' E), 2000 m., 17.12.

1983, *Kielland-Lund* 350 (C, NLH); Nagichot, 2020 m., 28.10.1941, *Myers* 14,202 (K).
General habitat range: in medium-altitude and montane evergreen bushland ad at forest edges.
General distribution: Cameroon to Ethiopia, south to Tanzania, Zimbabwe and Malawi; also in Arabia.

Hibiscus micranthus L. f.
FTA 1: 205 (1868); FS: 132 (1929); FPS 2: 28 (1952); FWTA 1,2: 346 (1958); FZ 1,2: 453 (1961); FCB 10: 124 (1963); WICKENS 1976: 102; UKWF: 98 (1994); FE 2,2: 210 (1995); HYF: 110 (1997).
Imatong Mountains group, Sudan side: at the northernmost point of the continuous mountain chain, just south-east of Ngarama on the track to Molongori, 700 m., open woodland with *Acacia seyal, Albizia amara* subsp. *sericocephala, Lannea humilis*, etc., on sandy soil, 13.3. 1982, *Friis & Vollesen* 1198 (C, K, KHF).
General habitat range: in lowland and medium-altitude deciduous woodland or wooded grassland, and in disturbed places of other habitats.
General distribution: Senegal to Ethiopia, south to Botswana and South Africa; also in tropical Arabia and India.

Hibiscus sabdariffa L.
FTA 1: 204 (1868); FS: 131 (1929); FPS 2: 28 (1952); FWTA 1,2: 347 (1958); FZ 1,2: 441 (1961); FCB 10: 114 (1963); FE 2,2: 198 (1995).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., open woodland, 8.1.1979, *Shigeta* 49 (EA) & 66 (EA).
General habitat range: in lowland and medium-altitude disturbed habitats.
General distribution: Senegal to Ethiopia, south to South Africa; cultivated throughout the tropics and often escaped from cultivation. Probably indigenous in India and cultivated and naturalised elsewhere.

Hibiscus surattensis L.
FTA 1: 201 (1868); FS: 131 (1929); FPS 2: 26 (1952); FWTA 1,2: 346 (1958); FZ 1,2: 438 (1961); FCB 10: 12 (1963); UKWF: 99 (1994); FE 2,2: 198 (1995).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., open woodland, 9.1.1979, *Shigeta* 78 (EA).
General habitat range: in lowland and medium-altitude habitats, often in disturbed places.
General distribution: Senegal to South West Ethiopia, south to South Africa; also in tropical Asia.

Kosteletzkya Presl

Kosteletzkya adoensis (A. Rich.) Mast.
FTA 1: 194 (1868); FS: 129 (1929); FPNA 1: 602 (1948); FPS 2: 32 (1952); FWTA 1,2: 349 (1958); FZ 1,2: 474 (1961); FCB 10: 137 (1963); UKWF: 100 (1994); FE 2,2: 215 (1995); HYF: 108 (1997).
Imatong Mountains group, Sudan side: Gilo, 1830 m., forest edge, 12.7.1947, *MacLeay* 205 (BM); Gilo, 1850 m., edge of upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, 8.11. 1980, *Friis & Vollesen* 3 (C, K, KHF).
General habitat range: in medium-altitude and montane grassland, evergreen bushland and along forest edges or in clearings.
General distribution: Cameroon to Ethiopia, south to Angola, Zambia, Malawi and Tanzania; also in tropical Arabia and Madagascar.

Kosteletzkya grantii (Mast.) Garcke
FPNA 1: 602 (1948); FPS 2: 33 (1952); FWTA 1,2: 349 (1958); FCB 10: 140 (1963).
Syn.: *Hibiscus grantii* Mast.: FTA 1: 203 (1868); FS: 131 (1929).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., edge of forest, 26.1.1979, *Shigeta* 127 (EA, K) & 190 (K); Parajob, 910 m., in scrub, 25.12.1935, *Thomas* 1756 (BM, K); Talanga, 950

m., wooded grassland with *Combretum molle, C. collinum, Stereospermum kunthianum and Acacia hockii*, tall grass cover of *Cymbopogon giganteum* and *Hyparrhenia spp.*, 4.12.1980, *Friis & Vollesen* 671 (C, K, KHF).
General habitat range: in lowland and medium-altitude woodland, wooded grassland and evergreen bushland.
General distribution: Guinea Bissau to Sudan and Uganda, south to Angola.

Pavonia Cav.

Pavonia burchellii (DC.) R.A. Dyer
FPNA 1: 592 (1948); FPS 2: 36 (1952); FCB 10: 181 (1963); FE 2,2: 225 (1995); HYF: 108 (1997).
Syn.: [*Pavonia patens* auct., non (Andrews) Chiov.: FZ 1,2: 507 (1961); WICKENS 1976: 102].
Didinga Mountains: between Kiduru and Longumu north of Chukudum (4° 20' N, 33° 23' E), 1000 m., 20.12.1983, *Kielland-Lund* 416 (C, NLH); above Chukudum, 1280 m., in gorge, 28.4.1939, *Myers* 11,215 (K, WM).
General habitat range: in lowland and medium-altitude bushland, deciduous woodland and open forest.
General distribution: Cameroon and East Congo [previously Zaire] to Ethiopia, south to Namibia and South Africa (North West Cape Prov., Transvaal, Natal); also in tropical Arabia.
Note. The name *Pavonia patens* has been misapplied for this species in FZ and WICKENS 1976; the type of *P. patens* (Andrews) Chiov. is referable to *Abutilon mauritianum* (Jacq.) Medic.

Pavonia schimperiana A. Rich.
FTA 1: 192 (1868); FE 2,2: 228 (1995).
Syn.: *Pavonia schimperiana* A. Rich. var. *glabrescens* Ulbr.: FPNA 1: 590 (1948). *Pavonia urens* Cav. var. *glabrescens* (Ulbr.) Brenan: FPS 2: 36 (1952) {Laboni, Kagelu}; FWTA 1,2: 341 (1958); FCB 10: 186 (1963).
Imatong Mountains group, Sudan side: Laboni, no alt., forest, 15.10.1938, *Myers* 9753 (K, WM); Palotaka, 1200 m., forest, 23.1.1979, *Shigeta* 85 (EA); Talanga to Upper Talanga, 1100 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, in clearing along path, 10.12.1980, *Friis & Vollesen* 799 (BR, C, K, KHF); Itibol, 1940 m., in scrub, 17.12.1935, *Thomas* 1635 (BM, K).
Imatong Mountains group, Uganda side: near Agoro, no alt., stream-side, 12.1932, *Eggeling* 796 (K, MHU).
General habitat range: in lowland and medium-altitude forest.
General distribution: Guinée to Ethiopia, south to North Tanzania.

Pavonia urens Cav.
FPNA 1: 589 (1948); FWTA 1,2: 341 (1958), pro parte; FZ 1,2: 510 (1961); FCB 10: 184 (1963); UKWF: 103 (1994); FE 2,2: 228 (1995).
Syn.: *Pavonia urens* Cav. var. *hirsuta* (Hochst.) Brenan: FPS 2: 36 (1952) {Imatong Mountains, Lomuleng}.
Imatong Mountains group, Sudan side: Gilo, 1700 m., in forest clearing, 9.11.1949, *Jackson* 891 (BM, KHF); Lomuleng, 2440 m., in scrub, 29.12.1935, *Thomas* 1787 (BM, K); Gilo, 1900 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, at forest edge, 11.12.1980, *Friis & Vollesen* 812 (C, K, KHF).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., below peak of Mt. Lonyili, 1800 m., grassland, 4.12.1971, *Katende* 1391 (MHU); Mt. Lonyili, no alt., forest margin, 6.12.1970, *C.R. Field* 14 (EA).
Didinga Mountains: Nagichot, near houses (4° 16' N, 33° 35' E), 1970 m., 17.12.1983, *Kielland-Lund* 344 (C, NLH).
General habitat range: in medium-altitude and montane forest, especially along edges and in clearings and secondary growth, and evergreen bushland.

General distribution: Guinée to Ethiopia, south to South Africa; also in Madagascar.

Sida L.

Sida alba L.
FPNA 1: 585 (1948); FPS 2: 41 (1952); FWTA 1,2: 339 (1958); FZ 1,2: 477 (1961); FCB 10: 163 (1963); WICKENS 1976: 103; UKWF: 101 (1994); FE 2,2: 251 (1995); HYF: 106 (1997).
Syn.: [*Sida spinosa* auct, non L.: FCap 1: 167 (1860); FTA 1: 180 (1868); FS: 125 (1929).]
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, in compound, 700 m., in shallow soil on rocks, 2.12.1983, *Kielland-Lund* 169 (C, NLH).
General habitat range: in lowland and medium-altitude grassland and disturbed woodland; also in waste places, occasionally a weed in cultivations.
General distribution: Senegal and Gambia to Ethiopia, south to South Africa (Transvaal, Natal); also in tropical Asia and America.

Sida cordifolia L.
FC 1: 168 (1860); FTA 1: 181 (1868); FS: 126 (1929); FPS 2: 41 (1952); FWTA 1,2: 339 (1958); FZ 1,2: 483 (1961); UKWF: 100 (1994); FE 2,2: 251 (1995); HYF: 106 (1997).
Imatong Mountains group, Sudan side: Kinyeti Valley, c. 200 m from Hiliu along the road to Torit, 700 m., roadside, 21.11.1983, *Kielland-Lund* 13A (C, NLH).
Lafit, Dongotona and Nangeya Mountains: south-east of Lafon, no alt. 28.12. 1983, *Kielland-Lund* 493 (NLH).
General habitat range: in a wide range of lowland and medium-altitude habitats, usually in sandy, disturbed places.
General distribution: Pantropical and in warm temperate regions.

Sida javensis Cav.
FE 2,2: 251 (1995).
Syn.: [*Sida veronicifolia* auct., non Lam.: FPS 2: 41 (1952); FWTA 1,2: 338 (1958); FZ 1,2: 476 (1961); FCB 10: 167 (1963). *Sida humilis* auct., non Cav.: FTA 1: 179 (1868); FS: 125 (1929)].
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* in forest clearing, 11.12.1980, *Friis & Vollesen* 811 (C, K, KHF).
General habitat range: in a wide range of lowland and medium-altitude habitats, usually in disturbed places.
General distribution: Sierra Leone to South West Ethiopia, south to Zambia and Mozambique; also in tropical Asia.

Sida ovata Forssk.
FPNA 1: 586 (1948); FPS 2: 41 (1952); FZ 1,2: 479 (1961); FCB 10: 174 (1963); FE 2,2: 254 (1995); HYF: 106 (1997).
Syn.: *Sida grewioides* Guill. & Perr.: FTA 1: 182 (1868); FS: 126 (1929); FWTA 1,2: 339 (1958).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, 700 m., between compound and river, 2311.1983, *Kielland-Lund* 36 (C, NLH).
General habitat range: in lowland and medium-altitude dry woodland and deciduous bushland.
General distribution: Senegal to Ethiopia, south to Namibia and South Africa (Transvaal); also in tropical Arabia, on Socotra and in the dry part of NW. India.

Sida paniculata L.
FPS 2: 42 (1952); FCB 10: 165 (1963).
Imatong Mountains group, Sudan side: Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata,* on ground with

rocky outcrops, 29.11.1980, *Friis & Vollesen* 536 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude woodland and bushland, often in riverine woodland.
General distribution: East Congo [previously Zaire], South Sudan, North West Uganda, and North Angola; also in Central and South America.

Sida rhombifolia L.
FTA 1: 181 (1868); FS: 126 (1929); FPNA 1: 586 (1948); FPS 2: 41 (1952); FWTA 1,2: 339 (1958); FZ 1,2: 480 (1961); FCB 10: 172 (1963); UKWF: 101 (1994); FE 2,2: 254 (1995); HYF: 106 (1997).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., open woodland, 5.1.1979, *Shigeta* 14 (EA); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* at edge of clearings, 5.12. 1980, *Friis & Vollesen* 714 (BR, C, K, KHF).
General habitat range: in a wide range of lowland and medium-altitude habitats, usually in disturbed places.
General distribution: Guinée to Ethiopia, south to South Africa; also in tropical Asia, including tropical Arabia, and tropical America.

Urena L.

Urena lobata L.
FTA 1: 189 (1868); FS: 128 (1929); FPNA 1: 588 (1948); FWTA 1,2: 341 (1958); FCB 10: 179 (1963); UKWF: 102 (1994); FE 2,2: 224 (1995).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., below dam, 6.1.1984, *Kielland-Lund* 589 (C, NLH); Kinyeti Valley, Hiliu, 700 m., farm area, 28.11.1983, *Kielland-Lund* 65 (C, NLH).
General habitat range: in a wide range of lowland and medium-altitude habitats influenced by man, but also in naturally disturbed habitats such as riverbanks and seepage areas.
General distribution: Pantropical.

Urena ricinocarpa [no authority]
El Amin 1990: 117 {"a shrub or liana to 5 m high in forest clearings and along edges in montane areas of Equatoria (Imatong Mts., Mt. Kinyeti)"}.
This is probably a confusion between *Urena lobata* and *Sparrmannia ricinocarpa* (Eckl. & Zeyh.) Kuntze (Tiliaceae); neither species is mentioned elsewhere by El Amin.

Wissadula Medic.

Wissadula rostrata (Schumach. & Thonn.) Hook. f.
FTA 1: 182 (1868); FS: 126 (1929); FZ 1,2: 499 (1961); FCB 10: 177 (1963); Wickens 1976: 103; UKWF: 103 (1994); FE 2,2: 239 (1995).
Syn.: *Wissadula hernandioides* (L'Hér.) Garcke var. *rostrata* (Schumach. & Thonn.) R.E. Fr.: FPNA 1: 584 (1948). *Wissadula amplissima* (L.) R.E. Fr. var. *rostrata* (Schumach. & Thonn.) R.E. Fr.: FPS 2: 43 (1952); FWTA 1,2: 336 (1958).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* on forest floor, 26.11.1980, *Friis & Vollesen* 474 (BR, C, K, KHF); Kinyeti Valley, Hiliu, between compound and stream, 700 m., 23.11.1983, *Kielland-Lund* 32 (C, NLH).
General habitat range: in lowland and medium-altitude open and riverine forest and dense woodland.
General distribution: Senegal to Ethiopia, south to Botswana and South Africa (Transvaal).

Order 41. **Malpighiales** Mart.

Fam. 78. **Malpighiaceae** Juss.

Acridocarpus Guill. & Perr.

Acridocarpus ugandensis Sprague
FPS 2: 43 (1952) {near Torit}; FTEA, Malpighiac.: 9 (1968); EL AMIN 1990: 119; FE 2,2: 258 (1995).
Imatong Mountains group, Sudan side: 65 km. east of Juba on road towards Torit, no alt., on gneiss rock with *Strychnos* and *Terminalia brownii*, no date, *Jackson* 160 (FHO); Oronyo, south of Torit, 9.12.1945, *Muratori* s.n. (WM); Kinyeti Valley, hills east of Hiliu (4° 17' N, 32° 39' E), no alt., 8.1.1984, *Kielland-Lund* 606 (C, NLH).
Didinga Mountains: Boya Hill, Kimatong, 700 m., rocky outcrop, 7.1.1985, *Fukui* 84-60 (EA).
General habitat range: on rocky outcrops in lowland and medium-altitude open woodland and bushland.
General distribution: South East Sudan, South West Ethiopia and Tanzania.
Note. The epithet *ugandensis* for this species, known from what is now part of the Sudan (and recently also found in Ethiopia), is a consequence of the shifting of political boundaries during colonial time, as described in the introduction, Chapter II(f).

Fam. 79. **Erythroxylaceae** Kunth.

Erythroxylum P. Browne

Erythroxylum fischeri Engl.
ITU: 112 (1952); FPS 2: 44 (1952); FCB 7: 55 (1958); FTEA, Erythoxylac.: 5 (1984); EL AMIN 1990: 120; KTSL: 178 (1994); FE 2,2: 264 (1995).
Imatong Mountains group, Uganda side: north of Madi Opei, no alt., 3.1935, *Eggeling* 1734 (MHU).
General habitat range: in lowland and medium-altitude forest.
General distribution: Congo [previously Zaire] to South West Ethiopia, south to Tanzania.

Order 42. **Euphorbiales** Lindl.

Fam. 80. **Euphorbiaceae** Juss.

Acalypha L.

Acalypha acrogyna Pax
FTA 6,1: 897 (1912); FPNA 1: 466 (1948); JACKSON 1956: 354 {Talanga, Lotti}; FTEA, Euphorbiac. 1: 195 (1987); FE 2,2: 300 (1995).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* scandent along trail in forest, 1.12.1980, *Friis & Vollesen* 604 (BR, C, K, KHF) & 605 (BR, C, K, KHF).
General habitat range: in clearings in medium-altitude forest.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Zambia and Zimbabwe.

Acalypha bipartita Muell. Arg.
FTA 6,1: 908 (1912); FS: 154 (1929); FPNA 1: 468 (1948); FPS 2: 53 (1952); FTEA, Euphorbiac. 1: 205 (1987); EL AMIN 1990: 121; UKWF: 106 (1994).
Imatong Mountains group, Sudan side: Kinyeti Valley, 3 km. south of Hiliu along Katire road, no alt., 1.6.1984, *Kielland-Lund* 817 (C, NLH); Imeila, 800 m., at forest edge with *Milicia* and *Caloncoba*, 27.5.1949, *Jackson* 766 (FHO); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveo-*

lens, Alstonia boonei, Parinari excelsa and *Milicia excelsa,* on forest floor, 27.11.1980, *Friis & Vollesen* 512 (BR, C, K, KHF).

Didinga Mountains (?): near Farasiki, no alt., in closed forest patch near stream, 13.6.1984, *Kielland-Lund* 946 (C, NLH).

General habitat range: in medium-altitude forest.

General distribution: East Congo [previously Zaire] to South Sudan and Kenya, south to Tanzania.

Acalypha ciliata Forssk.

FTA 6,1: 901 (1912); FS: 153 (1929); FPS 2: 51 (1952); FWTA 1,2: 410 (1958); WICKENS 1976: 103; FTEA, Euphorbiac. 1: 197 (1987); FSo 1: 287 (1993); UKWF: 106 (1994); FE 2,2: 303 (1995); HYF: 190 (1997).

Imatong Mountains group, Sudan side: Imeila, 800 m., weed, 17.6.1961, *Jackson* 4244 (K).

General habitat range: in lowland and medium-altitude woodland and wooded grassland, usually in disturbed sites.

General distribution: Senegal to Ethiopia and South Somalia, south to Namibia and South Africa; also in tropical Arabia and India.

Acalypha fruticosa Forssk.

FTA 6,1: 895 (1912); FS: 153 (1929); FPNA 1: 468 (1948); FPS 2: 50 (1952); FTEA, Euphorbiac. 1: 206 (1987); EL AMIN 1990: 121; FSo 1: 285 (1993); UKWF: 106 (1994); KTSL: 183 (1994); FE 2,2: 301 (1995); HYF: 190 (1997).

var. **fruticosa**

FTEA, Euphorbiac. 1: 207 (1987); FSo 1: 285 (1993); FE 2,2: 301 (1995).

Imatong Mountains group, Sudan side: near Torit town, 630 m., evergreen tangle on termite mound, 23.4.1949, *Jackson* 708 (FHO); 10 km. north of Hiliu towards Torit, 650 m., 8.12.1983, *Kielland-Lund* 269 (C, NLH); at the northernmost point of the continuous mountain chain, just south-east of Ngarama along the road to Molongori, 700 m., open woodland with *Acacia seyal, Albizia amara* subsp. *sericocephala, Lannea humilis,* etc., on sandy soil, 13.3.1982, *Friis & Vollesen* 1192 (C, K, KHF); 2 km. from junction of Katire and Ngarama roads along Imatong road and 500 m. east of road (4° 21' N, 32° 39' E), no alt., 26.5.1984, *Kielland-Lund* 764 (C, NLH); Kinyeti Valley, Hiliu, 13 km. south of Torit, 700 m., small hills with woodland in extensive cultivations, 28.2.1986, *Bodoegaard & Francis* 19 (EA).

Lafit, Dongotona and Nangeya Mountains: south east side of Lafon (5° 02' N, 32° 27-28' E), no alt., 28.12.1983, *Kielland-Lund* 491 (C, NLH).

Didinga Mountains: Nathilani, 1200 m., in gully with *Combretum* and *Acacia,* 9.4.1949, *Jackson* 675 (FHO); Mt. Lotuke, 1500 m., under *Acacia ataxacantha* on eroded hillside, 31.3.1950, *Jackson* 1370 (BM) [approaching var. *eglandulosa* Radcl.-Sm.].

General habitat range: in lowland deciduous bushland.

General distribution: as for var. below.

var. **eglandulosa** Radcl.-Sm.

FTEA, Euphorbiac. 1: 209 (1987).

Didinga Mountains: just above Chukudum, 1280 m., 28.4.1939, *Myers* 11,213 (K, WM).

var. **villosa** Hutch.

FTEA, Euphorbiac. 1: 209 (1987).

Didinga Mountains: foot of Didinga Mts., 16 km. north-east of Kapoeta, bank of the river Lokalyan, no alt., 24.8.1940, *Myers* 13,439 (K) [approaching var. *fruticosa*].

General habitat range: in lowland deciduous bushland.

General distribution: South Sudan to Ethiopia and Somalia, south to Namibia, Zimbabwe and Mozambique; also in tropical Arabia, India, Sri Lanka and Burma.

Note. The Sudanese material is variable, with many intermediate specimens, and the varieties of FTEA have therefore not been consistently applied here, nor have their ranges of distribution been fully indicated.

Acalypha indica L.
FTA 6,1: 903 (1912); FS: 154 (1929); FPS 2: 52 (1952); FTEA, Euphorbiac. 1: 199 (1987); FSo 1: 285 (1993); UKWF: 106 (1994); FE 2,2: 303 (1995); HYF: 190 (1997).
Didinga Mountains: 8 km. south of Kapoeta on road to Nathilani, no alt., sandy soil, 27.8.1953, *Peers* KM3 (K).
General habitat range: in lowland and medium-altitude woodland and bushland, often found in disturbed places or in riverine scrub.
General distribution: Senegal to Ethiopia and Somalia, south to South Africa; also in tropical Asia, including tropical Arabia, and tropical America.

Acalypha neptunica Muell. Arg.
FTA 6,1: 907 (1909); FPNA 1: 467 (1948); FPS 2: 52 (1952); JACKSON 1956: 354 {Talanga, Lotti}; FWTA 1,2: 410 (1958); FTEA, Euphorbiac. 1: 210 (1987); SOMMERLATTE 1990: 228; EL AMIN 1990: 121; UKWF: 106 (1994); KTSL: 184 (1994).
Imatong Mountains group, Sudan side: Laboni, 1280 m., fringing forest with *Coffea canephora*, 19.4.1930, *Snowden* 1685 (K); near Lotti rest house, no alt., forest, 9.6.1939, *Andrews* 1726 (K); near Lotti rest house, no alt., forest, 9.6.1939, *Andrews* 1746 (K); near Lotti rest house, no alt., forest, 10.6.1939, *Andrews* 1777 (K); Lotti, 1000 m., in forest understorey, 17.1.1949, *Jackson* 596 (FHO, KHF); Lotti, 1000 m., in forest understorey, 20.5.1949, *Jackson* 741 (FHO); Lotti, 1000 m., in forest understorey, 26.3.1950, *Jackson* 1271 (BM); Lotti, 1000 m., in forest understorey, 24.6.1953, *Jackson* 3034 (FHO); Talanga, 900 m., understorey in forest, 21.3.1950, *Jackson* 1258 (BM); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, 26.11.1980, *Friis & Vollesen* 472 (BR, C, K, KHF); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, understorey in forest, 6.12.1980, *Friis & Vollesen* 730 (BR, C, K, KHF); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, 9.12.1980, *Friis & Vollesen* 784 (C, K, KHF).
General habitat range: in undergrowth of lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as an understorey shrub in lowland forest.
General distribution: Ghana to South Sudan, south to Congo [previously Zaire] and Tanzania.

Acalypha ornata Hochst. ex A. Rich.
FTA 6,1: 890 (1912); FS: 151 (1929); FPNA 1: 464 (1948); FPS 2: 50 (1952); JACKSON 1956: 350 & 354 {Lotti}; FTEA, Euphorbiac. 1: 190 (1987); EL AMIN 1990: 121; UKWF: 106 (1994); KTSL: 184 (1994); FE 2,2: 300 (1995).
Imatong Mountains group, Sudan side: without further locality, no alt., 1947, *Maxwell Forbes* 100 (K); Palotaka, 1200 m., open woodland, 16.2.1979, *Shigeta* 187 (EA); Kinyeti Valley, Hiliu, east of compound, 700 m., near river, 23.11.1983, *Kielland-Lund* 25 & 26 (C, NLH) & 29.11.1983, *Kielland-Lund* 94 (C, NLH) & 3.12.1983, *Kielland-Lund* 180 (C, NLH); 3 km. south of Hiliu along Katire road (4° 14' N, 32° 40' E), no alt., 30.5.1984, *Kielland-Lund* 797 (C, NLH); Katire to Gilo, at road to Itibol, 1500 m., secondary transitional forest with *Harungana madagascariensis*, forest edge, 12.11.1980, *Friis & Vollesen* 180 (BR, C, EA, K, KHF).
Imatong Mountains group, Uganda side: Lututuru, 1530 m., 5.6.1963, *Kertland* s.n. (MHU); Agoro, south of the Forest Department's trials below bamboo forest, no alt., 9.6.1973, *Katende* 1851 (MHU); 6 km. east of Lututuru (3° 46' N, 32° 54' E), 1500 m., woodland, 19.7.1974, *Katende* 2202 B (HMU).

Didinga Mountains: Iwowa, 1620 m., in khor, 22.4.1939, *Myers* 11,029 (K).
General habitat range: in undergrowth of lowland, medium-altitude and montane forest. According to JACKSON 1956 it occurs at the Imatong Mountains as a pioneer in moist woodland west and north of the mountains, and in lowland forest.
General distribution: Nigeria to Ethiopia, south to Angola, Botswana, Zimbabwe and Mozambique.

Acalypha psilostachya Hochst.
FTA 6,1: 899 (1912); FS: 153 (1929); FPNA 1: 467 (1948); FPS 2: 51 (1952) {Imatong Mountains, Mt. Garia}; FTEA, Euphorbiac. 1: 203 (1987); UKWF: 106 (1994).
Imatong Mountains group, Sudan side: without further locality, no alt., 1939, *Andrews* 1879 (K, WM); near Gilo Pool (4° 02' N, 32° 50' E), no alt., 15.1.1984, *Kielland-Lund* 639 (C, NLH); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 19.11.1980, *Friis & Vollesen* 347 (C, K, KHF).
Imatong Mountains group, Uganda side: Lututuru, 1500 m., at rock in woodland, 19.7.1974, *Katende* 2202 A (MHU).
General habitat range: in undergrowth of medium-altitude and montane forest.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Angola, Zimbabwe, Malawi and Mozambique.

Acalypha racemosa Baill.
FPS 2: 49 (1952); FWTA 1,2: 409 (1958); FTEA, Euphorbiac. 1: 187 (1987). EL AMIN 1990: 121; UKWF: 106 (1994); KTSL: 184 (1994); FE 2,2: 300 (1995); HYF: 190 (1997).
Syn.: [*Acalypha paniculata* auct., non Miq.: FTA 6,1: 886 (1912); FPS 2: 49 (1952); FWTA 1,2: 409 (1958)].
Imatong Mountains group, Sudan side: Lotti, no alt., forest, 8.6.1939, *Andrews* 1695 (K, WM); Lotti, 1000 m., forest understorey, 23.6.1953, *Jackson* 3024 (FHO); Imeila, 800 m., forest understorey, 26.5.1949, *Jackson* 810 (FHO); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* on forest floor, 4.12.1980, *Friis & Vollesen* 679 (C, K, KHF).
General habitat range: in lowland and medium-altitude forest.
General distribution: Ivory Coast to Ethiopia, south to Angola, Zimbabwe and Mozambique; also in tropical Arabia, India, Sri Lanka and Java.

Acalypha villicaulis Hochst. ex A. Rich.
FTA 6,1: 893 (1912); FS: 152 (1929); FPS 2: 50 (1952); WICKENS 1976: 103; FTEA, Euphorbiac. 1: 192 (1987); UKWF: 106 (1994); FE 2,2: 301 (1995).
Syn.: *Acalypha senensis* Klotzsch: FTA 6,1: 888 (1912); FPS 2: 50 (1952); EL AMIN 1990: 122.
Imatong Mountains group, Sudan side: Palotaka, 1200 m., open woodland, 8.1.1979, *Shigeta* 50 (EA); Lerua (3° 58' N, 32° 33' E), 1000 m., weed of cultivations, 17.5.1949, *Jackson* 732 (BM); Kinyeti Valley, hill 3 km. south of Hiliu along Katire road (4° 14' N, 32° 40' E), no alt., north east face of rock, 26.5.1984, *Kielland-Lund* 752 (C, NLH); near Kinyieti River 8 km. south of Hiliu towards Katire, 700 m., 7.12.1983, *Kielland-Lund* 247 (C, NLH).
Imatong Mountains group, Uganda side: Lututuru, 1530 m., 5.6.1963, *Kertland* s.n. (MHU); 5 km. south-east of Lomwaga, no alt., tall-grass grassland with scattered trees, 18.7.1974, *Katende* 2186 (MHU); 2 km. east of Lututuru, near a rivulet, 1400 m., in open woodland, 17.2.1969, *Lye* 2094 (EA, MHU, NLH).
Didinga Mountains: Mt. Lotuke, Char, 1830 m., wooded grassland, 19.4.1939, *Myers* 10,928 (K); Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia*

hockii and *Albizia grandibracteata* on ground with rocky outcrops, 8.12.1980, *Friis & Vollesen* 766 (C, K, KHF).
General habitat range: in lowland and medium-altitude woodlands.
General distribution: Senegal to Ethiopia, south to Namibia, Botswana and South Africa (Transvaal).

Acalypha volkensii Pax
FTA 6,1: 908 (1912); FPS 2: 54 (1952) {Imatong Mountains, Itibol}; FTEA, Euphorbiac. 1: 205 (1987); UKWF: 106 (1994); FE 2,2: 302 (1995).
Imatong Mountains group, Sudan side: Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 8.11.1980, *Friis & Vollesen* 42 (C, K, KHF); Mt. Itibol, 1960 m., 14.6.1939, *Andrews* 1988 (K); Mt. Itibol, 1960 m., 15.6.1939, *Andrews* 2008 (K).
General habitat range: in undergrowth of medium-altitude and montane forest.
General distribution: Uganda and South Sudan to Ethiopia and North Somalia, south to Tanzania.

Alchornea Sw.

Alchornea laxiflora (Benth.) Pax & K. Hoffm.
ITU: 115 (1952); FPS 2: 54 (1952); Jackson 1956: 354 {Talanga, Lotti}; FWTA 1,2: 403 (1958); FTEA, Euphorbiac. 1: 257 (1987); El Amin 1990: 122; KTSL: 185 (1994); FE 2,2: 291 (1995).
Syn.: *Lepidoturus laxiflorus* Benth.: FTA 6,1: 913 (1912); FS: 155 (1929).
Imatong Mountains group, Sudan side: Lotti, 1000 m., forest understorey, 26.3.1950, *Jackson* 1272 (BM); Lotti, 1000 m., forest understorey, 26.2.1951, *Jackson* 1744 (FHO); Talanga, 1050 m., forest understorey, 17.3.1950, *Jackson* 1232 (K).
General habitat range: in lowland and medium-altitude forest.
General distribution: Nigeria to Ethiopia, south to South Africa (Transvaal).

Antidesma L.

Antidesma membranaceum Muell. Arg.
FTA 6,1: 645 (1912); ITU: 116 (1952); FPS 2: 55 (1952); FWTA 1,2: 375 (1958); FTEA, Euphorbiac, 2: 574 (1988); El Amin 1990: 122.
Syn.: *Antidesma meiocarpum* J. Léonard: ITU: 116 (1952).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 26.11.1980, *Friis & Vollesen* 453 (C, K, KHF); Kinyeti Valley, Hiliu, east of compound, c. 700 m., near stream, 23.11.1983, *Kielland-Lund* 31 (C, NLH); Kinyeti Valley, 20 km. south of Hiliu along Katire road (4° 05' N, 32° 43' E), no alt., in teak plantation, 1.6.1984, *Kielland-Lund* 828 (C, NLH).
General habitat range: in lowland and medium-altitude forest, often riverine, or in bushland or moist woodland.
General distribution: Senegal and Guinée to Sudan, Uganda and Kenya, south to South Africa (Transvaal).

Argomuellera Pax

Argomuellera macrophylla Pax
FTA 6,1: 925 (1912); Chipp 1929: 189; FPNA 1: 451 (1948); FPS 2: 56 (1952) {Lotti, Laboni}; Jackson 1956: 354 {Talanga, Lotti, Laboni}; FWTA 1,2: 405 (1958); FTEA, Euphorbiac. 1: 225 (1987); Sommerlatte 1990: 232; El Amin 1990: 123; KTSL: 186 (1994); FE 2,2: 290 (1995).
Imatong Mountains group, Sudan side: Laboni, no alt., an up to 6 m. high shrub in forest, associated with *Coffea,* 8.2.1929, *Chipp* 36 (K, KHF. WM); Laboni, 1280 m., in fringing forest with

Coffea canephora, 19.4.1930, *Snowden* 1683 (BM); Lotti, no alt., forest, 15.4.1933, *Smith* 32 (KHF); Lotti rest house, no alt., 10.6.1939, *Andrews* 1778 (K); Lotti, 1000 m., in closed forest, 26.3.1950, *Jackson* 1284 (K, WM); Palotaka, 1200 m., forest, 25.1.1979, *Shigeta* 101 (EA, K); Gilo, at bridge on Ngairigi River, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 15.11.1980, *Friis & Vollesen* 222 (C, K, KHF).

Imatong Mountains group, Uganda side: north of Mt. Madi Opei, no alt., 3.1935, *Eggeling* 1732 (MHU).

General habitat range: in lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as an understorey shrub in lowland forest.

General distribution: Guinée and Sierra Leone to Ethiopia, south to Angola, Zimbabwe and Mozambique.

Bridelia Willd.

Bridelia atroviridis Muell. Arg.

FTA 6,1: 614 (1912); ITU: 117 (1952); FPS 2: 56 (1952); JACKSON 1956: 354 {Talanga, Lotti}; FWTA 1,2: 370 (1958); FCB 8,1: 35 (1962); FTEA, Euphorbiac. 1: 125 (1987); SOMMERLATTE 1990: 220; EL AMIN 1990: 124; KTSL: 187 (1994); FE 2,2: 268 (1995).

Imatong Mountains group, Sudan side: Lotti, no alt., forest, 31.10.1948, *Jackson* 882 (FHO, KHF); Lotti, 1000 m., forest with *Chrysophyllum,* 26.3.1950, *Jackson* 1273 (K, WM); Lotti, 1000 m., forest understorey, no date, *Jackson* 3018 (FHO); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 5.12.1980, *Friis & Vollesen* 707 (BR, C, K, KHF).

General habitat range: in lowland and medium-altitude evergreen bushland and at forest edged. According to SOMMERLATTE 1990 an understorey tree in lowland forest around the Imatong Mountains.

General distribution: Sierra Leone to Ethiopia, south to Angola and Zimbabwe.

Bridelia brideliifolia (Pax) Fedde

FPNA 1: 448 (1948); ITU: 117 (1952); FPS 2: 57 (1952) {Imatong Mountains, Kinyeti Forest}; FCB 8,1: 36 (1962); FTEA, Euphorbiac. 1: 126 (1987); SOMMERLATTE 1990: 286; EL AMIN 1990: 124.

Imatong Mountains group, Sudan side: Mt. Kinyeti, 1830-2140 m., 15.6.1939, *Andrews* 2015 (K); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 20.11.1980, *Friis & Vollesen* 353 (BR, C, K, KHF); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 15.11.1980, *Friis & Vollesen* 242 (C, K, KHF).

General habitat range: in montane forest and evergreen bushland. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains often together with *Macaranga kilimandscharica* in and at edge of *Albizia* forest.

General distribution: East Congo [previously Zaire] to Uganda and South Sudan, south to Tanzania and Malawi.

Bridelia ndellensis Beille

FWTA 1,2: 371 (1958); WICKENS 1976: 104; FCB 8,1: 42 (1962); FTEA, Euphorbiac. 1: 129 (1987); EL AMIN 1990: 124.

Syn.: *Bridelia ferruginea* Benth. var. *orientalis* Hutch.: FTA 6,1: 620 (1912); FS: 141 (1929). [*Bridelia ferruginea* auct., non Benth.: JACKSON 1956: 357. *Bridelia aubrevillii* auct., non Pellegr.: FPS 2: 56 (1952). *Bridelia duvigneaudii* auct., non J. Léonard: SOMMERLATTE 1990: 214].

Imatong Mountains group, Sudan side: without further locality, no alt., 1939, *Andrews* 1825 (K); without further locality, no alt., 1947, *Maxwell Forbes* 73 (K); Torit district, 9.6.1939, *Andrews* 1722 (K); Issore, 1200 m., edge of gallery

forest, 2.1951, *Jackson* 1793 (FHO); on the Issore-Lomariti path, 1570 m., gallery forest, 4.8.1939, *Myers* 11,799 (K, WM); Gilo, 1900 m., *Albizia gummifera-Macaranga* forest, 10.1948, *Jackson* 423 (FHO, KHF).

Imatong Mountains group, Uganda side: Lomwaga, above Lututuru, 1980 m., woodland, fringing forest, 4.4.1945, *Greenway & Hummel* 7267 (EA, FHO, K).

General habitat range: in medium-altitude and montane forest and riverine forest. According to JACKSON 1956 it occurs at the Imatong Mountains in forest transitional between lowland and montane habitats; according to SOMMERLATTE 1990 it occurs in thickets of lowland woodland and at edges of lowland and medium-altitude forest.

General distribution: Nigeria to South Sudan, south to Uganda and South Congo [previously Zaire].

Bridelia scleroneura Muell. Arg.

FTA 6,1: 614 (1912); FWTA 1,2: 370 (1958); FCB 8,1: 32 (1962); WICKENS 1976: 104; FTEA, Euphorbiac. 1: 122 (1987); EL AMIN 1990: 125; KTSL: 187 (1994); FE 2,2: 267 (1995); HYF: 185 (1997).

Syn.: *Bridelia scleroneuroides* Pax: FTA 6,1: 614 (1912); FS: 141 (1929); FPNA 1: 447 (1948); ITU: 118 (1952); FPS 2: 56 (1952); JACKSON 1956: 349; SOMMERLATTE 1990: 112.

Imatong Mountains group, Sudan side: Loa, Moliandro village west of Kerepi (3° 54' N, 31° 54' E), no alt., 5.6.1984, *Kielland-Lund* 845 (C, NLH); Padibe, Acholi Mountains, 1070 m., 23.7.1946, *Dawkins* 201 (EA); Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees of *Terminalia laxiflora, T. brownii, Pterocarpus lucens, Combretum collinum* and *Vitex doniana* on rocky outcrop, 2.12.1980, *Friis & Vollesen* 645 (C, KHF).

General habitat range: in lowland deciduous woodland. According to JACKSON 1956 it occurs at the Imatong Mountains in moist woodland west and north of the mountains; according to SOMMERLATTE 1990 it occurs in lowland woodland.

General distribution: Guinée to Ethiopia, south to Angola, Zambia and Zimbabwe; also in tropical Arabia.

Caperonia A. St.-Hil.

Caperonia serrata (Turcz.) Presl

FTA 6,1: 833 (1912); FPS 2: 57 (1952); FCB 8,1: 168 (1962); FTEA, Euphorbiac. 1: 164 (1987); FE 2,2: 287 (1995).

Syn.: *Caperonia senegalensis* Muell.Arg.: FTA 6,1L 832 (1912); FWTA 1,2: 398 (1958). *Caperonia gallabatensis* Pax & K. Hoffm.

Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), in dam, 800 m., 6.1.1984, *Kielland-Lund* 593 (C, NLH).

General habitat range: in swamps and at edges of open water at low and medium altitude.

General distribution: Senegal to Ethiopia, south to eastern Congo [previously Zaire], Uganda and Kenya.

Chrozophora A. Juss.

Chrozophora plicata (Vahl) Spreng.

FTA 6,1: 834 (1912); FS: 149 (1929); FPS 2: 58 (1952); FWTA, 1,2: 398 (1958); FTEA, Euphorbiac. 1: 616 (1987); FSo 1: 282 (1993); FE 2,2: 288 (1995).

Lafit, Dongotona and Nangeya Mountains: 800 m. south east of Lafon (5° 02' N, 32° 27-28' E), no alt. 28.12.1983, *Kielland-Lund* 496 (C, NLH).

General habitat range: in dry lowland habitats subject to flooding in and after rains, along rivers and drainage channels.

General distribution: Senegal to Ethiopia (possibly also in Somalia), south to South Africa

(Transvaal); also in Mauritania, Egypt, the Middle East and western Arabia. Closely related species in tropical Asia.

Clutia L.

Clutia abyssinica Jaub. & Spach
FTA 6,1: 807 (1912); FPNA 1: 471 (1948); FPS 2: 60 (1952) {Imatong Mountains, Mt. Baghanj}; FCB 8,1: 99 (1962); FTEA, Euphorbiac. 1: 333 (1987); SOMMERLATTE 1990: 260; EL AMIN 1990: 125; FSo 1: 279 (1993); UKWF: 108 (1994); KTSL: 190 (1994); FE 2,2: 286 (1995).
var. **abyssinica**
FTEA, Euphorbiac. 1: 334 (1987); FSo 1: 280 (1993); FE 2,2: 286 (1995).
Imatong Mountains group, Sudan side: near pool in Kinyeti near Gilo, 1750 m., 26.12.1983, *Kielland-Lund* 475 (C, NLH); Mt. Baghanj, 1830-2140 m., 13.6.1939, *Andrews* 1896 (K); Bushbuck Hill, 2150 m., edge of *Hagenia* woodland in *Loudetia arundinacea* grassland with scattered trees, much *Agauria* and *Nuxia*, 10.11.1980, *Friis & Vollesen* 128 (C, K, KHF); Kipia, 2440 m., in scrub, 29.12.1935, *Thomas* 1828 (BM, K).
var. **pedicellaris** (Pax) Pax
FTEA, Euphorbiac. 1: 336 (1987); FSo 1: 280 (1993).
Imatong Mountains group, Uganda side: Langia, 2590 m., grassland, 4.1943, *Purseglove* 1411 (EA, K).
General habitat range: in open montane forest, especially in glades and along margins, in evergreen bushland and colonising grasslands. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains in colonising thickets in *Loudetia* grassland.
General distribution: both varieties are distributed from East Congo [previously Zaire] or South Sudan to Ethiopia and North Somalia, south to Angola, Zambia, Malawi and South Africa (Natal).

Croton L.

Croton macrostachyus Hochst. ex Del.
FTA 6,1: 772 (1912); FPNA 1: 449 (1948); ITU: 120 (1952); FPS 2: 60 (1952); FWTA 1,2: 394 (1958); FCB 8,1: 62 (1962); FTEA, Euphorbiac. 1: 149 (1987); SOMMERLATTE 1990: 274; EL AMIN 1990: 126; KTSL: 191 (1994); FE 2,2: 326 (1995); HYF: 189 (1997).
Imatong Mountains group, Sudan side: without further locality, 1990 m., *Albizia-Macaranga* forest, 30.1.1976, *Howard* IM 11 (K, KHF); Gilo, 2000 m., at road through *Albizia* forest, 19.4. 1984, *Sommerlatte* 61 (EA); Mt. Angargi, 1830-2140 m., 14.6.1939, *Andrews* 1945 (K, WM); Mt. Itibol, 1960 m., 15.6.1939, *Andrews* 2002 (K); Lomuleng, 2010 m., *Podocarpus latifolius* forest, 29.7.1939, *Myers* 11,711 (K, WM).
Imatong Mountains group, Uganda side: Lututuru, 1830 m., at stream-side, 2.1938, *Eggeling* 3493 (EA); Lomwaga, 1830-2140 m., 5.4.1945, *Hummel* 710 (FHO).
Didinga Mountains: Mt. Lotuke, Char, 1830 m., in valley forest, 19.4.1939, *Myers* 10,919 (K, WM).
General habitat range: in lowland, medium-altitude and montane forest, often as pioneer species and colonising grassland or woodland. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains in secondary forest and along forest edges, usually between 1500 and 2400 m., particularly in *Albizia* forest.
General distribution: Guinée to Ethiopia, south to Angola, Zambia, Malawi and Mozambique; also in tropical Arabia.

Croton sylvaticus Krauss
FTA 6,1: 771 (1912); ITU: 123 (1952); FCB 8,1: 72 (1962); FTEA, Euphorbiac. 1: 155 (1987).
Syn.: *Croton oxypetalus* Muell. Arg.: FTA 6,1: 774 (1912); JACKSON 1956: 354 {Talanga, Lotti}; EL AMIN 1990: 127; KTSL: 193 (1994); FE 2,2: 326 (1995).
Imatong Mountains group, Sudan side: near Ka-

tire, 900 m., *Combretum* woodland, 26.5.1949, *Jackson* 811 (FHO).
General habitat range: in lowland and medium-altitude forest, mainly as pioneer.
General distribution: Guinée to Ethiopia, south to Congo [previously Zaire] and South Africa (Natal).

Croton zambesicus Muell. Arg.
FTA 6,1: 758 (1912); FPS 2: 61 (1952); FWTA 1,2: 394 (1958); FTEA, Euphorbiac. 1: 138 (1987); EL AMIN 1990: 127; KTSL: 194 (1994); FE 2,2: 325 (1995).
Didinga Mountains: Urungu Hill (4° 3' N, 33° 49' E), 1200 m., rocky hillside with *Commiphora*, 28.3.1950, *Jackson* 1292 (BM, K); at rocks north-east of Chukudum (4° 15' N, 33° 27' E), 1100 m., 21.12.1983, *Kielland-Lund* 426 (C, NLH); Longumu Valley north of Chukudum (4° 20' N, 33° 23' E), 900 m., 20.12.1983, *Kielland-Lund* 392 (C, NLH).
General habitat range: in lowland and medium-altitude dry woodland and deciduous bushland.
General distribution: Gambia and Senegal to Ethiopia, south to Kenya; a separate distribution area from Angola to South Africa (Natal).

Croton sp.
Imatong Mountains group, Sudan side: above Itibol, 2260 m., 19.9.1940, *Myers* 13,482 (?K, not traced).

Dalechampia L.

Dalechampia parvifolia Lam.
FSo 1: 290 (1993); UKWF: 107 (1994); FE 2,2: 312 (1995).
Syn.: *Dalechampia scandens* L. var. *cordofana* (Webb) Muell.Arg.: FTA 6,1: 954 (1912); FS: 156 (1929); FPS 2: 61 (1952); FWTA 1,2: 1,2: 413 (1958); FTEA, Euphorbiac. 1: 289 (1987); HYF: 191 (1997). [*Dalechampia scandens* auct., non L.: FTA 6,1: 954 (1912); FS: 156 (1929); FPS 2: 61 (1952); FWTA 1,2: 413 (1958); FTEA, Euphorbiac. 1: 287 (1987); HYF: 191 (1997)].
Imatong Mountains group, Sudan side: Kinyeti Valley, half way between Torit and Hiliu, near Imatong junction (4° 21' N, 32° 38' E), no alt., 31.5.1984, *Kielland-Lund* 812 (NLH).
General habitat range: in lowland and medium-altitude deciduous bushland or wooded grassland, often in rocky or seasonally wet places.
General distribution: Cape Verde Islands and Senegal to Ethiopia and Somalia, south to Angola and Namibia, Zambia and Mozambique; also in tropical Arabia, Pakistan and India.
Note: According to recent authors, including specialists on neotropical Euphorbiaceae, *Dalechampia scandens* L. is restricted to tropical America.

Drypetes Vahl

Drypetes gerrardii Hutch.
FTEA, Euphorbiac. 1: 97 (1987); EL AMIN 1990: 128 {"near streams in ... Equatoria (Lotti Forest)"}; KTSL: 194 (1994).
var. **tomentosa** Radcl.-Sm.
FTEA, Euphorbiac. 1: 98 (1987).
Syn.: *Drypetes sp. nov. aff. D. leonensis* (Pax) Pax & K. Hoffm.: ITU: 124 (1952).
Imatong Mountains group, Sudan side: Lotti, no alt., forest, 5.8.1939, *Myers* 11,812 (K, WM); Lotti, 1000 m., understorey of tall forest, 24.6.1955, *Jackson* 3046 (FHO).
Imatong Mountains group, Uganda side: Lututuru, no alt., 1991, *Katende* (sight record).
General habitat range: in medium-altitude or montane dry forest.
General distribution: South Sudan through eastern Africa to South Africa (Natal, Transvaal).

Drypetes ugandensis (Rendle) Hutch.
FTA 6,1: 687 (1912); ITU: 123 (1952); JACKSON 1956: 353 {Talanga, Lotti}; FTEA, Euphorbiac.

1: 93 (1987); SOMMERLATTE 1990: 202; EL AMIN 1990: 128.

Imatong Mountains group, Sudan side: Talanga, no alt., forest, rocky slope to stream, 6.4.1950, *Jackson* 1383 (K) & 1384 (K); Talanga, 900 m., on steep slope in forest, 21.3.1950, *Jackson* 1256 (K); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, 27.11.1980, *Friis & Vollesen* 495 (C, K).

General habitat range: in medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as an understorey tree in lowland forest.

General distribution: Cameroon to East Congo [previously Zaire], Uganda and South Sudan.

Note. The only species of *Drypetes* indicated in FPS (FPS 2: 61 (1952)) is *D. mildbraedii* (Pax) Hutch.; it has not been recorded from the study area.

Erythrococca Benth.

Erythrococca trichogyne (Muell. Arg.) Prain

FTA 6,1: 863 (1912); FTEA, Euphorbiac. 1: 274 (1987); KTSL: 197 (1994); FE 2,2: 298 (1995).

Imatong Mountains group, Uganda side: without further locality, 2290 m., forest, 4.1938, *Jackson* 640 (FHO); Gilo, 1900 m., *Podocarpus latifolius-Olea* forest, 28.3.1949, *Eggeling* 3571 (K); Bushbuck Hill, 2150 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, 10.11. 1980, *Friis & Vollesen* 110 (C, K, KHF); at upper reach of Ngairigi River north-east of Gilo, 2000 m., riparian scrub in *Loudetia* grassland, 28.2. 1982, *Friis & Vollesen* 1052 (C, K, KHF).

Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1800 m., old high forest, 17.5.1972, *Synnott* 985 (EA, MHU); Mt. Lonyili, 1900 m., old high forest, 16.5.1972, *Synnott* 1056 (EA, MHU).

General habitat range: in medium-altitude and montane forest.

General distribution: East Congo [previously Zaire] to Ethiopia, south to Angola, Zambia, Zimbabwe and Mozambique.

Note. FPS (FPS 2: 63 (1952)), has *Erythrococca bongensis* as the only species from Equatoria. EL AMIN (1990: 128) has E. *atroviridis* Prain and *E. bongensis* Pax from Equatoria. However, no material of these two species has been seen from the study area.

Euphorbia L.

Euphorbia ampliphylla Pax

FE 2,2: 334 (1995).

Syn.: [*Euphorbia obovalifolia* auct., non A. Rich.: FTA 6,1: 594 (1912); FTEA, Euphorbiac. 2: 483 (1988); KTSL: 204 (1994)].

Imatong Mountains group, Sudan side: Lomuleng, 2440 m., forest, locally abundant tree to 18 m. high, with erect, cylindrical bole, branching near the top, stem mostly 3-angled, 31.12. 1935, *Thomas* 1889 (BM, K); Kipia, on the descent from Mt. Logoforok, 1980 m., tall tree to c. 20 m. in *Podocarpus latifolius-Olea capensis* forest, 6.7.1947, *MacLeay* 189 (BM, KHU).

Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., 2000 m., understorey in montane *Podocarpus latifolius* forest, 24.1.1950, *Jackson* 1121 (FHO).

General habitat range: in montane forest, especially old clearings and forest edges.

General distribution: East Congo [previously Zaire] to Ethiopia, south to Malawi.

Euphorbia bongensis Kotschy & Peyr.

FTA 6,1: 521 (1912); FS: 136 (1929); FPS 2: 75 (1952); FTEA, Euphorbiac. 2: 464 (1988).

Imatong Mountains group, Sudan side: south of Torit, 630 m., savannah, 22.4.1949, *Jackson* 704 (BM); Kinyeti Valley, 3 km. south of Torit, 650 m., 13.12.1983, *Kielland-Lund* 324 (C, NLH);

Kinyeti Valley, Imatong Junction, between Torit and Hiliu, near Ngarama (4° 20' N, 32° 38' E), no alt., 14.1.1984, *Kielland-Lund* 626 (C, NLH); near Imatong Junction and Ngarama (4° 21' N, 32° 38' E), no alt., in dry *Acacia seyal* savannah, 24.5.1984, *Kielland-Lund* 721 (C, NLH); 16 km. north of Katire, 900 m., woodland with *Combretum collinum, C. molle* and *Annona senegalensis*, 22.2.1982, *Friis & Vollesen* 989 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: Agoro, *Acacia* woodland, no date, *Eggeling* 786 (K, MHU); north of Okako, south of Mingaro, no alt., grassland, 9.6.1973, *Katende* 1861 (EA, MHU).
General habitat range: in lowland and medium-altitude grassland and open woodland.
General distribution: South Sudan south to Tanzania.

Euphorbia breviarticulata Pax
FTA 6,1: 582 (1912); ITU: 126 (1952); FTEA, Euphorbiac. 2: 492 (1988); KTSL: 201 (1994); FE 2,2: 337 (1995).
var. **breviarticulata**
FE 2,2: 337 (1995).
Syn.: *Euphorbia grandicornis* Goebel
Imatong Mountains group, Sudan side: Torit, 3 km. west of Kinyeti River, 800 m., in tangle with *Lannea, Grewia,* and *Sansevieria* on termite mound, 11.4.1949, *Jackson* 693 (FHO).
General habitat range: in lowland and medium-altitude deciduous bushland, the thorny stems often forming dense, impenetrable tangles.
General distribution: Uganda and South Sudan to South Ethiopia and Somalia, south to Tanzania.

Euphorbia candelabrum Kotschy
FTA 6,1: 598 (1912); FS: 141 (1929); ITU: 126 (1952); FPS 2: 66 (1952); WICKENS 1976: 104; FTEA, Euphorbiac. 2: 485 (1988); FSo 1: 325 (1993); KTSL: 201 (1994); FE 2,2: 336 (1995).
Syn.: *Euphorbia calycina* N.E. Br.: FTA 6,1: 597 (1912); FPNA 1: 478 (1948).
Imatong Mountains group, Sudan side: near Torit, east of airstrip (4° 25' N, 32° 35' E), 650 m., 9.12.1983, *Kielland-Lund* 273 (C, NLH).
Didinga Mountains: Nathilani, foothills, 1200 m., forming grove with *Aloe sp.* in woodland of *Acacia gerrardii, Albizia anthelmintica* and *Tamarindus*, 9.4.1949, *Jackson* (sight record, quoted on label of *Jackson* 668, which is *Ochna sp.*, on *Jackson* 671, which is *Eulophia petersii*, and on *Jackson* 674, which is *Acacia gerrardii*).
General habitat range: in lowland and medium-altitude woodland.
General distribution: East Congo [previously Zaire] to Sudan, Ethiopia and South Somalia, south to Malawi and Zambia.

Euphorbia cyparissioides Pax
FTA 6,1: 542 (1912); FS: 137 (1929); FPS 2: 75 (1952); FTEA, Euphorbiac. 2: 439 (1988); UKWF: 110 (1994); FE 2,2: 367 (1995).
Imatong Mountains group, Uganda side: Lomwaga Mts., 2450 m., *Protea-Combretum* bushland, 5.4.1945, *Greenway & Hummel* 7277 (EA, K).
Didinga Mountains: Nagichot, 1980 m., in open country, 26.4.1939, *Myers* 11,140 (K, WM); Mt. Lotuke, 1900 m., *Protea gaguedi* grassland, 29.3.1950, *Jackson* 1312 (BM); Mt. Lotuke, 2000 m., *Protea gaguedi* grassland, 30.3.1950, *Jackson* 1332 (BM).
General habitat range: in medium-altitude and montane grassland and open woodland.
General distribution: Cameroon to Ethiopia, south to Angola, Zambia, Zimbabwe and Mozambique.

Euphorbia depauperata Hochst. ex A. Rich.
FTA 6,1: 537 (1920); FPS 2: 73 (1952) {Imatong Mountains}; FWTA 1,2: 421 (1958); UKWF: 110 (1994); FE 2,2: 366 (1995).
var. **depauperata**
FTEA, Euphorbiac. 2: 440 (1987).
Imatong Mountains group, Sudan side: at bridge on Ngairigi River, 1680 m., grassland, 15.6. 1953, *Prowse* 286 (KHU); above Lomuleng,

1830 m., 2.1936, *Johnston* 1407 (K); above Lomuleng, 2500 m., in mountain meadow, 25.7. 1939, *Myers* 11,582 (K); Kipia, 2740 m., grassland, 4.7.1947, *MacLeay* 194 (KHU).
General habitat range: in intermediate and mountain grassland.
General distribution: Sierra Leone to Ethiopia, south to Malawi, Zambia and Zimbabwe.
var. **laevicarpa** Friis & Vollesen
FRIIS & VOLLESEN 1982: 470; FTEA, Euphorbiac. 2: 440 (1988).
Imatong Mountains group, Sudan side: Gilo, 1580 m., in mountain grassland maintained by burning, 24.6.1947, *MacLeay* 39 (BM); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 13.11.1980, *Friis & Vollesen* 206 (C, holotype, K, KHF, isotypes); at path from Gilo to Mt. Garia, 2000 m., *Loudetia arundinacea* grassland with scattered trees, 19.3.1982, *Friis & Vollesen* 1259 (BR, C, K, KHF); Mt. Baghanj, 1830-2130 m., 13.6.1939, *Andrews* 1888 (K); Lomuleng, 2440 m., grassland, 31.12.1935, *Thomas* 1892 (BM, K); Kipia, 2740 m., in mountain grassland maintained by burning, 6.7.1947, *MacLeay* 194 (BM).
Imatong Mountains group, Uganda side: without further locality, 2140 m., grassland, 4.1938, *Eggeling* 3608 (K); Langia, 1830-2740 m., montane grassland, 4.1943, *Purseglove* 1388 (EA, K).
Didinga Mountains: Mt. Lotuke, 2000 m., *Protea* grassland, 30.3.1950, *Jackson* 1354 (BM).
General habitat range: in mountain grassland.
General distribution: only known from the Imatong Mountains and adjacent massifs in South Sudan and North Uganda. Species as a whole with an overall distribution similar to that of var. *depauperata.*

Euphorbia heterophylla L.
FPS 2: 76 (1952); FWTA 1,2: 421 (1958); WICKENS 1976: 104; FTEA, Euphorbiac. 2: 431 (1988); FSo 1: 309 (1993); UKWF: 109 (1994); FE 2,2: 373 (1995); HYF: 182 (1997).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, 700 m., waste ground in compound, 26.11.1983, *Kielland-Lund* 53 (C, NLH).
General habitat range: In damp, disturbed places, or a weed of cultivations.
General distribution: distributed throughout the tropics, probably originating in Central America.

Euphorbia hirta L.
FTA 6,1: 496 (1912); FS: 134 (1929); FPS 2: 71 (1952); FWTA 1,2: 419 (1958); WICKENS 1976: 104; FTEA, Euphorbiac. 2: 415 (1988); FSo 1: 307 (1993); UKWF: 109 (1994); FE 2,2: 374 (1995); HYF: 182 (1997).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., open woodland, 5.1.1979, *Shigeta* 25 (EA); Kinyeti Valley, Hiliu, 700 m., waste ground in compound, 21.11.1983, *Kielland-Lund* 5 (C, NLH).
General habitat range: in a wide range of habitats, nearly always in disturbed places.
General distribution: almost pantropical.

Euphorbia indica Lam.
FPS 2: 71 (192); FWTA 1,2: 422 (1958); FTEA, Euphorbiac. 2: 417 (1988); UKWF: 109 (1994); FE 2,2: 374 (1995); HYF: 183 (1997).
Syn.: [*Euphorbia hypericifolia* auct., non L.: FTA 6,1: 498 (1911); FCap 5,2: 248 (1915); FS: 134 (1929); FPNA 1: 476 (1948).]
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 3.1.1984, *Kielland-Lund* 568 (C, NLH); Kinyeti Valley, Hiliu, south-east of compound, 700 m., in cultivation, 2.12.1983, *Kielland-Lund* 159 (C, NLH).
General habitat range: in lowland and medium-altitude habitats disturbed by man, and in naturally disturbed habitats along streams.
General distribution: almost pantropical; originally from India.

Euphorbia magnicapsula S. Carter
FTEA, Euphorbiac. 2: 489 (1988); KTSL: 204 (1994).
var. **lacertosa** S. Carter
FTEA, Euphorbiac. 2: 490 (1988); KTSL: 204 (1994).
Syn.: *Euphorbia sp. aff. E. thi* Schweinf. sensu Eggeling in ITU: 128 (1952).
Imatong Mountains group, Sudan side: North east side of the mountains, above Molongori, 750 m., almost bare rocky slope with *Boswellia papyrifera, Terminalia brownii, Lannea fulva, Euphorbia magnicapsula, Xerophyta simulans,* etc., 10.3. 1982, *Friis & Vollesen* 1156 (C, K, KHF); Lofulong, 900 m., in cracks in granite rocks, 1.11. 1948, *Jackson* 506 (FHO) & 507 (FHO).
Imatong Mountains group, Uganda side: Mt. Madi [Opei], no alt., 3.1935, *Eggeling* 1733 (MHU).
Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., path from Moimoi to Isoke, no alt., on bare rock, 22.1.1950, *Jackson* 1105 (KHF, FHO).
Didinga Mountains: rocks north-east of Chukudum (4° 15' N, 33° 27' E), 1100 m., 21.12.1983, *Kielland-Lund* 435 (C, NLH).
General habitat range: on bare rocks in medium-altitude deciduous bushland.
General distribution: South Sudan, North and East Uganda, West Kenya and North Tanzania.

Euphorbia schimperiana Scheele
FTA 6,1: 537 (1912); FS: 137 (1929); FPNA 1: 482 (1948); FPS 2: 75 (1952) {Dongotona Mountains}; FWTA 1,2: 421 (1958); FTEA, Euphorbiac. 2: 433 (1988); FSo 1: 313 (1993); UKWF: 110 (1994); FE 2,2: 370 (1995); HYF: 184 (1997).
var. **schimperiana**
FTEA, Euphorbiac. 2: 433 (1988); FSo 1: 313 (1993).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 19.11.1980, *Friis & Vollesen* 337 (C, K, KHF); slope of Mt. Kinyeti, 2900 m., undergrowth in *Podocarpus latifolius-Dombeya torrida* forest, 15.11.1949, *Jackson* 976 (BM).
Imatong Mountains group, Uganda side: 4 km. south-east of Lomwaga (3° 47'N, 32° 55' E), 1900 m., tall grassland with scattered trees, 18.7.1974, *Katende* 2145 (MHU); 4 km. south-east of Lomwaga (3° 47'N, 32° 55' E), 1500 m., tall grassland with scattered trees, 18.7.1974, *Katende* 2157 (MHU).
Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., Mt. Aripiwa (4° 12' N, 33° 8' E), 2100 m., montane forest, 24.1.1950, *Jackson* 111 (BM); Mt. Lonyili, below peak, 1800 m., forest understorey, 4.12.1971, *Katende* 1390 (MHU).
Didinga Mountains: Mt. Lotuke, 2600 m., undergrowth in *Podocarpus latifolius* forest, 30.3.1950, *Jackson* 1353 (BM).
var. **pubescens** (N.E. Br.) S. Carter
FTEA, Euphorbiac. 2: 435 (1988).
Imatong Mountains group, Uganda side: Agoro, 2140 m., montane forest, 14.11.1945, *Thomas* 4378 (K).
var. **velutina** N.E. Br.
FTEA, Euphorbiac. 2: 435 (1988).
Imatong Mountains group, Uganda side: Lututuru, 6.6.1963, *Kertland* s.n. (K).
General habitat range: in medium-altitude end montane grassland and at forest edges.
General distribution: Cameroon to Ethiopia and North Somalia, south to Malawi and Zimbabwe. Species as a whole (infraspecific taxon not known) also in tropical Arabia.

Euphorbia teke Schweinf. ex Pax
FTA 6,1: 563 (1912); FS: 139 (1929); ITU: 127 (1952); FPS 2: 67 (1952); JACKSON 1956: 355; FTEA, Euphorbiac. 2: 481 (1988); EL AMIN 1990: 131 {Talanga, Torit}.
Imatong Mountains group, Sudan side: Laboni, no alt., forest, small tree, 11.2.1943, *Andrews* 2639 (EA); Palotaka (Lotti), 1200 m., forest, 6.1.1979, *Shigeta* 122 (EA); Talanga, 900 m.,

forest understorey, 8.7.1949, *Jackson* 832 (FHO); Talanga, 1000 m., in forest near swamp, 28.1.1949, *Jackson* 607 (K, KHF); Talanga, 1000 m., undergrowth in closed forest near swampy area, 27.4.1949, *Jackson* 745 (K).
General habitat range: in medium-altitude forest on heavy clay soils. According to JACKSON 1956 it occurs at the Imatong Mountains in riverine and swamp forest of the lowlands.
General distribution: Central African Republic and Congo [previously Zaire] to South Sudan, south to Uganda and Tanzania.

Euphorbia venenifica Kotschy
FTA 6,1: 562 (1912); FS: 138 (1929); ITU: 128 (1952); FPS 2: 67 (1952); FTEA, Euphorbiac. 2: 494 (1988); FE 2,2: 334 (1995).
Imatong Mountains group, Sudan side: Nokolong, 1220 m., dry grassland, locally abundant tree to 6 m. high, succulent, cylindrical branches in whorls, inflorescences near the tip of the branches, 31.12.1935, *Thomas* 1897 (K).
Imatong Mountains group, Uganda side: Agoro, arid hills, 12.1932, *Eggeling* 837 (K, MHU).
General habitat range: in dry lowland grassland, bushland and woodland, often in rocky places.
General distribution: Sudan, West Ethiopia, Uganda.

Euphorbia welbyi N.E. Br.
FTA 6,1: 541 (1911); FTEA, Euphorbiac. 2: 437 (1988); UKWF: 110 (1994); FE 2,2: 369 (1995).
var. **glabra** S. Carter
FTEA, Euphorbiac. 2: 437 (1988); FE 2,2: 369 (1995).
Imatong Mountains group, Sudan side: Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 58' N, 32° 54' E), 3100 m., above timberline, 10.6.1984, *Kielland-Lund* 926 (C, NLH).
General habitat range: in montane grassland and ericaceous bushland, also in high-altitude moorland.
General distribution: South Sudan to Ethiopia, south to Uganda and Tanzania. Species as a whole with the same general distribution.

Euphorbia sp.
Didinga Mountains: south of Kapoeta, on road to Nathilani, no alt., 27.8.53, *Peers* K014 (WM).

Flueggea Willd.
Syn.: *Securinega* Commers. ex Juss.

Flueggea virosa (Roxb. ex Willd.) Voigt
ITU: 128 (1952); FTEA, Euphorbiac. 1: 68 (1987); FSo 1: 271 (1993); KTSL: 207 (1994); FE 2,2: 272 (1995).
Syn.: *Securinega virosa* (Roxb. ex Willd.) Baill.: FPNA 1: 439 (1948); FPS 2: 97 (1952); JACKSON 1956: 350; FWTA 1,2: 389 (1958); SOMMERLATTE 1990: 132; EL AMIN 1990: 141. *Flueggea microcarpa* Blume: FTA 6,1: 736 (1912); FS: 147 (1929).
Imatong Mountains group, Sudan side: Laboni, secondary wooded grassland, 14.10.1938, *Myers* 9712 (K, WM); Palotaka, 1200 m., open woodland, 8.1.1979, *Shigeta* 57 (EA); Palotaka, 1200 m., open woodland, 25.2.1979, *Shigeta* 210 (EA); north-eastern side of the mountains, 10 km. north-west of Molongori towards Ngarama, 700 m., dense *Acacia seyal-Balanites aegyptiaca* woodland on clay, 10.3.1982, *Friis & Vollesen* 1159 (C, K, KHF); Kinyeti Valley, Hiliu, 700 m., in compound, 22.11.1983, *Kielland-Lund* 22 (C, NLH).
General habitat range: in many lowland and medium-altitude habitats, including grassland, woodland, forest edges, also swampy habitats and in disturbed places. According to JACKSON 1956 it occurs at the Imatong Mountains in moist woodland west and north of the mountains; according to SOMMERLATTE 1990 it occurs in lowland woodland or at edge of lowland secondary forest.
General distribution: Senegal to Ethiopia and South Somalia, south to Namibia and South Af-

rica (Natal); also in tropical Arabia, Madagascar and widespread in tropical Asia.

Hymenocardia Wall. ex Lindl.

Hymenocardia acida Tul.
FTA 6,1: 651 (1912); FS: 143 (1929); ITU: 130 (1952); FPS 2: 80 (1952); JACKSON 1956: 349; FWTA 1,2: 377 (1958); WICKENS 1976: 104; FAC, Hymenocardiac.: 10 (1985); FTEA, Euphorbiac. 2: 579 (1988); SOMMERLATTE 1990: 116; EL AMIN 1990: 132; KTSL: 209 (1994); FE 2,2: 285 (1995).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., woodland, 6.1.1979, *Shigeta* 119 (EA); above Katire, 1220 m., in *Combretum* woodland on hillside, 30.1.1947, *Jackson* 166 (FHO, KHF); Kinyeti Valley, Hiliu, 13 km. south of Torit, 700 m., small hills in extensive cultivations, 28.2.1986, *Bodoegaard & Francis* 29 (EA); between Palwar and Talanga (3° 53' N, 32° 39' E), 1000 m., *Combretum collinum* woodland on raised rocky ground, 26.4.1984, *Sommerlatte* 69 (EA); Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees of *Terminalia laxiflora, T. brownii, Pterocarpus lucens, Combretum collinum* and *Vitex doniana*, 3.12.1980, *Friis & Vollesen* 660 (C, KHF).
General habitat range: in lowland woodland and wooded grassland. According to both JACKSON 1956 and SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in lowland woodland.
General distribution: Senegal to West Ethiopia, south to Angola, Zimbabwe and Mozambique.

Hymenocardia ulmoides Oliv.
FTA 6,1: 648 (1912); FPS 2: 80 (1952); FAC, Hymenocardiac.: 3 (1985); FTEA, Euphorbiac. 2: 577 (1988); EL AMIN 1990: 132 {Katire}.
Imatong Mountains group, Sudan side: no specimen seen; recorded by EL AMIN 1990 from "rocky ground in woodland" at Katire. This could possibly represent a misidentification of *H. acida*.
General habitat range: in dry lowland forest and woodland.
General distribution: Cameroon and Gabon to South Sudan, south to South Africa (Transvaal, Natal).

Jatropha L.

Jatropha curcas L.
FTA 6,1: 791 (1912); FS: 148 (1929); FPS 2: 45 (1952); FWTA 1,2: 397 (1958); FCB 8,1: 90 (1962); WICKENS 1976: 104; FTEA, Euphorbiac. 1: 356 (1987); EL AMIN 1990: 133; KTSL: 210 (1994); FE 2,2: 324 (1995).
Imatong Mountains group, Sudan side: Kinyeti Valley, 10 km. north of Katire, 850 m., woodland with *Combretum collinum, C. molle* and *Annona senegalensis*, many rocky outcrops, 3.3. 1982, *Friis & Vollesen* 1090 (BR, C, K, KHF).
General habitat range: in old farmland in lowland or medium-altitude woodland, often naturalised.
General distribution: the species is indigenous in tropical America; it is now widely cultivated and naturalised throughout the tropical lowlands of the Old World.

Macaranga Thouars

Macaranga capensis (Baill.) Sim
FTEA, Euphorbiac. 1: 243 (1987); FE 2,2: 295 (1995); KTSL: 212 (1994); FE 2,2: 295 (1995).
var. **capensis**
KTSL: 212 (1994); FE 2,2: 295 (1995).
Imatong Mountains group, Sudan side: Gilo, 2000 m., in *Albizia* forest, 24.8.1984, *Sommerlatte* 67 (EA).
var. **kilimandscharica** (Pax) Friis & M.G. Gilbert
FE 2,2: 295 (1995).

Syn.: *Macaranga kilimandscharica* Pax: FTA 6,1: 938 (1912); FPNA 1: 461 (1948); ITU: 132 (1952); FPS 2: 85 (1952) {Imatong Mountains, Itibol Forest}; JACKSON 1956: 364-365; FTEA, Euphorbiac. 1: 245 (1987); SOMMERLATTE 1990: 272; EL AMIN 1990: 135; KTSL: 212 (1994).

Imatong Mountains group, Sudan side: without further locality [probably Gilo], 1990 m., *Croton-Macaranga* forest, 27.1.1975, *Howard* IM 8 (EA, K, KHF), & 30.1.1976, *Howard* IM 12 (K, KHF); Gilo, 1800 m., dominant in forest regrowth with *Albizia gummifera*, no date, *Jackson* 429 (FHO, KHF); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, 15.11.1980, *Friis & Vollesen* 232 (C, K, KHF); Itibol, 1860 m., in forest, 19.12.1935, *Thomas* 1683 (BM, K).

Imatong Mountains group, Uganda side: headwaters of Aringa River, 2140 m., *Podocarpus latifolius-Syzygium* forest, 7.4.1945, *Greenway & Hummel* 7310 (EA, K, MHU).

General habitat range: in medium-altitude and montane forest, often as a pioneer tree in clearings. According to JACKSON 1956 and SOMMERLATTE 1990 it occurs at the Imatong Mountains as a pioneer in the *Albizia* forest zone, often replacing *Albizia* as the dominant; JACKSON has also noted the species as an occasional component of mature *Podocarpus latifolius* forest.

General distribution: East Congo [previously Zaire] to Ethiopia, south to Malawi. The distribution of the two varieties, var. *capensis*, which occurs from the Cape Province of South Africa to Uganda and Kenya, and var. *kilimandscharica*, from Ethiopia to Malawi, overlaps in the distribution area from Malawi to East Africa.

Macaranga schweinfurthii Pax

FTA 6,1: 935 (1912); FS: 156 (1929); ITU: 133 (1952); FPS 2: 85 (1952); JACKSON 1956: 355; FWTA 1,2: FTEA, Euphorbiac. 1: 241 (1987); EL AMIN 1990: 135 {near Lotti}; KTSL: 213 (1994).

Imatong Mountains group, Sudan side: Poko Kweromon, near Lotti, 900 m., in gallery forest with *Maesopsis* and *Erythrophleum*, 24.4.1949, *Jackson* 714 (FHO, KHF).

General habitat range: in medium-altitude ground water forest.

General distribution: Nigeria to South Sudan, south to Angola and Zambia.

Mallotus Lour.

Mallotus oppositifolius (Geisler) Muell. Arg.

FTA 6,1: 928 (1912); FS: 156 (1929); FPNA 1: 459 (1948); ITU: 134 (1952); FPS 2: 85 (1952); JACKSON 1956: 354 {Lotti}; FWTA 1,2: 402 (1958); FTEA, Euphorbiac. 1: 236 (1987); SOMMERLATTE 1990: 216; EL AMIN 1990: 136; KTSL: 213 (1994); FE 2,2: 304 (1995).

Imatong Mountains group, Sudan side: near Lotti rest house, no alt., forest, 9.6.1939, *Andrews* 1744 (K); Lotti, 1000 m., understorey of forest, 20.5.1950, *Jackson* 1497 (BM); Lotti, 1000 m., forest undergrowth, 24.6.1953, *Jackson* 3039 (FHO, KHF); Talanga, undergrowth in rain forest, 11.6.1961, *Jackson* 4220 (K) & 4221 (K) [male and female plant]; Talanga, 900 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, 1.3. 1982, *Friis & Vollesen* 1060 (BR, C, K, KHF).

General habitat range: in undergrowth of lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a pioneer tree in lowland forest.

General distribution: Senegal and Gambia to Ethiopia, south to Angola, Zambia, Malawi and Mozambique; also in Madagascar.

Margaritaria L. f.

Margaritaria discoidea (Baill.) Webster

FTEA, Euphorbiac. 1: 63 (1987); SOMMERLATTE

1990: 190; EL AMIN 1990: 137; KTSL: 213 (1994); FE 2,2: 284 (1995).
Syn.: *Phyllanthus discoideus* Baill.: FTA 6,1: 707 (1912); FS: 144 (1929); FPNA 1: 441 (1948); ITU: 136 (1952); FPS 2: 90 (1952); FWTA 1,2: 387 (1958).
var. **fagifolia** (Pax) A. Radcl.-Sm.
FTEA, Euphorbiac. 1: 66 (1987); FE 2,2: 284 (1995).
Imatong Mountains group, Sudan side: Lotti, no alt., near rest house, 9.6.1939, *Andrews* A1740 (K); Lotti, no alt., forest, 5.8.1939, *Myers* 11,811 (?K, not traced, WM); Imeila forest, 750 m., gallery forest, 27.5.1949, *Jackson* 761 (FHO).
General habitat range: in lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a pioneer species in lowland forest. Species as a whole extending into deciduous woodland.
General distribution: Guinée to Ethiopia, south to Angola and South Africa (Natal). Species as a whole extending to Senegal and Botswana.

Neoboutonia Muell. Arg.

Neoboutonia melleri (Muell. Arg.) Prain
FTA 6,1: 922 (1912); FPNA 1: 454 (1948); ITU: 135 (1952); JACKSON 1956: 357; FTEA, Euphorbiac. 1: 234 (1987); SOMMERLATTE 1990: 212; EL AMIN 1990: 138; KTSL: 216 (1994).
Imatong Mountains group, Sudan side: Talanga, 1200 m., forest on steep slope to stream, 8.3.1950, *Jackson* 1198 (K, WM).
General habitat range: in lowland and medium-altitude forest, often associated with streams. According to JACKSON 1956 it occurs at the Imatong Mountains in forest transitional between lowland and montane vegetation; according to SOMMERLATTE 1990 it occurs swampy areas and forest edges of medium-altitude forest.
General distribution: Nigeria to South Sudan, south to Angola and Mozambique.

Phyllanthus L.

Phyllanthus amarus Schumach. & Thonn.
FTA 6,1: 717 (1912); FPNA 1: 445 (1948); FPS 2: 93 (1952); FWTA 1,2: 387 (1958); FTEA, Euphorbiac. 1: 58 (1987); UKWF: 104 (1994); FE 2,2: 282 (1995); HYF: 186 (1997).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 3.1.1984, *Kielland-Lund* 564 (C, NLH); Kinyeti Valley, Hiliu, compound, no alt., 31.5.1984, *Kielland-Lund* 806 (C, NLH).
General habitat range: in lowland and medium-altitude grassland and woodland, often in disturbed places and cultivated ground.
General distribution: Indigenous in tropical America, but now a pantropical weed.

Phyllanthus boehmii Pax
FTA 6,1: 719 (1912); FTEA, Euphorbiac. 1: 54 (1987); UKWF: 104 (1994); FE 2,2: 282 (1995).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* in grassy swamp with stagnant water along the river, 21.11.1980, *Friis & Vollesen* 371 (BR, C, K, KHF).
General habitat range: in medium-altitude and montane grassland and woodland.
General distribution: Uganda and South Sudan to Ethiopia, south to Zambia. First record from the Sudan.

Phyllanthus fischeri Pax
FTA 6,1: 729 (1912); FTEA, Euphorbiac. 1: 42 (1987); UKWF: 105 (1994); KTSL: 218 (1994); FE 2,2: 280 (1995).
Imatong Mountains group, Sudan side: summit of Mt. Kinyeti, 3180 m., ericaceous bushland, 15.11.1949, *Jackson* 957 (BM); Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 819 (C).

General habitat range: in montane forest and evergreen bushland.
General distribution: Uganda and South Sudan to Ethiopia, south to Tanzania.

Phyllanthus inflatus Hutch.
FS: 143 (1929); FPS 2: 89 (1952); FTEA, Euphorbiac.: 25 (1987); UKWF: 104 (1994); KTSL: 218 (1994).
Imatong Mountains group, Sudan side: Lotti, 1000 m., understorey tree in rain forest, 20.5.1950, *Jackson* 1494 (FHO).
General habitat range: in lowland and medium-altitude forest.
General distribution: South Sudan through eastern tropical Africa to Zimbabwe.

Phyllanthus leucanthus Pax
FTA 6,1: 728 (1912); FTEA, Euphorbiac. 1: 48 (1987); FSo 1: 276 (1993); UKWF: 105 (1994); FE 2,2: 281 (1995).
Imatong Mountains group, Sudan side: Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees, on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 3.12.1980, *Friis & Vollesen* 663 (C, K, KHF); Kinyeti Valley, Hiliu, west of Kinyeti River, 700 m., in cultivation, 11.12.1983, *Kielland-Lund* 304 (C, NLH); Kipia, 2590 m., beside a stream in mountain grassland, 4.7. 1947, *MacLeay* 158 (BM).
General habitat range: in lowland and medium-altitude, rarely montane woodland, evergreen bushland or along forest edges and streams.
General distribution: Congo [previously Zaire] to Ethiopia and North Somalia, south to Zambia, Malawi, Zimbabwe and Mozambique. First record from the Sudan.

Phyllanthus limmuensis Cufod.
FE 2,2: 278 (1995)
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, scrambling shrub, 5.12.1980, *Friis & Vollesen* 708 (BR, C, K, KHF).
General habitat range: in medium-altitude forest, especially along forest edges, or in evergreen bushland.
General distribution: South Sudan and Ethiopia. First record from the Sudan.

Phyllanthus maderaspatensis L.
FTA 6,1: 722 (1912); FS: 145 (1929); FPNA 1: 442 (1948); FPS 2: 93 (1952); FWTA 1,2: 388 (1958); FTEA, Euphorbiac. 1: 18 (1987); FSo 1: 273 (1993); UKWF: 104 (1994); FE 2,2: 276 (1995); HYF: 186 (1997).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 3.1.1984, *Kielland-Lund* 550 (C, NLH); Kinyeti Valley, Hiliu, compound, no alt., 31.5.1984, *Kielland-Lund* 807 (C, NLH).
Imatong Mountains group, Uganda side: 2 km. north-east of Lututuru, near end of road, 1600 m., in scrub, 17.2.1969, Lye 2052 (MHU).
Didinga Mountains: Lokwara (4° 40' N, 33° 27' E), durra field on black cotton soil, 29.9.1953, *Peers* "Lokwara 1" (K).
General habitat range: in a variety of lowland, medium-altitude and montane habitats, including, grassland, woodland and disturbed places.
General distribution: Senegal to Ethiopia and Somalia, south to South Africa; widespread in the tropics and subtropics of the Old World.

Phyllanthus muellerianus (O. Kuntze) Exell
FPS 2: 89 (1952); Jackson 1956: 351; FWTA 1,2: 385 (1958); FTEA, Euphorbiac. 1: 24 (1987); El Amin 1990: 139; UKWF: 104 (1994); KTSL: 218 (1994).
Imatong Mountains group, Sudan side: Kinyeti Valley, 18 km. south of Hiliu along Katire road, no alt., in teak plantation, 1.6.1984, *Kielland-Lund* 829 (C, NLH).

General habitat range: in lowland and medium-altitude grassland and woodland. According to JACKSON 1956 it occurs frequently at the Imatong Mountains in transitional vegetation from moist lowland woodland and forest west and north of the mountains.
General distribution: Guinée and Mali to Sudan, south to Angola, Zambia and Malawi.

Phyllanthus nummularifolius Poir.
FTA 6,1: 710 (1912); FS: 144 (1929); FPNA 1: 442 (1948); FPS 2: 90 (1952); FTEA, Euphorbiac. 1: 28 (1987); UKWF: 104 (1994).
Syn.: *Phyllanthus capillaris* Schumach. & Thonn.: FTA 6,1: 709 (1912); FPNA 1: 442 (1948); FWTA 1,2: 387 (1958); FE 2,2: 277 (1995).
Imatong Mountains group, Sudan side: Katire, 1300 m., burnt woodland, 9.2.1950, *Jackson* 1142 (BM); Katire to Gilo, near road to Itibol, 1400 m., wooded grassland with *Combretum molle, C. collinum, Entada abyssinica* and *Erythrina abyssinica,* the grasses *Pennisetum purpureum* and *Hyparrhenia rufa* dominant, 12.11.1980, *Friis & Vollesen* 173 (BR, C, EA, K, KHF); Kinyeti Valley, above Katire, along road to Gilo, at turn off to Itibol, 1650 m., wooded grassland with *Combretum molle, Cussonia arborea, Stereospermum kunthianum, Erythrina abyssinica, Entada abyssinica,* etc., 7.3.1982, *Friis & Vollesen* 1119 (BR, C, K, KHF); Itibol, 1550 m., path, 17.12.1935, *Thomas* 1613 (K).
General habitat range: in lowland, medium-altitude and montane grassland.
General distribution: Guinée and Sierra Leone to Sudan, south to South Africa; also in Madagascar, Mascarene Islands and Seychelles.

Phyllanthus ovalifolius Forssk.
FTEA, Euphorbiac. 1: 32 (1987); UKWF: 104 (1994); FE 2,2: 276 (1995); HYF: 186 (1997).
Syn.: *Phyllanthus guineensis* Pax: FPNA 1: 441 (1948); EL AMIN 1990: 138 {"Mt. Lotuko"}; KTSL: 218 (1994). *Phyllanthus lalambensis* Schweinf.: FTA 6,1: 698 (1912).
Imatong Mountains group, Sudan side: Katire to Gilo, near road forking off towards Itibol, 1500 m., secondary transitional forest with much *Harungana madagascariensis,* forest edge, 17.11. 1980, *Friis & Vollesen* 296 (BR, C, K, KHF); Gilo, at bridge on Ngairigi River, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* at forest edge, 17.2.1982, *Friis & Vollesen* 928 (BR, C, K, KHF).
Didinga Mountains: Mt. Lotuke, 1700 m., secondary scrub, 31.3.1950, *Jackson* 1365 (BM); Mt. Lotuke, Char, 1830 m., at edge of valley forest, 19.4.1939, *Myers* 10,915 (K, WM).
General habitat range: in medium-altitude or montane evergreen bushland and at forest edges.
General distribution: Nigeria to Ethiopia, south to Angola, Zambia, Zimbabwe and Mozambique; also in tropical Arabia.

Phyllanthus sepialis Muell. Arg.
FTA 6,1: 707 (1912); FTEA, Euphorbiac. 1: 41 (1987); UKWF: 105 (1994); KTSL: 219 (1994); FE 2,2: 278 (1995).
Imatong Mountains group, Uganda side: Lututuru, at Aringa River, 1070 m., *Combretum* woodland in gully, 27.4.1947, *Dawkins* 255 (FHO).
Didinga Mountains: slopes of Mt. Lotuke, 1470 m., eroded hillside with *Terminalia brownii* woodland, 31.5.1950, *Jackson* 1368 (BM).
General habitat range: in medium-altitude end montane evergreen bushland.
General distribution: Uganda and South Sudan to Ethiopia, south to Tanzania.

Ricinodendron Muell. Arg.

Ricinodendron heudelotii (Baill.) Heckel
FPNA 1: 473 (1948); ITU: 138 (1952); FPS 2: 95 (1952); JACKSON 1956: 353 {Talanga, Lotti};

FCB 8,1: 116 (1962); FWTA 1,2: 393 (1958); EL AMIN 1990: 140; KTSL: 220 (1994).
subsp. **africanum** (Muell. Arg.) J. Léonard
FTEA, Euphorbiac. 1: 326 (1987).
Syn.: *Ricinodendron africanum* Muell. Arg.: FTA 6,1.: 745 (1912).
Imatong Mountains group, Sudan side: no specimen seen; recorded by JACKSON 1956 from high forest at Talanga and Lotti.
General habitat range: in lowland and medium-altitude forest.
General distribution: Guinée and Guinea Bissau to South Sudan and Uganda, south to Angola, Tanzania and Mozambique. Species as a whole also in Kenya and in West Africa from Guinea Bissau to Ghana.

Ricinus L.

Ricinus communis L.
FTA 6,1: 945 (1912); FS: 156 (1929); FPS 2: 96 (1952); FWTA 1,2: 410 (1958); WICKENS 1976: 105; FTEA, Euphorbiac. 1: 322 (1987); EL AMIN 1990: 140; FSo 1: 283 (1993); KTSL: 221 (1994); FE 2,2: 293 (1995); HYF: 191 (1997).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., open woodland, 6.1.1979, *Shigeta* 35 (EA).
Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).
General habitat range: cultivated and escaped in disturbed lowland and medium-altitude habitats.
General distribution: Senegal to Somalia, south to South Africa; cultivated and escaped throughout the tropics and the warm temperate countries.

Sapium P. Browne

Sapium ellipticum (Hochst. ex Krauss) Pax
FPNA 1: 474 (1948); ITU: 140 (1952); FPS 2: 96 (1952); FWTA 1,2: 415 (1958); FCB 8,1: 153 (1962); FTEA, Euphorbiac. 1: 390 (1987); EL AMIN 1990: 140; KTSL: 221 (1994); FE 2,2: 328 (1995).
Syn.: *Sapium mannianum* (Muell. Arg.) Benth. ex Pax: FTA 6,1: 1016 (1912).
Imatong Mountains group, Sudan side: Lotti, 1600 m., in forest with *Albizia gummifera*, 13.2.1951, *Jackson* 1714 (FHO); riverine forest at Issore, 1430 m., 21.12.1935, *Thomas* 1728 (K); Upper Talanga Tea Project, 1800 m., forest, 11.1981, *Howard* UTT 2 (BR, C, EA, FT, K); Katire to Gilo, near road forking off towards Itibol, 1500 m., secondary transitional forest with much *Harungana madagascariensis*, 17.11.1980, *Friis & Vollesen* 299 (C, K, KHF).
General habitat range: in medium-altitude and montane forest.
General distribution: Guinée to Ethiopia, south to Angola and South Africa (Natal).

Suregada Roxb. ex Rottler

Suregada procera (Prain) Croizat
FCB 8,1: 125 (1962); FTEA, Euphorbiac. 1: 378 (1987); KTSL: 223 (1994); FE 2,2: 317 (1995).
Syn.: *Gelonium procerum* Prain: FTA 6,1: 948 (1912); ITU: 129 (1952); JACKSON 1956: 353 {Talanga}.
Imatong Mountains group, Sudan side: Gilo, 1800 m., upland rain forest with *Albizia*, *Macaranga*, *Croton*, and *Ocotea*, 15.11.1980, *Friis & Vollesen* 246 (BR, C, EA, K, KHF).
General habitat range: in lowland, medium-altitude and montane forest.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Zambia, Zimbabwe and South Africa (Transvaal, Natal).

Synadenium Boiss.

Synadenium grantii Hook. f.
FTA 6,1: 468 (1911); FS: 134 (1929); ITU: 142 (1952); FPS 2: 98 (1952) {Imatong Mountains}; FTEA, Euphorbiac. 2: 535 (1988); EL AMIN 1990: 141 {Imatong Mountains}; KTSL: 224 (1994).
Imatong Mountains group, Sudan side: without further locality, no alt. or date, *Trought* s.n. (according to Aylmer [unpublished], specimen not traced).
General habitat range: in dry woodland on rocky slopes.
General distribution: East Congo [previously Zaire], South Sudan, Uganda, Kenya and Tanzania.
Note. According to EL AMIN 1990 this species occurs on "rocky hills in gallery forest in Equatoria (Imatong Mts., Yei)".

Tragia L.

Tragia brevipes Pax
FTA 6,1: 983 (1913); FPNA 1: 470 (1948); FTEA, Euphorbiac. 1: 302 (1987); UKWF: 107 (1994); FE 2,2: 307 (1995).
Imatong Mountains group, Sudan side: Katire, 900 m., climbing in *Albizia zygia* woodland, partly fire-protected, 10.1948, *Jackson* 382 (BM); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber along trail, 4.12.1980, *Friis & Vollesen* 694 (BR, C, K, KHF); between Katire and Gilo, 1700 m., 26.12.1983, *Kielland-Lund* 478 (C, NLH); Loyaru, 1920 m., in secondary scrub, 28.12.1935, *Thomas* 1771 (BM, K); upper Kinyeti Valley, near Gilo Pool (4° 02' N, 32° 50' E), no alt., 15.1.1984, *Kielland-Lund* 658 (C, NLH); Gilo, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* at edge of forest, 11.12.1980, *Friis & Vollesen* 815 (BR, C, EA, K, KHF).
Didinga Mountains: Longumu River north of Chukudum (4° 21' N, 33° 21' E), 900 m., 20.12.1983, *Kielland-Lund* 405 (NLH).
General habitat range: in lowland, medium-altitude and montane evergreen bushland and at forest edges.
General distribution: Cameroon to Ethiopia and Somalia, south to Zimbabwe.

Tragia tenuifolia Benth.
FTA 6,1: 973 (1913); FPNA 1: 470 (1948); FWTA 1,2: 412 (1958); FTEA, Euphorbiac. 1: 295 (1987).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber in forest, 1.12.1980, *Friis & Vollesen* 601 (C); Talanga to Upper Talanga, 1000 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber at trail in forest, 7.12.1980, *Friis & Vollesen* 758 (BR, C, EA, K, KHF).
General habitat range: in clearings and along edges of lowland and medium-altitude forest.
General distribution: Guinée and Sierra Leone to South Sudan and Uganda, south to Zimbabwe.

Tragia volubilis L.
FTA 6,1: 969 (1913); FPNA 1: 469 (1948); FWTA 1,2: 411 (1958); FTEA, Euphorbiac. 1: 294 (1987).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber in forest, 6.12.1980, *Friis & Vollesen* 722 (C, K, KHF).
General habitat range: in clearings and along edges of lowland and medium-altitude forest.
General distribution: Sierra Leone to South Sudan, south to Congo [previously Zaire] and Zimbabwe.

Tragiella Pax & K. Hoffm.

Tragiella natalensis (Sond.) Pax & K. Hoffm.
FPS 2: 100 (1952) {Didinga Mountains}; FTEA, Euphorbiac. 1: 318 (1987); UKWF: 107 (1994).
Syn.: *Tragia natalensis* Sond.: FTA 6,1: 974 (1913).
Imatong Mountains group, Sudan side: Mt. Itibol, 1960 m., 14.6.1939, *Andrews* 1981 (K).
Didinga Mountains: Iwowa, 1620 m., in khor, creeper, 22.4.1939, *Myers* 11,030 (K).
General habitat range: in lowland and medium-altitude evergreen bushland and at forest edges.
General distribution: South Sudan and Uganda to Kenya, south to South Africa (Transvaal, Natal).

Order 43. **Rosales** Perleb

Fam. 81. **Rosaceae** Juss.

Alchemilla L.

Alchemilla abyssinica Fresen.
FTA 2: 378 (1871); FE 3: 40 (1989).
Syn.: *Alchemilla rothii* Oliv.: FTA 2: 378 (1871); FTEA, Rosac.: 17 (1960); UKWF: 113 (1994).
Imatong Mountains group, Sudan side: near Gilo Forest Project Centre, 1900 m., 26.12.1983, *Kielland-Lund* 464 (C, NLH); between Gilo and Bushbuck Hill, 2000 m., clearing in *Cupressus lusitanica* plantation, with regrowth of *Albizia-Croton-Macaranga* forest, 10.11.1980, *Friis & Vollesen* 122 (C, K).
General habitat range: in damp places in medium-altitude and montane forest, bamboo-thicket and evergreen (ericaceous) bushland.
General distribution: Ethiopia, South Sudan, Uganda, Kenya.

Alchemilla argyrophylla Oliv.
FCB 3: 13 (1952); Hedberg 1957: 111; FTEA, Rosac.: 7 (1960); El Amin 1990: 143; UKWF: 112 (1994); KTSL: 226 (1994).
subsp. **argyrophylla**
Hedberg 1957: 111; FTEA, Rosac.: 8 (1982).
Imatong Mountains group, Sudan side: summit of Mt. Kinyeti, 3000 m., in ericaceous scrub, 28.3.1949, *Jackson* 645 (KHF); summit of Mt. Kinyeti, 3170 m., 21.2.1976, *Howard* IM 55 (KHF); Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 839 (C, K).
General habitat range: in montane evergreen bushland.
General distribution: South Sudan, Kenya and Tanzania. Species as a whole also in Uganda and East Congo [previously Zaire].

Alchemilla cryptantha Steud. ex A. Rich.
FTA 2: 377 (1871); FPNA 1: 246 (1948); FCB 3: 7 (1952); FPS 2: 101 (1952) {Imatong Mountains, Itibol}; Hedberg 1957: 105; FWTA 1,2: 424 (1958); FTEA, Rosac.: 15 (1960); FC 20: 197 (1978); FE 3: 39 (1989); UKWF: 112 (1994); HYF: 137 (1997).
Syn.: *Alchemilla tenuicaulis* Hook. f.: FTA 2: 378 (1871).
Imatong Mountains group, Sudan side: Mt. Itibol, 1950 m., 15.6.1939, *Andrews* 2011 (K, WM); ridge leading to the summit of Mt. Kinyeti, 3000 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, on wetter side of rocks, where earth accumulates, 22.3.1982, *Friis & Vollesen* 1277 (C, K).
Imatong Mountains group, Uganda side: Langia, 2740 m., mountain grassland, 4.1943, *Purseglove* 1408 (EA).
General habitat range: in montane grassland and in forest clearings.
General distribution: Cameroon to Ethiopia,

south to South Africa (Transvaal); also in Madagascar and tropical Arabia.

Alchemilla ellenbeckii Engl.
HEDBERG 1957: 103; FTEA, Rosac.: 12 (1960); FE 3: 38 (1989); UKWF: 112 (1994).
Syn.: *Alchemilla mildbraedii* Engl.: FCB 3: 8 (1952).
Imatong Mountains group, Sudan side: Lomuleng, 2440 m., swamp, 29.12.1935, *Thomas* 1803 (K).
General habitat range: in montane grassland often in marshes or along streams.
General distribution: South Sudan and Ethiopia to East Congo [previously Zaire] (Ruwenzori), Uganda and North Tanzania.

Hagenia J.F. Gmel.

Hagenia abyssinica (Bruce) J.F. Gmel.
FPNA 1: 254 (1948); FCB 3: 16 (1952); FPS 2: 103 (1952) {Imatong Mountains}; FTEA, Rosac.: 43 (1960); FE 3: 43 (1989); EL AMIN 1990: 143; SOMMERLATTE 1990: 238; KTSL: 227 (1994).
Syn.: *Brayera anthelmintica* Kunth: CHIPP 1929: 189. *Hagenia "anthelmintica* (Bruce) J.F. Gmel.": ITU: 332 (1952).
Imatong Mountains group, Sudan side: without further locality, no alt., 12.4.1933, *Smith* 20 (K, KHF); Bushbuck Hill, 2200 m., clump of this species in open grassland, 5.1984, *Sommerlatte* 76 (EA); Kipia, 2660 m., in ravine forest, a 18 m. high tree, with *Gnidia glauca, Hypericum revolutum,* and *Podocarpus latifolius* it forms most of the ravine forest, 11.2.1929, *Chipp* 93 (K, KHF, WM); Kipia, 2680 m., upper montane forest, 12.1938, *MacDonald* 15 (BM); below Lomuleng, 2260 m., 25.7.1939, *Myers* 11,570 (K); Lomuleng, 2440 m., in forest, 30.12.1935, *Thomas* 1888 (BM, K).
Imatong Mountains group, Uganda side: without further locality, 2380 m., 4.1938, *Eggeling* 3536 (EA, K); Lomwaga Mts., near summit, 2740 m., forming woodland, 5.4.1945, *Hummel* 771 (FHO).
General habitat range: in montane forest, often forming the upper forest boundary, or in montane woodland or bushland. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a common tree between 1800 and 2900 m.
General distribution: East Congo [previously Zaire], South Sudan and Ethiopia through eastern Africa, south to Zambia and Malawi.

Prunus L.

Prunus africana (Hook. f.) Kalkm.
FC 20: 209 (1978); FE 3: 41 (1989); SOMMERLATTE 1990: 304; KTSL: 227 (1994).
Syn.: *Pygeum africanum* Hook. f.: FTA 2: 373 (1871); FPNA 1: 256 (1948); JACKSON 1951: 340, Didinga Mts., Mt. Lotuke; FCB 3: 32 (1952); ITU: 335 (1952); FPS 2: 106 (1952) {Imatong Mountains, Itibol}; FTEA, Rosac.: 45 (1960); EL AMIN 1990: 145.
Imatong Mountains group, Sudan side: without further locality, 2130 m., 17.2.1976, *Howard* IM 50 (EA, KHF), & 2290 m., 10.2.1976, *Howard* IM 93 (KHF); Upper Talanga (3° 59' N, 32° 48' E), 2000 m., in mixed *Podocarpus latifolius* forest with *Olea capensis* subsp. *hochstetteri, Syzygium guineense* subsp. *afromontanum, Maytenus undata,* and *Vepris nobilis,* 6.3.1984, *Sommerlatte* 19 (EA); Itibol, 1860 m., in forest, 19.12.1935, *Thomas* 1682 (BM, K); Itibol, 1980 m., 19.8. 1940, *Myers* 13,426 (?K, not traced); near Itibol, 2040 m., *Podocarpus latifolius-Olea* forest, 19.8. 1940, *Myers* 13,431 (K); below Lomuleng, 1980 m., secondary forest, 29.7.1939, *Myers* 11,717 (K, WM).
Imatong Mountains group, Uganda side: Lomwaga, 1830-2140 m., *Podocarpus latifolius-Syzygium* forest, 5.4.1945, *Greenway & Hummel* 7283 (EA, FHO, K, MHU).

General habitat range: in medium-altitude and montane forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in medium-altitude forest, in *Albizia* forest and in mixed *Podocarpus latifolius* forest.
General distribution: Cameroon to Ethiopia, south to Angola and South Africa (Natal, Cape Prov.).

Rubus L.

Rubus apetalus Poir.
FTA 2: 374 (1871); FPNA 1: 241 (1948); FWTA 1,2: 426 (1958); FTEA, Rosac.: 39 (1960); FE 3: 34 (1989); UKWF: 114 (1994); KTSL: 228 (1994); HYF: 136 (1997).
Syn.: *Rubus rigidus* Sm.: FTEA, Rosac.: 33 (1960).
Imatong Mountains group, Sudan side: without further locality, 1520-1830 m., frequent, 12.6. 1939, *Andrews* 1859 (K); just outside Gilo at road to Itibol, 1900 m., *Harungana madagascariensis* thicket with tangle of *Rubus spp.*, 14.3. 1982, *Friis & Vollesen* 1216 (C, K, KHF).
Didinga Mountains: between Iwowa and Nagichot, 1920 m., in grazed secondary-growth grassland, 24.4.1939, *Myers* 11,087 (K, WM).
General habitat range: in medium-altitude and montane forest, especially in clearings and along edges, and in evergreen bushland.
General distribution: Nigeria and Cameroon to Ethiopia, south to Tanzania and Malawi; also in Madagascar and Mascarene Islands, and possibly also in tropical Arabia.

Rubus pinnatus Willd.
FTA 2: 374 (1871); FPNA 1: 241 (1948); FCB 3: 26 (1952); FWTA 1,2: 426 (1958); FTEA, Rosac.: 37 (1960); FC 20: 217 (1978); UKWF: 113 (1994); KTSL: 229 (1994).
var. **afrotropicus** (Engl.) C. E. Gust.
FCB 3: 27 (1952); FTEA, Rosac.: 38 (1960).
Imatong Mountains group, Sudan side: just outside Gilo at road to Itibol, 1900 m., *Harungana madagascariensis* thicket with tangle of *Rubus spp.*, 14.3.1982, *Friis & Vollesen* 1215 (C, K, KHF); Itibol to Issore, near bridge on Kinyeti River, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 11.11.1980, *Friis & Vollesen* 150 (C, K, KHF).
General habitat range: in medium-altitude and montane forest, especially along edges and in clearings, and in evergreen bushland.
General distribution: Guinée to Uganda and Kenya, southern limit not known. Species as a whole also in South Africa, St. Helena and Ascension Islands.

Rubus steudneri Schweinf.
FCB 3: 22 (1952); FPS 2: 106 (1952) {Imatong Mountains}; FTEA, Rosac.: 26 (1960); FE 3: 34 (1989); EL AMIN 1990: 145; UKWF: 113 (1994); KTSL: 230 (1994).
var. **aberensis** Engl. ex C. E. Gust.
FCB 3: 22 (1952); FPS 2: 106 (1952) {Imatong Mountains}; FTEA, Rosac.: 26 (1960); KTSL: 230 (1994).
Imatong Mountains group, Sudan side: without further locality, 1830 m., 2.1936, *Johnston* 1457 (K); Bushbuck Hill, east of Itibol, 2100 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum,* 21.11.1980, *Friis & Vollesen* 397 (C, K, KHF); Lowiliwili (3° 58' N, 32° 53' E), 2500 m., open, upper *Podocarpus latifolius* forest, 14.11.1949, *Jackson* 903 (BM); Mt. Kinyeti, 3050 m., ravines with *Podocarpus latifolius,* 10.2.1929, *Chipp* 61 (K); Kipia, 2680 m., scrub, 12.1938, *MacDonald* 19 (BM); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 58' N, 32° 54' E), 3100 m., in upper elfin forest belt, 10.6.1984, *Kielland-Lund* 912 (NLH); near summit of Mt. Kinyeti, no alt., 24.4.1950, *Jackson* 1422 (KHF); on ridge leading to summit of Mt. Kinyeti, 3000 m., upper edge of *Erica arborea* scrub, 22.3.1982, *Friis & Vollesen* 1275 (C).

General habitat range: in montane forest, especially along edges and in clearings, and evergreen bushland.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Tanzania. Species as a whole with the same general distribution.

Fam. 82. **Chrysobalanaceae** R. Br.

Parinari Aubl.

Parinari excelsa Sabine
FTA 2: 367 (1871); FPS 2: 106 (1952) {Lotti}; JACKSON 1956: 353 {Talanga, Lotti}; FWTA 1,2: 429 (1958); FTEA, Rosac.: 49 (1960); FC 20: 130 (1978); FG 24: 130 (1978); SOMMERLATTE 1990: 160; EL AMIN 1990: 144.
subsp. **holstii** (Engl.) R. Graham
FTEA, Rosac.: 50 (1960).
Syn.: *Parinari holstii* Engl.: FCB 3: 59 (1952); ITU: 333 (1952).
Imatong Mountains group, Sudan side: Lotti, no alt., forest, 5.8.1939, *Myers* 11,808 (K, WM); Talanga, 1000 m., closed forest, 6.4.1950, *Jackson* 1388 (FHO).
General habitat range: in lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in lowland forest.
General distribution: Senegal and Sierra Leone to South Sudan, Uganda and Kenya, south to Angola, Zambia, Malawi and Tanzania.

Fam. 83. **Dichapetalaceae** Baill.
(Syn.: *Chailletiaceae* R. Br.)

Dichapetalum Thouars

Dichapetalum madagascariense Poir.
FTEA, Dichapetalac.: 10 (1988); FG 32: 122 (1991); KTSL: 232 (1994).
Imatong Mountains group, Sudan side: Torit district, 10.6.1939, *Andrews* 1773 (K).
General habitat range: in lowland and medium-altitude forest.
General distribution: Senegal to South Sudan, south to Angola and Mozambique; also in Madagascar and on the Comoro Islands.

Dichapetalum ugandense M.B. Moss
FPNA 1: 434 (1948); FCB 7: 324 (1958); FTEA, Dichapetalac.: 15 (1988).
Imatong Mountains group, Sudan side: Talanga, 1000 m., forest, along stream, 5.4.1950, *Jackson* 1374 (K, WM).
General habitat range: in lowland and medium-altitude forest.
General distribution: Congo [previously Zaire], South Sudan, Uganda and Tanzania.

Tapura Aubl.

Tapura fischeri Engl.
FPNA 1: 434 (1948); ITU: 84 (1952); FPS 2: 107 (1952); JACKSON 1956: 354 {Talanga}; FCB 7: 347 (1958); FWTA 1,2: 439 (1958); FTEA, Dichapetalac.: 16 (1988); FE 3: 47 (1989); EL AMIN 1990: 146; FG 32: 206 (1991); KTSL: 233 (1994).
Imatong Mountains group, Sudan side: south of Torit, original data lost, *Jackson* 1490 (KHF); Talanga, 900 m., forest undergrowth, 11.5. 1949, *Jackson* 743 (FHO); Talangà, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* understorey tree, 27.11.1980, *Friis & Vollesen* 508 (BR, C, EA, K, KHF).
General habitat range: in lowland forest, sometimes riverine.
General distribution: Ivory Coast to South West Ethiopia, south to Mozambique and South Africa (Natal).

Order 44. **Fabales** Bromhead

Fam. 84. **Fabaceae** Lindl.
(*Leguminosae* Juss., nom. altern.)

subfam. **Caesalpinioideae** DC.

Afzelia Sm.

Afzelia africana Pers.
FTA 2: 302 (1871); FCB 3: 355 (1952); ITU: 55 (1952); FPS 2: 110 (1952); FWTA 1,2: 459 (1958); FTEA, Legum.-Caesalp.: 125 (1967); FC 9: 114 (1970); EL AMIN 1990: 1991.
Syn: *Pahudia africana* (Pers.) Smith: FS: 164 (1929).
Imatong Mountains group, Sudan side: near Molongori, 750 m., 11.6.1939, *Andrews* 1811 (K); Kinyeti Valley, Hiliu, near compound, 700 m., 30.11.1983, *Kielland-Lund* 116 (C, NLH); Hiliu, at the bank of Kinyeti River, no alt., 14.3.1984, *Kielland-Lund* 1014 (C, NLH); c. 10 km. north of Katire, 850 m., rocky woodland with *Combretum collinum, C. molle* and *Annona senegalensis*, 3.3.1982, *Friis & Vollesen* 1086 (C, K); above Katire, on rocky hillside or bare rock, 10.2.1950, *Jackson* 1150 (FHO, KHF).
General habitat range: in lowland and medium-altitude deciduous woodland.
General distribution: Senegal to South Sudan and Uganda.

Cassia L.

Cassia mannii Oliv.
FTA 2: 272 (1871); FCB 3: 499 (1952); ITU: 59 (1952); FPS 2: 116 (1952) {Laboni}; JACKSON 1956: 354 {Laboni}; FWTA 1,2: 452 (1958); FTEA, Legum.-Caesalp.: 58 (1967); FG 15: 56 (1968); FC 9: 53 (1970); EL AMIN 1990: 197.
Imatong Mountains group, Sudan side: no specimen seen; recorded by JACKSON 1956 from forest at Laboni.
General habitat range: in lowland and medium-altitude forest.
General distribution: Ivory Coast to South Sudan and Uganda, south to Gabon and Congo [previously Zaire].

Chamaecrista (L.) Moench

Chamaecrista absus (L.) Irwin & Barneby
FE 3: 64 (1989); FSo 1: 354 (1993); UKWF: 115 (1994).
Syn.: *Cassia absus* L.: FTA 2: 279 (1871); FS: 162 (1929); FPNA 1: 374 (1948); FPS 2: 118 (1952); FCB 3: 507 (1952); FWTA 1,2: 453 (1958); FTEA, Legum.-Caesalp.: 81 (1967); FC 9: 59 (1970); WICKENS 1976: 105; HYF: 164 (1997).
Imatong Mountains group, Sudan side: Kinyeti Valley, village about 500 m. south west of Hiliu, no alt., in savannah, 7.6.1984, *Kielland-Lund* 880 (C, NLH).
General habitat range: in a variety of lowland and medium-altitude woodland and grassland associations, but most frequently on river banks, waste places, ans as a weed in cultivated areas.
General distribution: Senegal to Ethiopia and Somalia, south to Angola, Zimbabwe and Mozambique; widespread in tropical Asia, including tropical Arabia, and in Australia.

Chamaecrista kirkii (Oliv.) Standl.
FE 3: 65 (1989); UKWF: 115 (1994).
Syn.: *Cassia kirkii* Oliv. var. *kirkii*: FTA 2: 281 (1871); FCB 3: 525 (1952); FWTA 1,2: 452 (1958); FTEA, Legum.-Caesalp.: 92 (1967); FG 15: 52 (1968); FC 9: 58 (1970).
Imatong Mountains group, Sudan side: Gilo, 1620 m., in wooded grassland with *Acacia abyssinica*, 24.6.1947, *MacLeay* 38 (BM).
General habitat range: in lowland, medium-alti-

tude and montane grassland, especially damp places.
General distribution: Sierra Leone to South Sudan, Uganda and Kenya, south to Zambia, Malawi and Zimbabwe.

Chamaecrista mimosoides (L.) Greene
FE 3: 66 (1989); FSo 1: 356 (1993); UKWF: 115 (1994).
Syn.: *Cassia mimosoides* L.: FTA 2: 280 (1871), pro parte; FS: 162 (1929); FPNA 1: 377 (1948); FCB 3: 514 (1952); FPS 2: 121 (1952); FWTA 1,2: 452 (1958); FTEA, Legum.-Caesalp.: 100 (1967); FG 15: 51 (1968); FC 9: 56 (1970); WICKENS 1976: 105; HYF: 165 (1997).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 3.1.1984, *Kielland-Lund* 555 (C, NLH); hill above bridge on Ngairigi River, 1680 m., in short grassland, 15.6.1953, *Prowse* 288 (KHU); Mt. Itibol, 1960 m., 14.6.1939, *Andrews* 1990 (K).
Didinga Mountains: Chukudum Regional District Centre (4° 24' N, 33° 29' E), no alt., 13.6.1984, *Kielland-Lund* 951 (C, NLH).
General habitat range: in lowland, medium-altitude and montane woodland, wooded grassland and grassland.
General distribution: Senegal to Ethiopia and South Somalia, south to South Africa; also in tropical Asia. including tropical Arabia.

Chamaecrista nigricans (Vahl) Greene
FE 3: 65 (1989); UKWF: 115 (1994).
Syn.: *Cassia nigricans* Vahl: FTA 2: 280 (1871); FS: 162 (1929); FCB 3: 518 (1952); FPS 2: 121 (1952); FWTA 1,2: 452 (1958); FTEA, Legum.-Caesalp.: 81 (1967); FC 9: 58 (1970); WICKENS 1976: 106; HYF: 165 (1997).
Imatong Mountains group, Sudan side: Loa, Molitokoro village north of Kerepi (3° 55' N, 31° 55' E), no alt., 5.6.1984, *Kielland-Lund* 861 (C, NLH); Kinyeti Valley, Hiliu, 700 m., in compound, 28.11.1983, *Kielland-Lund* 64 (C, NLH).
General habitat range: in lowland, medium-altitude and montane grassland, a weed in cultivations, and along roadsides on dry and sandy soil.
General distribution: Senegal to Ethiopia and South Somalia, south to Angola; also in tropical Arabia and India.

Cordyla Lour.

Cordyla richardii Planch. ex Milne-Redh.
FPS 2: 177 (1952); FTEA, Legum.-Caesalp.: 223 (1967); EL AMIN 1990: 225.
Syn.: [*Cordyla africana* auct., non Lour.: FS: 209 (1929)].
Imatong Mountains group, Sudan side: Molongori, 800 m., in crack in the rock, 11.11.1948, *Jackson* 508 (FHO, KHF); at the northernmost point of the continuous mountain chain, just south-east of Ngarama on track to Molongori, 700 m., on rocky outcrop with *Sterculia setigera, Cordyla richardii, Ficus arbutilifolia,* etc., 13.3. 1982, *Friis & Vollesen* 1186 (BR, C, K, KHF); Kinyeti Valley, Hiliu, near compound, 700 m., 30.11.1983, *Kielland-Lund* 117 (C, NLH).
Imatong Mountains group, Uganda side: near Agoro, summit of arid hills, no date, *Eggeling* 846 (K); above Agoro, 2.1938, *Eggeling* 3508 (K); above Agoro on Agoro-Logoforok path, 1070 m., on bare rock with *Lannea fulva, Grewia, Combretum molle, Dalbergia melanoxylon,* etc., 9.10.1947, *Dawkins* 282 (FHO, MHU).
General habitat range: in lowland and medium-altitude deciduous woodland on rocky outcrops.
General distribution: South Sudan and Uganda.

Dialium L.

Dialium excelsum Steyaert
FCB 3: 540 (1952); FTEA, Legum.-Caesalp.: 104 (1967); EL AMIN 1990: 211.

Syn.: [? *Dialium* sp. sensu FPS 2: 123 (1952). *Dialium bipindense* auct., non Harms: ITU: 65 (1952); JACKSON 1956: 353 {Lotti}].
Imatong Mountains group, Sudan side: no specimen seen; recorded by JACKSON 1956 from lowland forest at Lotti.
General habitat range: in lowland forest.
General distribution: South Sudan, Congo [previously Zaire] and Uganda.

Erythrophleum Afzel. ex G. Don

Erythrophleum suaveolens (Guill. & Perr.) Brenan
ITU: 66 (1952); FTEA, Legum.-Caesalp.: 18 (1967); FC 9: 320 (1970); EL AMIN 1990: 211; SOMMERLATTE 1990: 158; KTSL: 243 (1994).
Syn.: *Erythrophleum guineense* G. Don: FS: 166 (1929); FCB 3: 243 (1952); FPS 2: 123 (1952); JACKSON 1956: 353 {Talanga, Lotti, Laboni}; FWTA 1,2: 484 (1958).
Imatong Mountains group, Sudan side: Farajok (3° 51' N, 32° 28' E), 900 m., near stream in gallery forest, 29.1.1949, *Jackson* 613 (FHO, KHF); Lotti, no alt., forest, 27.2.1939, *Myers* 10,553 (K, WM); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 1.12.1980, *Friis & Vollesen* 591 (C, KHF); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 4.12. 1980, *Friis & Vollesen* 680 (C, KHF); Talanga, 1010 m., tall tree in forest, 27.5.1950, *Ali* 34 (KHU).
General habitat range: in lowland and medium-altitude forest and riverine forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in lowland forest, it is particularly common in gallery forest.
General distribution: Senegal to South Sudan, south to Zambia, Zimbabwe and Mozambique.

Mildbraediodendron Harms

Mildbraediodendron excelsum Harms
FPNA 1: 380 (1948); FCB 3: 553 (1952); FPS 2: 222 (1952) {Lotti}; JACKSON 1956: 353 {Talanga, Lotti, Laboni}; FWTA 1,2: 448 (1958); FTEA, Legum.-Caesalp.: 225 (1967); FC 9: 306 (1970); EL AMIN 1990: 237; SOMMERLATTE 1990: 150.
Imatong Mountains group, Sudan side: Lotti, no alt., 15.4.1933, *Smith* 35 (K, KHF); Lotti, near rest house, no alt., forest, 8.6.1939, *Andrews* 1698 (K, WM); Lotti, 1000 m., in closed forest, 17.1.1949, *Jackson* 591 (FHO, KHF).
General habitat range: in lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in the canopy of lowland forest.
General distribution: Ghana to South Sudan, south to Congo [previously Zaire] and Uganda.

Piliostigma Hochst.

Piliostigma thonningii (Schumach.) Milne-Redh.
ITU: 67 (1952); FPS 2: 127 (1952); JACKSON 1956: 349; FWTA 1,2: 444 (1958); FTEA, Legum.-Caesalp.: 206 (1967); FG 15: 26 (1968); FC 9: 24 (1970); FE 3: 68 (1989); EL AMIN 1990: 217; SOMMERLATTE 1990: 114; KTSL: 246 (1994); HYF: 166 (1997).
Syn.: *Bauhinia reticulata* DC.: FS: 163 (1929). *Piliostigma reticulata* (DC.) Hochst.: FPS 2: 127 (1952); FWTA 1,2: 444 (1958); WICKENS 1976: 106. *Bauhinia thonningii* Schumach.: FCB 3: 275 (1952).
Imatong Mountains group, Sudan side: Lotti, no alt., 1979, *Shigeta* 55 (?EA, identified and listed by M.G. Gilbert, not traced); Katire, 910 m., in woodland, 16.12.1935, *Thomas* 1602 (BM, K); between Palwar and Talanga (3° 53' N, 32° 39' E), 1000 m., *Combretum* wooded grassland and open woodland, 28.3.1984, *Sommerlatte* 35 (EA).

Didinga Mountains: Boya Hill, Kimatong, 700 m., between rocks, 9.1.1985, *Fukui* 84-151 (EA).
General habitat range: in lowland and medium-altitude wooded grassland and deciduous woodland. According to JACKSON 1956 it occurs at the Imatong Mountains in moist woodland west and north of the mountains; according to SOMMERLATTE 1990 it occurs as a small tree in lowland woodland, and often as a pioneer species on disused cultivated land.
General distribution: Senegal to Ethiopia, south to Namibia and South Africa (Transvaal); also in tropical Arabia.

Pterolobium R. Br. ex Wight & Arn.

Pterolobium stellatum (Forssk.) Brenan
FTEA, Legum.-Caesalp.: 42 (1967); FE 3: 54 (1989); EL AMIN 1990: 219; FSo 1: 347 (1993); UKWF: 116 (1994); KTSL: 247 (1994); HYF: 163 (1997).
Syn.: *Pterolobium exosum* (J.F. Gmel.) Bak. f.: FCB 3: 256 (1952); FPS 2: 127 (1952).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., open woodland, 6.1.1979, *Shigeta* 43 (EA); above Katire, near waterfall on Kinyeti River, 1200 m., in forest regrowth with *Syzygium*, no date, *Jackson* 376 (FHO, KHF); Gilo, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* climber at forest edge, 21.11.1980, *Friis & Vollesen* 399 (C).
Didinga Mountains: North of Duguru village, Nagichot (4° 17' N, 33° 35' E), 2000 m., 18.12.1983, *Kielland-Lund* 375 (NLH); at rocks north-east of Chukudum (4° 15' N, 33° 27' E), 1100 m., 21.12.1983, *Kielland-Lund* 429 (C, NLH).
General habitat range: in medium-altitude and montane dry evergreen forest and evergreen bushland.
General distribution: Sudan, Ethiopia and North Somalia south to South Africa (Transvaal); also in tropical Arabia.

Senna Miller

Senna bicapsularis (L.) Roxb.
FE 3: 60 (1989); KTSL: 249 (1994).
Syn.: *Cassia bicapsularis* L.: FCB 3: 511 (1952); FWTA 1,2: 455 (1958); FTEA, Legum.-Caesalp.: 71 (1967).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (31°59'E & 3°48'N), 800 m., 4.1. 1984, *Kielland-Lund* 581 (C, NLH).
General habitat range: in lowland and medium-altitude secondary bushland and old cultivations, often used as a hedge-plant and naturalised.
General distribution: indigenous in the West Indies and South America, now cultivated and naturalised throughout the tropics.

Senna didymobotria (Fresen.) Irwin & Barneby
FE 3: 61 (1989).
Syn.: *Cassia didymobotria* Fresen.: FS: 162 (1929); FPNA 1: 373 (1948); FCB 3: 504 (1952); ITU: 59 (1952); FTEA, Legum.-Caesalp.: 66 (1967); EL AMIN 1990: 197; KTSL: 249 (1994): HYF: 164 (1997).
Imatong Mountains group, Sudan side: Palotaka, 900 m., woodland with *Albizia zygia*, 31.10.1949, *Jackson* 880 (FHO, KHF).
Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).
General habitat range: in lowland deciduous bushland and wooded grassland.
General distribution: Congo [previously Zaire] to Ethiopia, south to Angola, Zambia, Malawi, Zimbabwe and Mozambique; recently introduced to tropical Arabia.

Senna obtusifolia (L.) Irwin & Barneby
FE 3: 60 (1989); FSo 1: 351 (1993); UKWF: 114 (1994); KTSL: 249 (1994).
Syn.: *Cassia obtusifolia* L.: FTEA, Legum.-Caesalp.: 77 (1967); FG 15: 53 (1968); FC 9: 64 (1970); WICKENS 1976: 106; EL AMIN 1990: 199;

HYF: 165 (1997). [*Cassia tora* auct., non L.: FTA 2: 116 (1871); FS: 160 (1929)].
Imatong Mountains group, Sudan side: Palotaka, no alt., 1979, *Shigeta* 5 (?EA, identified and listed by M.G. Gilbert, not traced); Kinyeti Valley, Hiliu, above the compound, 700 m., 30.11.1983, *Kielland-Lund* 115 (C, NLH).
Didinga Mountains: 8 km. south of Kapoeta on Nathilani road, no alt., sandy soil, 27.8.1953, *Peers* KM4 (K, WM).
General habitat range: in lowland and medium-altitude grassland, especially in disturbed places and in abandoned cultivations.
General distribution: Senegal to Ethiopia and South Somalia, south to South Africa; pantropical.

Senna occidentalis (L.) Link
FE 3: 60 (1989); FSo 1: 351 (1993); UKWF: 114 (1994).
Syn.: *Cassia occidentalis* L.: FTA 2: 274 (1871); FS: 160 (1929); FPNA 1: 373 (1948); FCB 3: 513 (1952); FPS 2: 116 (1952); FWTA 1,2: 455 (1958); FTEA, Legum.-Caesalp.: 78 (1967); FG 15: 54 (1968); FC 9: 66 (1970); WICKENS 1976: 106; HYF: 165 (1997).
Imatong Mountains group, Sudan side: at River Khodo near Molongori (4° 10' N, 32° 52' E), 700 m., in meander of stream, 17.1.1950, *Jackson* (sight record, recorded on the label of *Jackson* 1054, which is a collection of *Crotalaria pallida*); Kinyeti Valley, c. 200 m from Hiliu towards Torit, 700 m., 21.11.1983, *Kielland-Lund* 9 (C, NLH).
General habitat range: in lowland and medium-altitude habitats disturbed by man, at roadsides, or a weed in cultivations and at waste places, also along streams.
General distribution: Congo [previously Zaire] to Ethiopia and Somalia, south to South Africa; pantropical. Possibly a native of tropical America.

Senna petersiana (Bolle) Lock
FE 3: 59 (1989); KTSL: 249 (1994).
Syn.: *Cassia petersiana* Bolle: FCB 3: 508 (9152); ITU: 60 (1952); FPS 2: 117 (1952); FTEA, Legum.-Caesalp.: 72 (1967); FC 9: 67 (1970); EL AMIN 1990: 201.
Imatong Mountains group, Sudan side: Katire, 970 m., *Albizia zygia-Combretum* woodland, 10.1. 1947, *Jackson* 162 (FHO).
Didinga Mountains: rocks north east of Chukudum (4° 15' N, 33° 27' E), 1100 m., 21.12.1983, *Kielland-Lund* 424 (NLH); between Naligede and Iwowa, 1710 m., wooded grassland, 22.4.1939, *Myers* 11,015 (K).
General habitat range: in lowland and medium-altitude forest, riverine forest and evergreen bushland and moist woodland.
General distribution: Cameroon and Central African Republic to Ethiopia, south to South Africa (Transvaal).

Senna singueana (Del.) Lock
FE 3: 59 (1989); KTSL: 250 (1994).
Syn.: *Cassia singueana* Del.: FCB 3: 509 (1952); ITU: 60 (1952); FPS 2: 117 (1952); FWTA 1,2: 453 (1958); FTEA, Legum.-Caesalp.: 73 (1967); EL AMIN 1990: 203. *Cassia goratensis* Fresen.: FTA 2: 273 (1871).
Didinga Mountains: between Kiduru and Longumu north of Chukudum (4° 20' N, 33° 23' E), 1000 m., 20.12.1983, *Kielland-Lund* 411 (C, NLH); Naligede, 1770 m., 21.4.1939, *Myers* 10,982 (K);
General habitat range: in lowland and medium-altitude deciduous and evergreen bushland.
General distribution: Mali and Ivory Coast to Ethiopia, south to South Africa (Transvaal).

Tamarindus L.

Tamarindus indica L.
FTA 2: 308 (1871); FS: 164 (1929); FPNA 1: 370 (1948); FCB 3: 436 (1952); ITU: 69 (1952);

FPS 2: 129 (1952); FWTA 1,2: 477 (1958); FTEA, Legum.-Caesalp.: 153 (1967); FC 9: 295 (1970); WICKENS 1976: 106; FE 3: 66 (1989); EL AMIN 1990: 219; FSo 1: 358 (1993); KTSL: 250 (1994); HYF: 166 (1997).

Imatong Mountains group, Sudan side: near Torit, 610-910 m., common in fire swept woodland, 14.4.1930, *Snowden* 1673 (BM, K); Kinyeti Valley, Hiliu, 700 m., in compound, 28.11.1983, *Kielland-Lund* 56 (C, NLH).

Didinga Mountains: Boya Hill, Kimatong, 700 m., woodland on rocks, 7.1.1985, *Fukui* 84-69 (EA).

General habitat range: in lowland and medium-altitude woodland and, deciduous bushland and wooded grassland.

General distribution: Senegal to Ethiopia and Somalia, south to South Africa; also widespread in tropical Asia, including tropical Arabia; it is so widely planted that its natural range is now difficult to establish.

Tylosema (Schweinf.) Torre & Hillc.

Tylosema fassoglensis (Schweinf.) Torre & Hillc.

FTEA, Legum.-Caesalp.: 213 (1967); FE 3: 70 (1989); EL AMIN 1990: 221; UKWF: 114 (1994).

Syn.: *Bauhinia fassoglensis* Schweinf.: FS: 163 (1929); FCB 3: 272 (1952); FPS 2: 110 (1952).

Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, east of compound, 700 m., near stream, 23.11.1983, *Kielland-Lund* 28 (C, NLH); 5 km south of Hiliu on the road to Imeila, 750 m., rocky slope with many loose boulders, *Combretum molle* dominant, and much *Xerophyta simulans* growing on the bare rocks, 10.3.1982, *Friis & Vollesen* 1166 (C); Issore, 1200 m., in *Hyparrhenia* grassland, 17.11.1948, *Jackson* 345 (BM); Issore to Laboni, at Kulubi, 1370 m., scrub, 21.12.1935, *Thomas* 1730 (BM, K).

Didinga Mountains: near Ero, 1200 m., on rocky slope, 28.3.1950, *Jackson* 1290 (BM, WM).

General habitat range: in lowland and medium-altitude wooded grassland, deciduous woodland and deciduous bushland.

General distribution: Sudan and Ethiopia south to South Africa (Transvaal).

subfam. **Mimosoideae** DC.

Acacia Mill.

Acacia abyssinica Hochst. ex Benth.

FTA 2: 347 (1871); FCB 3: 167 (1952); FTEA, Legum.-Mimos.: 112 (1959); FE 3: 89 (1989); EL AMIN 1990: 148; SOMMERLATTE 1990: 236; KTSL: 256 (1994); HYF: 168 (1997).

subsp. **calophylla** Brenan

EL AMIN 1990: 148; KTSL: 256 (1994).

Syn.: [*Acacia abyssinica* auct., non Hochst. ex Benth., sensu stricto: CHIPP 1929: 189; *Acacia xiphocarpa* auct., non Hochst. ex Benth., sensu stricto: ITU: 215 (1952); FPS 2: 148 (1952) {Imatong Mountains and Didinga Mountains}].

Imatong Mountains group, Sudan side: Issore, in fire swept grassland above 1680 m., a 4-15 m. high, flat-topped tree; is almost the only tree in fire-swept grassland at this altitude, 9.2.1929, *Chipp* 55 (K, WM); Gilo, 1830 m., woodland, 7.1946, *Sangster* 821 (MHU).

Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).

Didinga Mountains: Nagichot, 1980 m., forest edges and grassland, 26.4.1939, *Myers* 11,147 (K).

General habitat range: in medium-altitude and montane woodland and wooded grassland, often as a forest pioneer tree. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains in *Loudetia* grassland; it is the dominant species in *Acacia abyssinica* woodland.

General distribution: Ethiopia and Sudan south to Malawi, Zimbabwe and Mozambique. Species as a whole within same general distribution area; perhaps also in tropical Arabia.

Acacia albida Del.
FTA 2: 339 (1871); FS: 172 (1929); ITU: 205 (1952); FPS 2: 133 (1952); FWTA 1,2: 499 (1958); FTEA, Legum.-Mimos.: 78 (1959); WICKENS 1976: 106; FE 3: 84 (1989); FSo 1: 377 (1993); KTSL: 257 (1994).
Syn.: *Faidherbia albida* (Del.) A. Chev.: FCB 3: 169 (1952).
Lafit, Dongotona and Nangeya Mountains: south east side of Lafon (5° 02' N, 32° 27-28' E), no alt., 28.12.1983, *Kielland-Lund* 490 (C, NLH).
Imatong Mountains group, Uganda side: Agoro, 1220 m., on banks of dried up river, with *Ficus thonningii, Ficus vallis-choudae, Ficus sycomorus, Trichilia emetica, Acacia polyacantha* subsp. *campylacantha, Albizia zygia, Albizia amara, Cadaba farinosa, Capparis sp.,* and *Celtis toka,* 9.4.1945, *Greenway & Hummel* (sight record, reported on *Greenway & Hummel* 7327, which is *Celtis toka*).
General habitat range: in lowland and medium-altitude riverine forest and moist woodland, often with a high ground water table.
General distribution: Senegal to Egypt, Sudan, Ethiopia and North Somalia, south to Botswana and South Africa (Transvaal, Natal); also in the Middle East and (?native) in Cyprus.

Acacia amythetophylla A. Rich.
FTA 2: 346 (1871); FE 3: 86 (1989).
Syn.: *Acacia macrothyrsa* Harms: FTA 2: 343 (1871); FS: 173 (1929); FCB 3: 157 (1952); ITU: 210 (1952); FWTA 1,2: 499 (1958); FTEA, Legum.-Mimos.: 101 (1959); EL AMIN 1990: 159; KTSL: 261 (1994).
Imatong Mountains group, Sudan side: Palotaka (4° 2' N, 32° 26' E), 900 m., in *Albizia zygia* woodland, 31.10.1949, *Jackson* 878 (BM, KHF); Magwe, 1100 m., *Combretum* woodland, 1.10. 1948, *Jackson* 365 (FHO); Kinyeti Valley, Hiliu, south of compound, 700 m., 5.12.1983, *Kielland-Lund* 204 (C, NLH).
Imatong Mountains group, Uganda side: Lututuru, 1590 m., 1963, *Kertland* s.n. (MHU).
General habitat range: in lowland and medium-altitude deciduous woodland and wooded grassland.
General distribution: Senegal to South Sudan and Ethiopia, south to Zambia, Malawi, Zimbabwe and Mozambique.

Acacia ataxacantha DC.
FTA 2: 343 (1871); FS: 173 (1929); JACKSON 1951: 339; FCB 3: 153 (1952); FPS 2: 140 (1952); FWTA 1,2: 499 (1958); FTEA, Legum.-Mimos.: 82 (1959); WICKENS 1976: 107; EL AMIN 1990: 151; KTSL: 257 (1994).
Didinga Mountains: no specimen seen; recorded by JACKSON 1956 in dry open *Terminalia brownii* woodland at 1500 m.
General habitat range: in lowland and medium-altitude bushland, often riverine.
General distribution: Senegal to Sudan, south to Namibia and South Africa (Transvaal, Natal).

Acacia brevispica Harms
FTEA, Legum.-Mimos.: 96 (1959); FE 3: 78 (1989); EL AMIN 1990: 151; FSo 1: 370 (1993); KTSL: 257 (1994).
Syn.: [*Acacia pennata* auct., non (L.) Willd.: FS: 173 (1929); FCB 3: 154 (1952), pro parte; ITU: 212 (1952); FPS 2: 150 (1952); JACKSON 1956: 354 {Talanga, Lotti}].
Imatong Mountains group, Sudan side: Lofulong (4° 07' N, 32° 54' E), 900 m., *Acacia* woodland, 11.11.1948, *Jackson* 511 (FHO).
Didinga Mountains: Nathilani, 1190 m., on dry, rocky slope, 10.9.1940, *Myers* 13,469 (K); Nathilani, 1200 m., *Combretum* woodland, in gully, 9.4.1949, *Jackson* 673 (FHO); base of Mt. Lotuke, Ero, 1220 m., on stony ground, 16.4. 1939, *Myers* 10,869 (K); lower slope of Mt. Lotuke, 1400 m., stony hill with *Terminalia brownii* woodland, 29.3.1950, *Jackson* 1296 (BM).
General habitat range: in lowland and medium-altitude deciduous bushland and woodland often at edges of clumps of trees and at rocky outcrops.
General distribution: Congo [previously Zaire]

to Ethiopia and Somalia, south to Angola, Mozambique and South Africa (Natal, Cape Prov.)

Acacia dolichocephala Harms
FTEA, Legum.-Mimos.: 79 (1959); FE 3: 85 (1989); El Amin 1990: 152; KTSL: 258 (1994).
Didinga Mountains: above Chukudum, 1220 m., in khor, 28.4.1939, *Myers* 11,219 (K).
General habitat range: in lowland and medium-altitude riverine habitats and at rocky outcrops.
General distribution: South Sudan and Ethiopia, Uganda and North Tanzania.

Acacia drepanolobium Harms ex Sjoest.
ITU: 207 (1952); FPS 2: 143 (1952); FTEA, Legum.-Mimos.: 121 (1959); FE 3: 88 (1989); FSo 1: 381 (1993); KTSL: 258 (1994).
Imatong Mountains group, Uganda side: north of Madi Opei, 1040 m., on black cotton soil with *Combretum adenogonium, Dombeya quinqueseta, Maytenus senegalensis, Pseudocedrela kotschyi, Grewia mollis,* and *Dichrostachys cinerea* on ground with rocky outcrops, 10.10.1947, *Dawkins* 283 (MHU).
General habitat range: in grassland and bushland, often on black cotton soil.
General distribution: South Sudan, Ethiopia and South Somalia, through eastern Africa and East Congo [previously Zaire], south to Central Tanzania.

Acacia etbaica Schweinf.
FTA 2: 349 (1871); FS: 170 (1929); ITU: 209 (1952); FTEA, Legum.-Mimos.: 114 (1959); FE 3: 88 (1989); FSo 1: 380 (1993); KTSL: 259 (1994); HYF: 169 (1997).
subsp. **etbaica**
FE 3: 88 (1989); El Amin 1990: 154 {Kapoeta}; HYF: 169 (1997).
Didinga Mountains: no specimens seen; recorded by El Amin 1990 in dry vegetation "in dry savannah zone of Equatoria (Kapoeta)."
General habitat range: in lowland and medium-altitude wooded grassland.
General distribution: Subsp. *etbaica* is only known from the Sudan, originally described from the Red Sea Hills, and a single record from the Yemen. We are, in the absence of material, not certain about the identification of the subspecies in South Sudan. Species as a whole also in Ethiopia and North Somalia and south to Tanzania; also widespread in tropical Arabia.

Acacia gerrardii Benth.
FTEA, Legum.-Mimos.: 119 (1959); Wickens 1976: 107; FE 3: 88 (1989); El Amin 1990: 154; KTSL: 259 (1994); HYF: 169 (1997).
var. **gerrardii**
FTEA, Legum.-Mimos.: 119 (1959); Wickens 1976: 107.
Syn.: *Acacia hebecladoides* Harms.: FPNA 1: 390 (1948); FCB 3: 162 (1952); ITU: 209 (1952); FPS 2: 144 (1952); FWTA 1,2: 500 (1958).
Imatong Mountains group, Sudan side: near Magwe (4° 8' N, 32° 17' E), 800 m., *Combretum binderianum* woodland, 18.5.1948, *Jackson* 304 (KHF); Logoforok, 700 m., in open *Combretum* woodland, on termite mound, 2.2.1949, *Jackson* 622 (FHO, KHF).
Lafit, Dongotona and Nangeya Mountains: 500 m. north of Lafon Regional District Centre (5° 02' N, 32° 27-28' E), no alt., 29.12.1983, *Kielland-Lund* 528 (C, NLH).
Didinga Mountains: Naligede, 1770 m., wooded grassland, 21.4.1939, *Myers* 10,978 (K); 13 km. north of Chukudum, 1160 m., wooded grassland, 29.4.1939, *Myers* 11,227 (K, WM); 26 km. north of Chukudum, 950 m., wooded grassland, 29.4.1939, *Myers* 11,229 (K); near Nathilani, Didinga foothills, 1200 m., savannah with *Euphorbia candelabrum, Albizia anthelmintica and Tamarindus indica,* 9.4.1949, *Jackson* 674 (FHO, KHF).
General habitat range: in deciduous woodland and wooded grassland.
General distribution: Nigeria to South Sudan, Uganda and Kenya, south to South Africa (Na-

tal); also in tropical Arabia. Species as a whole within the same general distribution area in Africa, but apparently extending further to the east in Asia.

Acacia hecatophylla Steud. ex A. Rich.
FTA 2: 344 (1871); FS: 173 (1929); ITU: 210 (1952); FTEA, Legum.-Mimos.: 87 (1959); FE 3: 84 (1989); EL AMIN 1990: 155.
Imatong Mountains group, Sudan side: Kinyeti Valley, hill 3 km. south of Hiliu along Katire road, no alt., north east face of rock, 26.5.1984, *Kielland-Lund* 751 (C, NLH); 10 km. north of Katire, 850 m., woodland with *Combretum collinum, C. molle* and *Annona senegalensis*, with many rocky outcrops, 3.3.1982, *Friis & Vollesen* 1093 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude wooded grassland.
General distribution: Congo [previously Zaire] to Ethiopia and Uganda.

Acacia hockii De Wild.
FWTA 1,2: 500 (1958); FTEA, Legum.-Mimos.: 104 (1959); FE 3: 86 (1989); EL AMIN 1990: 155; KTSL: 260 (1994); HYF: 169 (1997).
Syn.: *Acacia seyal* Del. var. *multijuga* Schweinf. ex Bak. f.: ITU: 213 (1952); FPS 2: 144 (1952); JACKSON 1956: 249. [*Acacia stenocarpa* auct., non A. Rich.: FTA 2: 351 (1871); FPNA 1: 389 (1948); FS: 171 (1929)].
Imatong Mountains group, Sudan side: Loa, Moliandro village west of Kerepi (3° 54' N, 31° 54' E), no alt., 5.6.1984, *Kielland-Lund* 846 (C, NLH); Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees of *Terminalia laxiflora, T. brownii, Pterocarpus lucens, Combretum collinum* and *Vitex doniana* on rocky outcrop, 5.12.1980, *Friis & Vollesen* 696 (BR, C, EA, K, KHF); Kinyeti Valley, Lorohoi village, near Hiliu, 14 km. south of Torit, 700 m., rocky outcrop with woodland in cultivations, 14.2.1986, *Bodoegaard* 2 (EA); Katire, 920 m., in long-grass woodland with *Terminalia schimperiana, Bridelia scleroneura, Grewia mollis*, etc., 11.10.1947, *Jackson* 225 (FHO); north-east side of mountains, 8 km. south-east of Ngarama on track to Molongori, 700 m., open *Acacia seyal-Combretum* deciduous bushland, 10.3.1982, *Friis & Vollesen* 1164 (C, K, KHF); Hiliu, in compound, 700 m., 22.11.1983, *Kielland-Lund* 21 (C, NLH).
Imatong Mountains group, Uganda side: Agoro, no alt., wooded grass plains with *Ziziphus spp., Acacia seyal, A. senegal, A. hockii*, etc., 12.1932, *Eggeling* 826 (MHU); Lututuru, 1530 m., woodland with *Terminalia brownii, Lonchocarpus laxiflorus, Stereospermum kunthianum, Vitex doniana*, etc., 31.7.1946, *Dawkins* 206 (EA, FHO, MHU); between Agoro and Logoforok, 1100 m., *Hyparrhenia* grassland with scattered *Acacia spp.*, 9.10.1947, *Dawkins* 281 (EA).
General habitat range: in lowland and medium-altitude deciduous woodland and wooded grassland. According to JACKSON 1956 it occurs at the Imatong Mountains in moist woodland to the west and north of the mountains.
General distribution: Guinée to Ethiopia and Kenya, south to Angola, Zambia, Zimbabwe and Mozambique; also in tropical Arabia.

Acacia horrida (L.) Willd.
FE 3: 84 (1989); KTSL: 260 (1994)
subsp. **benadirensis** (Chiov.) Hillc. & Brenan
FTEA, Legum.-Mimos.: 81 (1959); FE 3: 85 (1989); EL AMIN 1990: 155 {Kapoeta}; FSo 1.: 378 (1993); KTSL: 260 (1994).
Syn.: *Acacia bussei* Harms ex Sjoest. var. *benadirensis* Chiov.: ITU: 205 (1952).
Didinga Mountains: no specimen seen; recorded by EL AMIN 1990 from clay plains in the study area ("On clay soils ... in Equatoria (Kapoeta)").
General habitat range: in lowland deciduous bushland, often on black clay soils.
General distribution: Uganda and South Sudan to Ethiopia and Somalia. Species as a whole also in India.

Acacia kamerunensis Gand.
FTEA, Legum.-Mimos.: 98 (1959); FG 31: 123 (1989).
Syn.: [*Acacia pennata* auct., non (L.) Willd.: FPS 2: 150 (1952); JACKSON 1956: 354 {Talanga, Lotti}; FWTA 1,2: 500 (1958), pro parte].
Imatong Mountains group, Sudan side: Khor Doleib (4° 26' N, 32° 28' E), 600 m., in gallery forest with *Trichilia emetica* along khor, 1.10.1948, *Jackson* 366 (KHF); Talanga, 900 m., dense forest, 27.4.1949, *Jackson* 748 (FHO).
General habitat range: in lowland forest.
General distribution: Sierra Leone to South Sudan and West Uganda.

Acacia mellifera (Vahl) Benth.
FTA 2: 340 (1871); FS: 172 (1929); ITU: 211 (1952); FPS 2: 136 (1952); FTEA, Legum.-Mimos.: 84 (1959); WICKENS 1976: 107; FE 3: 81 (1989); EL AMIN 1990: 159; FSo 1: 376 (1993); KTSL: 261 (1994); HYF: 170 (1997).
Between the Imatong Mountains group and the Lafit Mountains, the Dongotona Mountains and the Nangeya Mountains: Logori (4° 14' N, 32° 47' E), 700 m., open bush on clay soil, 13.11.1948, *Jackson* 535 (FHO); in the Koss Valley between Logoforok and Ikoto (4° 3' N, 33° 5' E), 700 m., on clay soil with *Commiphora*, 2.2.1949, *Jackson* 624 (FHO, KHF).
Didinga Mountains: Boya Hill, Kimatong, 640 m., open bushland, 7.1.1985, *Fukui* 84-108 (EA); near Kapoeta Regional District Centre (4° 47' N, 33° 35' E), 650 m., in open deciduous bushland, 13.6.1984, *Kielland-Lund* 938 (C, NLH).
General habitat range: in lowland and medium-altitude bushland.
General distribution: Egypt, Sudan, Ethiopia and Somalia south to Namibia, Botswana and South Africa (Transvaal); also in tropical Arabia.

Acacia nilotica (L.) Del.
FS: 169 (1929); FPS 2: 147 (1952); FWTA 1,2: 500 (1958); FTEA, Legum.-Mimos.: 109 (1959); WICKENS 1976: 107; FE 3: 86 (1989); EL AMIN 1990: 160; FSo 1: 379 (1993); KTSL: 261 (1994); HYF: 170 (1997).
subsp. **subalata** (Vatke) Brenan
FTEA, Legum.-Mimos.: 110 (1959); FE 3: 87 (1989); EL AMIN 1990: 160; FSo 1: 380 (1993); KTSL: 262 (1994).
Syn.: [*Acacia arabica* (Lam.) Willd. var. *adansoniana* auct., non Dubard: FS: 169 (1929); FPS 2: 147 (1952). *Acacia adansonii* auct., non Guill. & Perr.: JACKSON 1956: 360].
Imatong Mountains group, Sudan side: Kinyeti Valley, between Hiliu and Ngarama, on the Katire-Torit rd., 650 m., on gravel soil, forming thickets with *Dalbergia melanoxylon, Commiphora africana, Grewia spp., Vepris sp., Zanthoxylum chalybeum* and *Maerua pseudopetalosa*, 16.6.1961, *Jackson* 4229 (K).
Imatong Mountains group, Uganda side: Agoro, 1370 m., woodland, 12.11.1945, *Thomas* 4359 (EA); above Agoro, Logoforok peak, 2 mile south of Loguru stream, 1070 m., in old cultivations, 9.10.1947, *Dawkins* 279 (EA, MHU).
Didinga Mountains: foot of Didinga Mts., 2 km. east of Kidepo River, no alt., low open *Acacia* bushland, 27.8.1940, *Myers* 13,451 (K).
General habitat range: in lowland and medium-altitude deciduous bushland and wooded grassland.
General distribution: Sudan, Uganda Ethiopia and South Somalia, south to Tanzania. Species as a whole widespread in tropical Africa, from Senegal to Ethiopia, south to South Africa; also in tropical Arabia and India.

Acacia oerfota (Forssk.) Schweinf.
ITU: 211 (1952); FE 3: 90 (1989).
Syn.: *Acacia nubica* Benth.: FTA 2: 348 (1871); FS: 170 (1929); FPS 2: 148 (1952); FTEA, Legum.-Mimos.: 129 (1959); WICKENS 1976: 107; EL AMIN 1990: 160; FSo 1: 382 (1993); KTSL: 262 (1994); HYF: 170 (1997).

Didinga Mountains: south of Kapoeta, 610 m., in *Balanites aegyptiaca-Acacia tortilis* savannah, 1.3.1947, *Jackson* 185 (KHF); near Kapoeta Regional District Centre (4° 47' N, 33° 35' E), 650-670 m., in open deciduous bushland, 13.6. 1984, *Kielland-Lund* 943 (C, NLH).
General habitat range: in lowland and medium-altitude deciduous bushland.
General distribution: Egypt, Sudan, Ethiopia and Somalia, south to Tanzania; also in tropical Arabia and in Iran.

Acacia paolii Chiov.
FTEA, Legum.-Mimos.: 130 (1959); FE 3: 90 (1989); El Amin 1990: 161 {"In short grass savannah and dry grassland scrub of the alluvial soils in South East Equatoria"}; FSo 1: 382 (1993); KTSL: 262 (1994).
Didinga Mountains: no specimen seen; recorded by El Amin from alluvial soils in that part of the region.
General habitat range: in lowland deciduous bushland.
General distribution: Sudan, Ethiopia, South Somalia and Kenya.

Acacia persiciflora Pax
FTEA, Legum.-Mimos.: 86 (1959); FE 3: 81 (1989); El Amin 1990: 162; KTSL: 263 (1994).
Syn.: *Acacia eggelingii* Bak. f.: FCB 3: 152 (1952); ITU: 209 (1952); FPS 2: 137 {Didinga Mountains, Naligede}.
Imatong Mountains group, Sudan side: Katire, 1100 m., *Combretum* woodland, 3.3.1950, *Jackson* 1183 (FHO); Katire to Gilo, at road to Itibol, 1400 m., wooded grassland with *Combretum molle, C. collinum, Entada abyssinica* and *Erythrina abyssinica,* the grasses *Pennisetum purpureum* and *Hyparrhenia rufa* dominant, 12.11.1980, *Friis & Vollesen* 169 (C, KHF).
Imatong Mountains group, Uganda side: Agoro, 1830 m., woodland, 15.11.1945, *Thomas* 4388 (EA, K).
Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., Moimoi, 1770 m., wooded grassland, 28.10.1941, *Myers* 14,179 (K).
Didinga Mountains: Naligede, 1770 m., 21.4. 1939, *Myers* 10,977 (K); Moimoi, no alt., wooded grassland with bracken, 26.2.1948, *Jackson* 273 (FHO).
General habitat range: in medium-altitude and montane deciduous bushland and wooded grassland.
General distribution: Congo [previously Zaire] to Ethiopia, south to Uganda.

Acacia polyacantha Willd.
FWTA 1,2: 499 (1958); FTEA, Legum.-Mimos.: 87 (1959); Wickens 1976: 107; FE 3: 81 (1989); KTSL: 263 (1994).
subsp. **campylacantha** (Hochst. ex A. Rich.) Brenan
FWTA 1,2: 499 (1958); FTEA, Legum.-Mimos.: 88 (1959); Wickens 1976: 107; FE 3: 81 (1989); KTSL: 263 (1994).
Syn.: *Acacia campylacantha* Hochst. ex A. Rich.: FPNA 1: 385 (1948); ITU: 207 (1952); FPS 2: 137 (1952); Jackson 1956: 351 & 359; FTEA, Legum.-Mimos.: 88 (1959); El Amin 1990: 162.
Imatong Mountains group: Recorded by Jackson 1956 from fringes along gallery forest and woodland on bouldery soil. A specimen with the inscription "S. Sudan" as only indication of locality, *Kosper* 352 (EA), may be from this region.
Imatong Mountains group, Uganda side: Agoro, 1370 m., thicket, 15.11.1945, *Thomas* 4390 (EA, K).
Lafit, Dongotona and Nangeya Mountains: 1 km. north of Lafon Regional District Centre (5° 02' N, 32° 27-28' E), no alt., 29.12.1983, *Kielland-Lund* 529 (C, NLH).
General habitat range: in lowland and medium-altitude woodland, often common or dominant, especially along rivers.
General distribution: Gambia to Ethiopia, south to South Africa (Transvaal). Species as a whole also in India, where it is represented by subsp. *polyacantha.*

Acacia reficiens Wawra
FTA 2: 348 (1871); FTEA, Legum.-Mimos.: 116 (1959); FE 3: 88 (1989); El Amin 1990: 162 {South East Equatoria}; FSo 1: 381 (1993); KTSL: 263 (1994).
subsp. **misera** (Vatke) Brenan
FTEA, Legum.-Mimos.: 116 (1959); FE 3: 88 (1989); FSo 1: 381 (1993); KTSL: 263 (1994).
Syn.: *Acacia misera* Vatke: ITU: 211 (1952).
Didinga Mountains: Kapoeta, no alt., 23.8.1940, *Myers* 13,437 (K); near Kapoeta Regional District Centre (4° 47' N, 33° 35' E), 650 m., in open deciduous bushland or sub-desert scrub, 13.6.1984, *Kielland-Lund* 937 (C, NLH).
General habitat range: in lowland and medium-altitude deciduous bushland.
General distribution: Sudan, Ethiopia, North Uganda, Kenya and Somalia. Species as a whole also in Angola, where it is represented by subsp. *reficiens*.
Note. Recorded by El Amin 1990 from "slightly alkaline soils on river banks ... in South East Equatoria".

Acacia schweinfurthii Brenan & Exell
FTEA, Legum.-Mimos.: 99 (1959).
var. **schweinfurthii**
FTEA, Legum.-Mimos.: 99 (1959); El Amin 1990: 163.
Imatong Mountains group, Sudan side: south east of Torit (4° 22' N, 32° 36' E), 630 m., in thorn thicket on termitaria, 12.6.1961, *Jackson* 4235 (?K, not traced); Kinyeti Valley, 10 km. north of Hiliu towards Torit, 650 m., 8.12.1983, *Kielland-Lund* 266 (C, NLH); half way between Torit and Hiliu, near Imatong junction (4° 21' N, 32° 38' E), no alt., 31.5.1984, *Kielland-Lund* 811 (C, NLH).
General habitat range: in deciduous woodland and bushland.
General distribution: Sudan to Botswana and South Africa (Transvaal, Natal). Species as a whole within the same general distribution area.

Acacia senegal (L.) Willd.
FCB 3: 149 (1952); ITU: 212 (1952); FPS 2: 135 (1952); FWTA 1,2: 498 (1958); FTEA, Legum.-Mimos.: 92 (1959); Wickens 1976: 108; FE 3: 78 (1989); FSo 1: 370 (1993); KTSL: 264 (1994).
var. **senegal**
FTEA, Legum.-Mimos.: 93 (1959); Wickens 1976: 108; FE 3: 78 (1989); El Amin 1990: 163.
Syn.: *Acacia verek* Guill. & Perr.: FTA 2: 342 (1871); FS: 171 (1929).
Imatong Mountains group, Sudan side: between Hiliu and Ngarama (4° 20' N, 32° 39' E), 650 m., in *Albizia amara* subsp. *sericocephala* woodland, 12.6.1961, *Jackson* 4228 (?K, not traced); at junction between roads to Ngarama and Katire north of Hiliu, 700 m., 3.12.1983, *Kielland-Lund* 184 (C, NLH); Kinyeti Valley, Hiliu, south of compound (4° 16' N, 32° 48' E), no alt., 25.5.1984, *Kielland-Lund* 739 (C, NLH).
Imatong Mountains group, Uganda side: Madi Opei, no alt., 11.1970, *D. Field* 2502 (EA).
Didinga Mountains: Boya Hill, Kimatong, 640 m., open bushland, 9.1.1985, *Fukui* 84-204 (EA).
General habitat range: in lowland and medium-altitude deciduous bushland, wooded grassland and woodland.
General distribution: Senegal to Ethiopia and Somalia, south to South Africa (Transvaal, Natal). Species as a whole within the same general distribution area.

Acacia seyal Del.
FTA 2: 351 (1871); FS: 170 (1929); FPNA 1: 386 (1948); FCB 3: 160 (1952); ITU: 213 (1952); FPS 2: 144 (1952); FWTA 1,2: 500 (1958); FTEA, Legum.-Mimos.: 103 (1959); Wickens 1976: 108; FE 3: 85 (1989); Sommerlatte 1990: 110; El Amin 1990: 163; FSo 1: 379 (1993); KTSL: 264 (1994); HYF: 171 (1997).
var. **fistula** (Schweinf.) Oliv.
FS: 171 (1929); FTEA, Legum.-Mimos.: 103 (1959); FE 3: 86 (1989); FSo 1: 379 (1993); KTSL: 264 (1994).

Syn.: *Acacia fistula* Schweinf.: FPS 2: 142 (1952).
Imatong Mountains group, Sudan side: near Kudo [Khodo] (4° 32' N, 32° 15' E), 650 m., on flat clay soil, 21.11.1948, *Jackson* 552 (KHF).
Imatong Mountains group, Uganda side: Agoro-Logoforok path, 1070 m., *Acacia senegal-Acacia seyal* wooded grassland, 9.10.1947, *Dawkins* 281 (FHO, MHU); Agoro, 1220 m., 9.4.1945, *Hummel* 793 (FHO); Agoro, no alt., alluvium plain, 19.1.1946, *Dawkins* 157 (EA, FHO, MHU) & 158 (EA, FHO, MHU).
General habitat range: in lowland and medium-altitude deciduous bushland, woodland and wooded grassland. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in lowland woodland.
General distribution: Sudan, Ethiopia and Somalia, south to Zambia, Malawi and Mozambique.
var. **seyal**
FTEA, , Legum.-Mimos.: 103 (1959); WICKENS 1976: 108; FE 3: 86 (1989).
Imatong Mountains group, Sudan side: Kinyeti Vally, at junction between roads to Ngarama and Katire north of Hiliu, 700 m., 3.12.1983, *Kielland-Lund* 186 (C, NLH).
General habitat range: in lowland and medium-altitude deciduous bushland, woodland and wooded grassland.
General distribution: Senegal to Ethiopia, north to Egypt, south to Tanzania; also in tropical Arabia. Species as a whole distributed as a combination of the areas of the two varieties.

Acacia sieberiana DC.
FTA 2: 347 (1871); FS: 168 (1929); FPNA 1: 385 (1948); FCB 3: 166 (1952); ITU: 214 (1952); FPS 2: 144 (1952); JACKSON 1956: 349; FWTA 1,2: 499 (1958); FTEA, Legum.-Mimos.: 127 (1959); WICKENS 1976: 108; FE 3: 89 (1989); SOMMERLATTE 1990: 82; EL AMIN 1990: 165; KTSL: 265 (1994).
var. **sieberiana**
FTEA, Legum.-Mimos.: 127 (1959); WICKENS 1976: 108; FE 3: 89 (1989); EL AMIN 1990: 167.
Imatong Mountains group, Sudan side: Ayi River near Obbo (4° 2' N, 32° 35' E), 900 m., near stream, 23.4.1949, *Jackson* 713 (FHO, KHF); .
Imatong Mountains group, Uganda side: 2 km. east of Lututuru, near a rivulet, 1400 m., in open woodland, 17.2.1969, *Lye* 2106 (MHU, NLH, UPS).
Lafit, Dongotona and Nangeya Mountains: 1 km. south of Lafon (5° 02' N, 32° 27-28' E), no alt., 28.12.1983, *Kielland-Lund* 504 (C, NLH).
General habitat range: in lowland and medium-altitude woodland and wooded grassland. According to JACKSON 1956 it occurs at the Imatong Mountains in moist woodland west and north of the mountains; according to SOMMERLATTE 1990 it occurs as a tree along seasonal riverbeds and in depressions in lowland woodland.
General distribution: Senegal to Ethiopia, south to Malawi and Mozambique.
var. **woodii** (Burt Davy) Keay & Brenan
Imatong Mountains group, Sudan side: at Palwar (3° 54' N, 32° 37' E), 900 m., at seasonal riverbed in *Combretum-Terminalia* woodland, 17.4. 1984, *Sommerlatte* 55 (EA).
General habitat range: in deciduous bushland and woodland and wooded grassland.
General distribution: Senegal to Ethiopia, south to Malawi and Mozambique. Species as a whole also in Congo [previously Zaire] and Angola and south to South Africa (Transvaal, Natal).

Acacia tortilis (Forssk.) Hayne
FTA 2: 352 (1871); FS: 169 (1929); ITU: 215 (1952); FPS 2: 142 (1952); FTEA, Legum.-Mimos.: 117 (1959); WICKENS 1976: 108; FE 3: 87 (1989); EL AMIN 1990: 167; FSo 1: 380 (1993); KTSL: 265 (1994); HYF: 171 (1997).
subsp. **raddiana** (Savi) Brenan
FTEA, Legum.-Mimos.: 117 (1959); FSo 1: 380 (1993).
Syn.: *Acacia raddiana* Savi: FPS 2: 140 (1952);

JACKSON 1956: 358.
Imatong Mountains group, Sudan side: no specimen seen; recorded by JACKSON 1956; all material seen from the study area is subsp. *spirocarpa*. The record of subsp. *raddiana* requires confirmation.
General habitat range: in lowland deciduous bushland in northern part of tropical Africa.
General distribution: Algeria, Senegal to Egypt, Sudan, Ethiopia, Somalia and East Kenya.
subsp. **spirocarpa** (A. Rich.) Brenan
FTEA, Legum.-Mimos.: 117 (1959); WICKENS 1976: 108; FE 3: 87 (1989); EL AMIN 1990: 167; FSo 1: 380 (1993).
Syn.: *Acacia spirocarpa* A. Rich.: FTA 2: 352 (1871); FS: 169 (1929).
Imatong Mountains group, Sudan side: south of Torit, 3.1948, *Jackson* 190 (KHF); Torit, near rest-house (4° 24' N, 32° 33' E), 650 m., relic of indigenous vegetation, the rest of which has disappeared, 17.6.1961, *Jackson* 4246 (K).
Lafit, Dongotona and Nangeya Mountains: base of southern slope of Lafit Mountains, north of the Dongotona Mountains and near Chabenni, wooded grassland, 2.8.1940, *Myers* 13,433 (K).
Didinga Mountains: Boya Hill, Thuguru region (4° 40' N, 33° 17' E), 12.6.1984, *Kielland-Lund* 930 (C, NLH).
General habitat range: in lowland and medium-altitude deciduous bushland, woodland and wooded grassland.
General distribution: Sudan, Ethiopia and Somalia south to Angola, Zimbabwe and Mozambique. Species as a whole also in tropical Arabia.

Albizia Durazz.

Albizia amara (Roxb.) Boivin
FS: 174 (1929); FCB 3: 172 (1952); FTEA, Legum.-Mimos.: 151 (1959); WICKENS 1976: 109; FE 3: 94 (1989); EL AMIN 1990: 169; FSo 1: 385 (1993); KTSL: 269 (1994).
subsp. **sericocephala** (Benth.) Brenan
FTEA, Legum.-Mimos.: 152 (1959); WICKENS 1976: 109; FE 3: 94 (1989); EL AMIN 1990: 169; KTSL: 270 (1994).
Syn.: *Albizia sericocephala* Benth.: ITU: 222 (1952); FPS 2: 154 (1952); JACKSON 1956: 358 & 360; FTEA, Legum.-Mimos.: 152 (1959).
Imatong Mountains group, Sudan side: south of Torit, 640 m., woodland with *Sclerocarya*, etc., 5.2.1947, *Jackson* 181 (FHO); near northernmost point of continuous mountain chain, just south-east of Ngarama along track to Molongori, 700 m., open woodland with *Acacia seyal, Albizia amara* subsp. *sericocephala, Lannea humilis*, etc., on sandy soil, 13.3.1982, *Friis & Vollesen* 1191 (BR, C, K, KHF); Hiliu, near Torit on Katire road, 850 m., wooded *Hyparrhenia* grassland with *Acacia seyal, Harrisonia abyssinica, Flueggea virosa, Grewia villosa, Ziziphus spp.*, etc., 21.1.1947, *Dawkins* 225 (MHU); Hiliu, 700 m., in compound, 26.11.1983, *Kielland-Lund* 55 (C, NLH).
Imatong Mountains group, Uganda side: Agoro, no alt., forming thickets in *Acacia* bushland, 12.1935, *Eggeling* 795 (K, MHU); Agoro, no alt., 2.1938, *Eggeling* 3491 (MHU); Agoro slope, 1520 m., in *Terminalia* woodland, 8.4.1945, *Greenway & Hummel* 7323 (EA, K, MHU).
Didinga Mountains: Iwowa, 1620 m., wooded grassland, 23.4.1939, *Myers* 11,047 (K); Iwowa, 1700 m., riparian forest, 8.4.1949, *Jackson* 665 (FHO).
General habitat range: in lowland and medium-altitude deciduous woodlands and wooded grassland, often associated with rocky outcrops.
General distribution: South Sudan and Ethiopia south to Botswana and South Africa (Transvaal). Species as a whole also in India and Ceylon.

Albizia anthelmintica Brongn.
FTA 2: 357 (1871); FS: 174 (1929); ITU: 217 (1952); FPS 2: 151 (1952); FTEA, Legum.-Mi-

mos.: 148 (1959); FE 3: 94 (1989); El Amin 1990: 169; FSo 1: 385 (1993); KTSL: 270 (1994).
Didinga Mountains: c. 2 km. south of Keiala, near Chukudum (33° 27' E, 4° 15' N), 1100 m., 22.12.1983, *Kielland-Lund* 447 (C, NLH).
Imatong Mountains group, Uganda side: Agoro, no alt., dry hillside, 12.1932, *Eggeling* 840 (K, MHU); Agoro, no alt., 3.1935, *Eggeling* 1713 (MHU); Agoro, 1220 m., bushland on hillside, 4.1945, *Hummel* 779 (FHO).
General habitat range: in lowland and medium-altitude deciduous bushland and woodland, often in riverine habitats.
General distribution: Sudan and Ethiopia and Somalia, south to Botswana and South Africa (Transvaal, Natal).

Albizia coriaria Welw.
FTA 2: 360 (1871); FPNA 1: 392 (1948); FCB 3: 187 (1952); ITU: 217 (1952); FPS 2: 151 (1952); FWTA 1,2: 502 (1958); FTEA, Legum.-Mimos.: 143 (1959); FE 3: 93 (1989); El Amin 1990: 171; KTSL: 270 (1994).
Imatong Mountains group, Sudan side: at Kinyeti River south of Torit (4° 2' N, 32° 48' E), 900 m., edge of gallery forest, 8.2.1950, *Jackson* 1124 (FHO, KHF); between Palwar and Talanga (3° 54' N, 32° 43' E), 1350 m., at a gully in open *Combretum* woodland, 22.2.1984, *Sommerlatte* 15 (EA).
Didinga Mountains: Iwowa, 1700 m., rocky ground with *Terminalia brownii, Lannea,* etc., 8.4.1949, *Jackson* 664 (FHO, KHF).
General habitat range: in lowland and medium-altitude deciduous woodland and riverine thickets.
General distribution: Ivory Coast to South Sudan, Uganda and Kenya, south to Angola, Congo [previously Zaire] and Tanzania.

Albizia glaberrima (Schumach. & Thonn.) Benth.
FTA 2: 358 (1871); FWTA 1,2: 502 (1958); FTEA, Legum.-Mimos.: 156 (1959); FG 31: 141 (1989); El Amin 1990: 171; KTSL: 270 (1994).
Syn.: *Albizia eggelingii* Bak. f.: ITU: 219 (1952); Jackson 1956: 354 {Lotti}.
Imatong Mountains group, Sudan side: no specimen seen; recorded by Jackson 1956 from forest at Lotti. The type specimen of *Albizia eggelingii* originates from the Chua region in Uganda, in or just south of the study area.
General habitat range: in lowland forest.
General distribution: Guinée to South Sudan, Uganda and Kenya, south to Angola, Zambia, Zimbabwe, Malawi and Mozambique.

Albizia grandibracteata Taub.
FPNA 1: 393 (1948); FCB 3: 175 (1952); ITU: 220 (1952); FPS 2: 154 (1952); Jackson 1953: 353 {Talanga, Lotti}; FTEA, Legum.-Mimos.: 161 (1959); FE 3: 96 (1989); Sommerlatte 1990: 184; El Amin 1990: 173; KTSL: 270 (1994).
Imatong Mountains group, Sudan side: Lotti, no alt., gallery forest, 28.2.1939, *Myers* 10,568 (K); Talanga, 900 m., edge of closed forest, 27.4.1949, *Jackson* 744 (FHO); Talanga, 1000 m., edge of rain forest, 5.4.1950, *Jackson* 1373 (K); Talanga, 1000 m., edge of forest, 28.1.1949, *Jackson* 611 (FHO, KHF); Lower Talanga, near Ngnolobot river (3° 53' N, 32° 42' E), 1200 m., near river in plantation area, 6.4.1984, *Sommerlatte* 50 (EA); Kinyeti Valley, near Lofoha forest ranger post, 1400 m., in remnant of transitional (riverine) forest dominated by *Rauvolfia caffra,* 21.3.1982, *Friis & Vollesen* 1273 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: Agoro, no alt., 12.1935, *Eggeling* 825 (K, MHU); Lututuru, 1560 m., *Acacia* woodland between large gneiss boulders, 22.3.1947, *Dawkins* 252 (FHO, MHU); 2 km. east of Lututuru, near a rivulet, 1400 m., in open woodland, 17.2.1969, *Lye* 2098 (MHU).
Didinga Mountains: Tok Valley (4° 18' N, 33° 42' E), 1400 m., in tangle near stream, 8.4.1949, *Jackson* 660 (FHO, KHF).

General habitat range: in lowland and medium-altitude forest and riverine forest, often as a forest pioneer tree. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as an understorey tree in lowland forest, it is particularly common in gallery forest.
General distribution: Congo [previously Zaire] to Ethiopia, south to Tanzania.

Albizia grandibracteata x gummifera
Imatong Mountains group, Sudan side: Mt. Baghanj, 1830-2130 m., 13.6.1939, *Andrews* 1911 (K).
Imatong Mountains group, Uganda side: Mt. Lomwaga, 1830 m., gregarious, forming stands, 4.4.1945, *Greenway & Hummel* 7271 (EA, FHO, K, MHU).
Note. In the Kew herbarium Brenan has annotated both specimens as *A. grandibracteata x gummifera.*

Albizia gummifera (J.F. Gmel.) C. A. Sm.
FPNA 1: 392 (1948); FCB 3: 181 (1952); ITU: 220 (1952); FPS 2: 155 (1952) {Imatong and Didinga Mountains}; JACKSON 1956: 361 & 364-367; FWTA 1,2: 503 (1958); FTEA, Legum.-Mimos.: 157 (1959); FE 3: 96 (1989); EL AMIN 1990: 173; SOMMERLATTE 1990: 270; KTSL: 271 (1994).
var. **gummifera**
KTSL: 271 (1994)
Imatong Mountains group, Sudan side: Upper Talanga tea project, 1800 m., 10.11.1981, *Howard* UTT 3 (BR, C, K); Upper Talanga (3° 57' N, 32° 47' E), 1800 m., one of the dominant species in secondary *Albizia-Croton* forest, 30.3. 1984, *Sommerlatte* 14 (EA); Gilo, at bridge on Ngairigi River, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 17.2. 1982, *Friis & Vollesen* 924 (C, K, KHF); from same tree as 924, flowering, 24.3.1982, *Friis & Vollesen* 1310 (C, K); Mt. Garia, 1830-2130 m., 13.6.1939, *Andrews* 1877 (K, WM).
Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).
Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., Mt. Emogadung, 1980 m., 28.10.1941, *Myers* 14.183 (K).
Didinga Mountains: Mt. Lotuke, 1980 m., lower montane forest, 20.4.1939, *Myers* 10,966 (K).
General habitat range: in lowland, medium-altitude and montane habitats in association with forest, often as a pioneer tree. According to JACKSON 1956 and SOMMERLATTE 1990 it occurs at the Imatong Mountains as one of the dominants in *Albizia* forest, it also occurs in mixed *Podocarpus latifolius* forest and in colonising thickets and woodland in succession from *Loudetia* grassland to mixed *Podocarpus latifolius* forest.
General distribution: Nigeria and Cameroon to Sudan and Ethiopia, south to Zimbabwe and Mozambique; also in Madagascar.

Albizia schimperiana Oliv.
FCB 3: 157 (1952); FPS 2: 150 (1952) {Didinga Mountains, Naligede, Nagichot}; FTEA, Legum.-Mimos.: 154 (1959). (1959); EL AMIN 1990: 177; SOMMERLATTE 1990: 268; KTSL: 271 (1994).
var. **schimperiana**
FTEA, Legum.-Mimos.: 154 (1959); EL AMIN 1990: 177; KTSL: 271 (1994).
Syn.: *Albizia maranguensis* Taub. ex Engl.: JACKSON 1951: 340; ITU: 221 (1952); FPS 2: 151 (1952) {Didinga Mountains}; JACKSON 1956: 348, 357, 363-365.
Imatong Mountains group, Sudan side: Upper Talanga Tea project, 1800 m., upland forest, 11.1981, *Howard* UTT 1 (BR, C, K); Upper Talanga, 1800 m., one of the dominant species in secondary *Albizia-Croton* forest, 4.4.1984, *Sommerlatte* 46 (EA); at bridge across Ngairigi River below Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 17.2.1982, *Friis & Vollesen* 924 (C, KHF); Kinyeti Valley, near Lofoha forest ranger post, 1400 m., in

remnant of transitional (riverine) forest dominated by *Rauvolfia caffra*, 21.3.1982, *Friis & Vollesen* 1272 (BR, C, EA, FT, K, KHF); at bridge across Ngairigi River below Gilo, 1800 m., *Albizia-Croton-Macaranga* forest, 24.3.1982, *Friis & Vollesen* 1310 (C, KHF).

Imatong Mountains group, Uganda side: Agoro, no alt., 3.1935, *Eggeling* 1723 (MHU).

Didinga Mountains: Naligede, 1770 m., gallery forest, 21.4.1939, *Myers* 10,988 (K); near Nagichot (4° 16' N, 33° 35' E), 1950 m., 17.12.1983, *Kielland-Lund* 347 (NLH); Nagichot, 1980 m., forest, 26.4.1939, *Myers* 11,148 (K, WM).

General habitat range: in medium-altitude and montane forest, often in disturbed sites and along margins or in dense woodlands as a forest pioneer species. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as one of the dominant tree species in *Albizia* forest, it also occurs in medium-altitude forest and in *Acacia abyssinica* woodland.

General distribution: South Sudan, Ethiopia and Somalia south to Zimbabwe and Mozambique.

var. **tephrocalyx** Brenan

FTEA, Legum.-Mimos.: 155 (1959).

Imatong Mountains group, Uganda side: Lututuru, 2.1938, *Eggeling* 3495 (MHU).

Didinga Mountains: slope of Mt. Lotuke, 610 m., forest patch, 31.3.1950, *Jackson* 1359 (K).

General habitat range: in medium-altitude riverine forest and at forest margins.

General distribution: Uganda and South Sudan.

Albizia zygia (DC.) Macbr.

FPNA 1: 394 (1948); FCB 3: 176 (1952); ITU: 222 (1952); FPS 2: 154 (1952); JACKSON 1956: 349; FWTA 1,2: 502 (1958); FTEA, Legum.-Mimos.: 161 (1959); WICKENS 1976: 109; FG 31: 138 (1989); EL AMIN 1990: 177; SOMMERLATTE 1990: 78; KTSL: 272 (1994).

Syn.: *Albizia brownei* (Walp.) Oliv.: FTA 2: 362 (1871); FS: 175 (1929).

Imatong Mountains group, Sudan side: between Mt. Kedong and Iyedo River (4° 03' N, 32° 36' E), 1800 m., medium-altitude woodland, 12.2.1948, *Jackson* 260 (FHO); Obbo (4° 01' N, 32° 30' E), 1000 m., *Combretum* woodland, 25.4.1949, *Jackson* 721 (FHO); Palotaka, 1200 m., open woodland, 5.1.1979, *Shigeta* 26 (EA); near Palotaka, on the Palotaka-Lerua road, 900 m., very common in *Combretum-Lonchocarpus* open woodland, 19.3.1984, *Sommerlatte* 27 (EA); Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees of *Terminalia laxiflora, T. brownii, Pterocarpus lucens, Combretum collinum* and *Vitex doniana* on rocky outcrop, 5.12.1980, *Friis & Vollesen* 698 (C, KHF); Kinyeti Valley, 16 km. north of Katire, 900 m., woodland with *Combretum collinum, C. molle* and *Annona senegalensis*, 22.2.1982, *Friis & Vollesen* 987 (C, K, KHF); Kinyeti Valley, c. 10 km. north of Katire, 700 m., edge of riverine forest bordering on *Combretum* woodland, 11.3.1982, *Friis & Vollesen* 1167 (BR, C, K, KHF); Talanga, 950 m., open woodland with *Albizia zygia, Combretum collinum,* etc., recently burnt, 17.3.1982, *Friis & Vollesen* 1235 (C, K, KHF).

General habitat range: in lowland and medium-altitude moist deciduous woodland and at margins of lowland forest. According to JACKSON 1956 it occurs at the Imatong Mountains in moist woodland to the west and north of the mountains; according to SOMMERLATTE 1990 it is a common deciduous tree of the lowland woodland and in fringing and secondary lowland forest.

General distribution: Senegal to Sudan, Uganda and Kenya, south to Congo [previously Zaire] and Tanzania.

Dichrostachys (DC.) Wight & Arn.

Dichrostachys cinerea (L.) Wight. & Arn.

FTEA, Legum.-Mimos.: 36 (1959); FG 31: 116 (1989); EL AMIN 1990: 179; KTSL: 273 (1994); HYF: 166 (1997).

Syn.: *Dichrostachys glomerata* (Forssk.) Chiov.:

FPNA 1: 382 (1948); FCB 3: 202 (1952); ITU: 224 (1952); FPS 2: 156 (1952); FWTA 1,2: 494 (1958). *Dichrostachys nutans* Benth.: FS: 168 (1929).

Imatong Mountains group, Sudan side: between Imurok and Magwe (4° 10' N, 32° 30' E), 800 m., thicket in *Albizia amara* subsp. *sericocephala* woodland, 16.5.1948, *Jackson* 297 (FHO, KHF); Kinyeti Valley, at junction of roads to Ngarama and Kinyeti north of Hiliu, 700 m., 3.12.1983, *Kielland-Lund* 182 (C, NLH); near Hiliu, 13 km. south of Torit, 700 m., small hills and permanent streams, intensive cultivations, 28.2. 1986, *Bodoegaard & Francis* 23 (EA); near Hiliu, no alt., 2.6.1984, *Kielland-Lund* 830 (C, NLH).

Didinga Mountains: Jie, near Kapoeta, 650 m., 9.1985, *Bodoegaard* 85/16 (EA).

General habitat range: in a wide range of deciduous lowland and medium-altitude habitats, often an indicator of overgrazing.

General distribution: Cape Verde Islands, Senegal and Gambia to Ethiopia and Somalia, south to Namibia and South Africa (Natal); also widespread in tropical Asia, including tropical Arabia, and in Australia.

Entada Adans.

Entada abyssinica Steud ex A. Rich.

FTA 2: 327 (1871); FS: 167 (1929); FPNA 1: 383 (1948); ITU: 225 (1952); FPS 2: 158 (1952); JACKSON 1956: 356; FWTA 1,2: 491 (1958); FTEA, Legum.-Mimos.: 13 (1959); WICKENS 1976: 109; EL AMIN 1990: 181; SOMMERLATTE 1990: 96; FSo 1: 363 (1993); KTSL: 274 (1994). Syn.: *Entadiopsis abyssinica* (Steud. ex A. Rich.) Gilbert & Boutique: FCB 3: 208 (1952).

Imatong Mountains group, Sudan side: between Lower and Upper Talanga, within tea concession, 1300 m., edge of cultivation, 30.3.1984, *Sommerlatte* 43 (EA); Kinyeti Valley, hill 3 km. south of Hiliu, 700 m., stony hillside, 6.12. 1983, *Kielland-Lund* 224 (C, NLH); Mt. Baghanj, 1830-2140 m., 13.6.1939, *Andrews* 1903 (K); Libuge, 1700 m., no date, *Jackson* 283 (FHO); Katire to Gilo, at road to Itibol, 1400 m., wooded grassland with *Combretum molle, C. collinum, Entada abyssinica* and *Erythrina abyssinica,* the grasses *Pennisetum purpureum* and *Hyparrhenia rufa* dominant, 12.11.1980, *Friis & Vollesen* 164 (C, KHF).

Imatong Mountains group, Uganda side: Mt. Lomwaga, 2140 m., 4.4.1945, *Hummel* 702 (FHO).

Didinga Mountains: Naligede, 1770 m., 21.4. 1939, *Myers* 10,987 (K).

General habitat range: in lowland, medium-altitude and montane deciduous woodland and wooded grassland. According to JACKSON 1956 it occurs at the Imatong Mountains in vegetation transitional between moist woodland and montane vegetation; according to SOMMERLATTE 1990 it occurs at the Imatong Mountains in lowland woodland around 1500 m.

General distribution: Sierra Leone to Ethiopia and North Somalia, south to Angola, Zimbabwe and Mozambique.

Entada abyssinica x africana

FTEA, Legum.-Mimos.: 13 (1959).

Imatong Mountains group, Uganda side: without further locality, 12.1932, *Eggeling* 806 (FHO, MHU).

Brenan, in FTEA, Legum.-Mimos.(1959), suggest that this collection is intermediate between *Entada abyssinica* and *Entada africana,* and possibly represents a hybrid.

Entada africana Guill. & Per.

FTA 2: 326 (1871), pro parte; FWTA 1,2: 491 (1958); FTEA, Legum.-Mimos.: 12 (1959); WICKENS 1976: 110; EL AMIN 1990: 181.

Syn.: *Entada sudanica* Schweinf.: FTA 2: 327 (1871); FS: 167 (1929); ITU (2.ed.): 225 (1952); FPS 2: 157 (1952). *Entadiopsis sudanica* (Schweinf.) Gilbert & Boutique: FCB 3: 204 (1952).

Imatong Mountains group, Sudan side: Kinyeti Valley, c. 6 km. south of Hiliu along the road to

Imeila, 750 m., open wooded grassland, 27.2. 1982, *Friis & Vollesen* 1048 (BR, C, K, KHF).
General habitat range: in lowland deciduous woodland and wooded grassland.
General distribution: Senegal to Sudan, Ethiopia and Uganda.

Entada rheedii Spreng.
KTSL: 275 (1994).
Syn.: *Entada pursaetha* DC.: FWTA 1,2: 490 (1958); FG 31: 78 (1989). [?*Entada phaseoloides* auct., non (L.) Merr.: FPS 2: 158 (1952); FTEA, Legum.-Mimos.: 12 (1959)].
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber in forest, 10.12.1980, *Friis & Vollesen* 801 (C, carpological collection only, accession no. 15955).
General habitat range: in lowland forest and evergreen bushland.
General distribution: Guinée and Guinea Bissau to South Sudan, Uganda and Kenya, south to South Africa; also widespread in tropical Asia.
Note. The identity of *Entada gigas* sensu El Amin 1990 (p. 181) is not certain; it is probably this species.

Entada wahlbergii Harv.
FCap 2: 277 (1862); FWTA 1,2: 492 (1958); FTEA, Legum.-Mimos.: 18 (1959); FZ 3,1: 22 (1970); El Amin 1990: 181.
Syn.: *Entada flexuosa* Hutch. & Dalz.: FPS 2: 157 (1952). *Entadopsis flexuosa* (Hutch. & Dalz.) Gilb. & Bout.: FCB 3: 206 (1953).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, 700 m., between compound and stream, 22.11.1983, *Kielland-Lund* 23 (C, NLH).
General habitat range: in lowland wooded grassland, woodland, especially associated with riverine forest, and in dry forest on sand.
General distribution: Guinée and Guinea Bissau to South Sudan, Uganda and Tanzania, south to South Africa (Natal).

Mimosa L.

Mimosa pigra L.
FCB 3: 230 (1952); FPS 2: 158 (1952); Jackson 1956: 351; FWTA 1,2: 495 (1958); FTEA, Legum.-Mimos.: 43 (1959); Wickens 1976: 110; FG 31: 87 (1989); El Amin 1990: 183; FSo 1: 366 (1993); KTSL: 276 (1994).
Syn.: *Mimosa asperata* L.: FTA 2: 335 (1871).
Imatong Mountains group, Sudan side: Torit, floodplain between rivers south of the town (4° 24' N, 32° 34' E), no alt., 12.1.1984, *Kielland-Lund* 615 (C, NLH). Also recorded by Jackson 1956 from riverine habitats in the moist lowland woodland north and west of the Imatong Mountains.
General habitat range: in lowland and medium-altitude riverine habitats and swamps.
General distribution: throughout tropical and South Africa; also in Madagascar and Mauritius and in tropical America, a rarely introduced species in Asia.

Parkia R. Br.

Parkia filicoidea Welw.
FTA 2: 324 (1871), pro parte; FCB 3: 141 (1952); ITU: 227 (1952); FPS 2: 158 (1952); Jackson 1956: 353 {Talanga, Lotti}; FWTA 1,2: 487 (1958); FTEA, Legum.-Mimos.: 7 (1959); FG 31: 31 (1989); El Amin 1990: 187; FSo 1: 362 (1993); KTSL: 277 (1994).
Imatong Mountains group, Sudan side: Kinyeti Valley, at Katire Police Station (4° 02' N, 32° 47' E), no alt., 15.1.1984, *Kielland-Lund* 661 (NLH); no undoubtedly indigenous specimen seen; recorded by Jackson 1956 from forest at Talanga, and by El Amin 1990 "in gallery forest in Equatoria".

General habitat range: in lowland and medium-altitude forest and riverine vegetation.
General distribution: Ivory Coast to South Sudan, Uganda, Kenya and South Somalia, south to Angola, Zambia, Malawi and Mozambique.

Tetrapleura Benth.

Tetrapleura tetraptera (Schumach. & Thonn.) Taub.
FCB 3: 218 (1952); ITU: 231 (1952); FPS 2: 163 (1952); JACKSON 1956: 353 {Talanga, Lotti, Laboni}; FWTA 1,2: 493 (1958); FTEA, Legum.-Mimos.: 32 (1959); FG 31: 64 (1989); EL AMIN 1990: 189; KTSL: 278 (1994).
Syn.: *Tetrapeura thonningii* Benth.: FTA 2: 330 (1871).
Imatong Mountains group, Sudan side: Lotti, no alt., 1979, *Shigeta* 91 (?EA, identified and listed by M.G. Gilbert, not traced); Talanga to Upper Talanga, 1100 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 10.12.1980, *Friis & Vollesen* 792 (C, carpological collection only, accession no. 15949).
General habitat range: in lowland and medium-altitude forest.
General distribution: Senegal to South Sudan, Uganda and Kenya, south to Congo [previously Zaire] and Tanzania.

subfam. **Faboideae**
(subfam. *Papilionoideae* DC., nom. altern.)

Abrus Adans.

Abrus canescens Bak.
FTA 2: 175 (1871); FPNA 1: 339 (1948); FPS 2: 169 (1952); FCB 6: 83 (1954); FWTA 1,2: 575 (1954); FTEA, Legum.-Papilion. 1: 117 (1971); FE 3: 108 (1989); UKWF: 118 (1994); KTSL: 281 (1994).
Imatong Mountains group, Sudan side: Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees, on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, along small brook between rocks, 2.12. 1980, *Friis & Vollesen* 640 (C, KHF); Kinyeti Valley, c. 2 km. north of Katire, at tributary of Kinyeti River, 900 m., on sandy river bank, 18.3.1982, *Friis & Vollesen* 1253 (BR, C, EA, KHF).
General habitat range: in lowland and medium-altitude grassland, often at water.
General distribution: Gambia and Senegal to Ethiopia, south to Tanzania and Zambia.

Abrus precatorius L.
FTA 2: 175 (1871); FS: 198 (1929); FPNA 1: 338 (1948); FPS 2: 169 (1952); FCB 6: 85 (1954); FWTA 1,2: (1958); FTEA, Legum.-Papilion. 1: 114 (1971); FE 3: 107 (1989); FSo 1: 393 (1993); UKWF: 118 (1994); KTSL: 281 (1994); HYF: 156 (1997).
subsp. **africanus** Verdc.
FTEA, Legum.-Papilion. 1: 114 (1971); FE 3: 107 (1989); FSo 1: 394 (1993); KTSL: 281 (1994); HYF: 156 (1997).
Didinga Mountains: Boya Hill, 640 m., open bushland, 26.12.1982, *Fukui* 82-40 (EA).
General habitat range: in lowland and medium-altitude woodland, wooded grassland and bushland, often in riverine plant communities.
General distribution: Senegal to Ethiopia and South Somalia, south to South Africa; also in tropical Arabia, the Seychelles, Madagascar and on the Mascarene Islands; introduced in Australia and the New World tropics. Species as a whole also indigenous in tropical Asia and Australia.

Abrus schimperi Bak.
FS: 198 (1929); FPS 2: 169 (1952); FTEA, Legum.-Papilion. 1: 115 (1971); FE 3: 107 (1989);

El Amin 1990: 223; UKWF: 118 (1994); KTSL: 281 (1994).
subsp. **schimperi**
FTEA, Legum.-Papilion. 1: 115 (1971).
Imatong Mountains group, Sudan side: Katire, near Kinyeti River, 1070 m., in scrub, 15.12.1935, *Thomas* 1569 (BM, K).
General habitat range: in lowland and medium-altitude deciduous bushland and woodland.
General distribution: South Sudan, Uganda and Kenya south to Zambia and Zimbabwe. Species as a whole also distributed from Central African Republic to Ethiopia.

Adenocarpus DC.

Adenocarpus mannii (Hook. f.) Hook. f.
FTA 2: 47 (1871); FPNA 1: 284 (1948); FPS 2: 169 (1952) {Imatong Mountains, summit of Mt. Kinyeti}; FCB 4: 284 (1953); Hedberg 1957: 117; FWTA 1,2: 552 (1958); FTEA, Legum.-Papilion. 2: 1009 (1971); FE 3: 222 (1989); KTSL: 281 (1994).
Imatong Mountains group, Sudan side: without further locality [Mt. Kinyeti], near summit, 3060 m., 12.1.1936, *Johnston* 1516 (K); summit of Mt. Kinyeti, 3050 m., rocky summit, 30.12.1935, *Thomas* 1848 (BM, ?K); Mt. Kinyeti, 3060 m., moorland, 21.2.1976, *Howard* IM 63 (K, KHF); Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 830 (C, K, KHF); summit of Mt. Kinyeti, 3170 m., 21.9.1940, *Tothill* in *Myers* 13,512 (K) & 13,515 (K); summit of Mt. Kinyeti, 3180 m., 27.7.1939, *Myers* 11,644 (?K, not traced).
General habitat range: in medium-altitude and montane grassland, evergreen bushland and forest clearings, especially among rocks.
General distribution: Nigeria and Cameroon to Ethiopia, south to Angola, Zambia, Malawi and Tanzania.
Note. The specimen *Myers* 11,664 was originally identified as "*Lotus sp.*"

Aeschynomene L.

Aeschynomene abyssinica (A. Rich.) Vatke
FPS 2: 173 (1952); FCB 5: 286 (1954); FWTA 1,2: 578 (1958); FTEA, Legum.-Papilion. 1: 396 (1971); FE 3: 144 (1989); UKWF: 127 (1994); KTSL: 282 (1994).
Syn.: *Aeschynomene ruppellii* Bak.: FTA 2: 149 (1871); FS: 194 (1929).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., forest, 25.2.1979, *Shigeta* 209 (EA); Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 8.12.1980, *Friis & Vollesen* 773 (BR, C, K, KHF); Katire, 1100 m., old cultivations, 8.2.1950, *Jackson* 1128 (BM); Itibol, 1980 m., grassland, 18.12.1935, *Thomas* 1649 (BM, K); Issore, 1430 m., in scrub, 20.12.1935, *Thomas* 1726 (BM, K); Gilo to Mt. Konoro, 2000 m., *Loudetia arundinacea* grassland with scattered trees, 16.11.1980, *Friis & Vollesen* 254 (BR, C, K, KHF).
General habitat range: in medium-altitude and montane grassland and woodland, often at water.
General distribution: Nigeria and Cameroon to Ethiopia, south to Zambia, Malawi, Zimbabwe and Mozambique.

Alysicarpus Neck.

Alysicarpus ovalifolius (Schumach.) Léonard
FCB 5: 226 (1954); FWTA 1,2: 587 (1958); FTEA, Legum.-Papilion. 1: 493 (1971); FE 3: 154 (1989).
Syn.: [*Alysicarpus rugosus* auct., non DC.: FTA 2: 171 (1871)].

Didinga Mountains: 56 km. south-west of Kapoeta, in khor, no alt., 29.8.1953, *Peers* TO17 (K).
General habitat range: in lowland woodland and wooded grassland, often in disturbed places or as a weed in cultivations.
General distribution: Senegal to Ethiopia, south to Angola and Zimbabwe; also in Madagascar and tropical Asia.

Alysicarpus rugosus (Willd.) DC.
FTA 2: 171 (1871); FCB 5: 229 (1954); FWTA 1,2: 587 (1958); FTEA, Legum.-Papilion. 1: 495 (1971).
subsp. **rugosus**
FTEA, Legum.-Papilion. 1: 496 (1971); FE 3: 155 (1989).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, south-east of compound, 700 m., in cultivation, 2.12.1983, *Kielland-Lund* 157 (C, NLH).
General habitat range: in lowland, medium-altitude and montane grassland, especially on black cotton soil and heavy clay, also invading abandoned cultivations.
General distribution: Mali and Ghana to Ethiopia, south to Namibia, Zimbabwe and Mozambique; also in Madagascar and possibly tropical Arabia. Species as a whole widespread in Africa and Madagascar, and possibly also in Asia. The characters separating this subspecies from the other equally widespread subspecies, *Alysicarpus rugosus* (Willd.) DC. subsp. *perennirufus* Léonard (not yet recorded from study area), seem constant, and the two taxa might well be treated as two distinct species.

Amphicarpaea Nuttall

Amphicarpaea africana (Hook. f.) Harms
FPNA 1: 339 (1948); FCB 6: 90 (1954); FWTA 1,2: 560 (1958); FTEA, Legum.-Papilion. 2: 511 (1971); FE 3: 155 (1989); UKWF: 130 (1994).
Syn.: *Shuteria africana* Hook. f.: FTA 2: 177 (1871).
Imatong Mountains group, Sudan side: Gilo to Mt. Konoro, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 18.11.1980, *Friis & Vollesen* 326 (BR, C, K, KHF); Dumuso, 2500 m., in tangle colonising *Hagenia abyssinica* grassland, 16.11.1949, *Jackson* 987 (BM).
General habitat range: in medium-altitude and montane forest, along edges and in clearings.
General distribution: Cameroon to Ethiopia, south to Zambia, Malawi and Tanzania. First record from the Sudan.

Andira A. L. Juss.

Andira inermis (Wright) DC.
FTA 2: 246 (1871); FS: 208 (1929); FPS 2: 175 (1952); FWTA 1,2: 518 (1958); FTEA, Legum.-Papilion. 1: 63 (1971); El Amin 1990: 223.
subsp. **rooseweltii** (De Wild.) Polhill
FTEA, Legum.-Papilion. 1: 63 (1971).
Imatong Mountains group, Sudan side: Kinyeti Valley, c. 5 km. south of Hiliu along the road to Imeila, 750 m., woodland on grey clay with *Ficus sycomorus, Piliostigma thonningii, Lonchocarpus laxiflorus,* etc., 27.2.1982, *Friis & Vollesen* 1042 (BR, C, K, KHF).
Lafit, Dongotona and Nangeya Mountains: near Tirangole (4° 29' N, 32° 48' E) south-west of the Lafit Mountains, 700 m., near stream, 11.4.1949, *Jackson* 694 (KHF).
General habitat range: in lowland and medium-altitude woodland.
General distribution: Ivory Coast to South Sudan and North Uganda. Species as a whole to Senegal; also in the West Indies and tropical America.

Antopetitia A. Rich.

Antopetitia abyssinica A. Rich.
FPNA 1: 318 (1948); FCB 5: 179 (1954); FWTA 1,2: 577 (1958); FTEA, Legum.-Papilion. 2: 1049 (1971); FE 3: 227 (1989); UKWF: 149 (1994).
Syn.: *Ornithopus coriandrinus* Bak.: FTA 2: 140 (1871).
Imatong Mountains group, Sudan side: Gilo, at bridge across Ngairigi River, 1750 m., *Loudetia arundinacea* grassland with scattered trees, 9.11.1980, *Friis & Vollesen* 105 (BR, C, EA, K, KHF).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Lonyili Peak, 2260 m., short turf over rock, 26.8.1966, *Lock* K 9 (EA, MHU).
General habitat range: in medium-altitude and montane grassland, and sometimes as a weed in cultivations.
General distribution: Cameroon to Ethiopia, south to Zambia, Zimbabwe, Malawi and Mozambique. First record from the Sudan.

Argyrolobium Eckl. & Zeyh.

Argyrolobium fischeri Taub.
POLHILL 1968: 154; FTEA, Legum.-Papilion. 2: 1002 (1971); FE 3: 220 (1989); UKWF: 146 (1994); KTSL: 284 (1994).
Imatong Mountains group, Sudan side: Gilo to Mt. Konoro, 1850 m., *Loudetia arundinacea* grassland with scattered trees, 18.11.1980, *Friis & Vollesen* 305 (BR, C, FT, K, KHF).
Imatong Mountains group, Uganda side: 4 km. south-east of Lomwaga, 1500 m., tall grassland, 18.7.1974, *Katende* 2154 (EA, MHU).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Lonyili peak, 1800 m., tall grassland, 4.12.1971, *Katende* 1399 (MHU); Lonyili peak, 2000 m., shrubby grassland on upper slope of mountain, 17.5.1972, *Synnott* 1061 B (MHU).
Didinga Mountains: Mt. Lotuke, no alt., 3.1939, *MacDonald* 88 (BM); Mt. Lotuke, Char, 1830 m., wooded grassland, 19.4.1939, *Myers* 10,929 (K).
General habitat range: in medium-altitude and montane grassland, evergreen bushland and along forest edges and in clearings.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Malawi and Zambia (Nyika Plateau).

Argyrolobium rupestre (E. Mey.) Walp.
FTEA, Legum.-Papilion. 2: 1005 (1971); FE 3: 220 (1989); FSo 1: 459 (1993); UKWF: 147 (1994); HYF: 143 (1997).
subsp. **aberdaricum** (Harms) Polhill
FTEA, Legum.-Papilion. 2: 1006 (1971); FE 3: 220 (1989).
Imatong Mountains group, Sudan side: Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 836 (C); ridge leading to the summit of Mt. Kinyeti, 3000 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 22.3.1982, *Friis & Vollesen* 1282 (C, K).
General habitat range: in montane grassland.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Malawi and Zambia (Nyika Plateau). First record from the Sudan.
subsp. **kilimandscharicum** (Taub.) Polhill
Polhill 1968: 160; FTEA, Legum.-Papilion. 2: 1005 (1971).
Didinga Mountains: Mt. Lotuke, no alt., no date, *Jackson* 1321 (BM).
General habitat range: in montane grassland and along forest edges.
General distribution: Uganda, Kenya, Tanzania. Species as a whole throughout the mountains of eastern Africa south to South Africa (Cape Prov.); also in tropical Arabia.

Astragalus L.

Astragalus atropilosus (Hochst.) Bunge
FCB 5: 73 (1954); FTEA, Legum.-Papilion. 2: 1054 (1971); WICKENS 1976: 111; FE 3: 230 (1989); HYF: 153 (1997).
subsp. **burkeanus** (Harv.) Gillett
FTEA, Legum.-Papilion. 2: 1056 (1971); FE 3: 231 (1989); HYF: 153 (1997).
Syn.: [*Astragalus abyssinicus* auct., non (Hochst.) Steud. ex A. Rich.: FTA 2: 138 (1871); FPS 2: 176 (1952) {Imatong Mountains, Itibol}].
Imatong Mountains group, Sudan side: Ibahin, 1860 m., scrub, 18.12.1935, *Thomas* 1661 (BM); Mt. Itibol, 1960 m., 14.6.1939, *Andrews* 1965 (K) & 1969 (K); Gilo to Mt. Konoro, 1850 m., *Loudetia arundinacea* grassland with scattered trees, 18.11.1980, *Friis & Vollesen* 303 (BR, C, EA, K, KHF).
Imatong Mountains group, Uganda side: north of Okako, south of Mingaro, no alt., montane grassland, 9.6.1973, *Katende* 1862 (EA, MHU).
General habitat range: in medium-altitude and montane grassland, evergreen bushland, along forest edges and in clearings.
General distribution: South Sudan to North Somalia, south to South Africa (Transvaal); also in tropical Arabia. Species as a whole also in East Congo [previously Zaire].

Baphia Lodd.

Baphia wollastonii Bak. f.
FPNA 1: 266 (1948); FCB 4: 27 (1953); ITU: 297 (1952); FPS 2: 176 (1952) {Imatong Mountains}; BRUMMITT 1968: 533; FTEA, Legum.-Papilion. 1: 60 (1971).
Note. The record in FPS of this species from Imatong Mountains is doubtful, see BRUMMITT 1968, p. 535. The species is otherwise distributed in lowland and medium-altitude forest of Uganda and East Congo [previously Zaire]. There is a documented record of this species (*Leggat* 60 (EA, K)) from the Zoka Forest, North West Uganda., a forest with many floristic similarities with the lowland forests of the Imatong Mountains.

Cajanus DC.

Cajanus cajan (L.) Millsp.
FWTA 1,2: 559 (1958); FTEA, Legum.-Papilion. 2: 709 (1971); FE 3: 181 (1989); UKWF: 135 (1994); HYF: 159 (1997).
Syn.: *Cajanus indicus* Spreng.: FTA 2: 216 (1871).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., cultivated in land claimed from woodland, 6.1.1979, *Shigeta* 36 (EA, K).
Cultivated in lowland and at medium-altitudes.
General distribution: throughout tropical Africa and elsewhere in the tropics; frequently escaped in abandoned cultivated areas.

Calpurnia E. Mey.

Calpurnia aurea (Aiton) Benth.
FTEA, Legum.-Papilion. 1: 47 (1971); FE 3: 104 (1989); KTSL: 285 (1994).
Syn.: *Calpurnia subdecandra* (L'Hér.) Schweick.: ITU: 298 (1952); FPS 2: 177 (1952) {Didinga Mountains, Nagichot}; FCB 4: 44 (1953).
subsp. **aurea**
FTEA, Legum.-Papilion. 1: 47 (1971); KTSL: 285 (1994).
Didinga Mountains: Nagichot, 1980 m., forest edge, 26.4.1939, *Myers* 11,149 (K).
General habitat range: in medium-altitude and montane evergreen bushland and at forest edges.
General distribution: Central African Republic to Ethiopia, south to Angola and South Africa (Natal). Species as a whole also in South Africa (Cape Prov.) and India.

Craibia Harms & Dunn

Craibia brownii Dunn.
ITU: 299 (1952); FCB 5: 54 (1954); FTEA, Legum.-Papilion. 1: 152 (1971); SOMMERLATTE 1990: 206; KTSL: 288 (1994).
Imatong Mountains group, Sudan side: Talanga to Upper Talanga, 1100 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, 7.12.1980, *Friis & Vollesen* 743 (BR, C, EA, K, KHF).
General habitat range: in lowland, medium-altitude and montane forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as an understorey tree in lowland forest.
General distribution: East Congo [previously Zaire] to South Sudan, Uganda and Kenya, south to Tanzania.

Craibia laurentii (De Wild.) De Wild.
ITU: 299 (1952); FCB 5: 55 (1954); FTEA, Leg. 3: 149 (1971); FE 3: 109 (1989); KTSL: 288 (1994).
Syn.: *Craibia utilis* M.B. Moss in CHIPP 1929: 190 & 195; FPS 2: 178 (1952) {Lotti}; JACKSON 1956: 353 {Talanga, Lotti}.
Imatong Mountains group, Sudan side: Lotti, no alt., in fringing forest, a 18 m. high, slightly buttressed tree, growing with *Coffea canephora*; it yields good timber for huts, 4.2.1929, *Chipp* 12 (K, holotype of *C. utilis*; KHF, WM, isotypes); Lotti, no alt., forest, 7.10.1938, *Myers* 9579 (K, WM); near Lotti rest house, no alt., 8.6.1939, *Andrews* 1696 (K, WM); Lotti, no alt., closed forest, 14.2.1953, *Jackson* 1741 (FHO) & 1742 (FHO); Lotti, 1000 m., in forest understorey, 24.6.1953, *Jackson* 3035 (FHO, KHF) & 3041 (FHO, KHF).
Didinga Mountains: rocks north east of Chukudum (4° 15' N, 33° 27' E), 1100 m., 21.12.1983, *Kielland-Lund* 430 (NLH).
General habitat range: in lowland and medium-altitude forest and evergreen bushland.
General distribution: Cameroon to South Sudan, South West Ethiopia and Kenya, south to Congo [previously Zaire].

Crotalaria L.

Crotalaria aculeata De Wild.
FCB 4: 107 (1953); FWTA 1,2: 548 (1958); FTEA, Legum.-Papilion. 2: 969 (1971); POLHILL 1982: 295.
subsp. **claessensii** (De Wild.) Polhill
POLHILL 1982: 295.
Syn.: *Crotalaria aculeata* De Wild. var. *aculeata*, pro parte: FTEA, Legum.-Papilion. 2: 970 (1971).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., weed in cultivations in open woodland, 1.2.1979, *Shigeta* 175 (EA).
General habitat range: in lowland and medium-altitude deciduous bushland and in abandoned cultivated land.
General distribution: Congo [previously Zaire] to Ethiopia. Species as a whole to Senegal, and south to Angola, Zambia and Tanzania; also in Madagascar.

Crotalaria alexandri Bak. f.
FCB 4: 261 (1953); FTEA, Legum.-Papilion. 2: 992 (1971); POLHILL 1982: 367; FE 3: 218 (1989); UKWF: 146 (1994).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 17.11.1980, *Friis & Vollesen* 288 (BR, C, K, KHF); Gilo to Mt. Konoro, 2000 m., *Loudetia arundinacea* grassland with scattered trees, 16.11.1980, *Friis & Vollesen* 259 (BR, C, EA, K, KHF).
General habitat range: in lowland and medium-altitude deciduous woodland and bushland.
General distribution: South Sudan and Ethiopia south to Zambia, Zimbabwe, Malawi and Mozambique.
Note. No records from Sudan in ANDREWS or POLHILL 1982; new to the Sudan.

Crotalaria brevidens Benth.
FTA 2: 37 (1871); FS: 177 (1929); FPS 2: 186 (1952); FTEA, Legum.-Papilion. 2: 908 (1971); WICKENS 1976: 111; POLHILL 1982: 189; FE 3: 207 (1989); UKWF: 144 (1994).
var. **intermedia** (Kotschy) Polhill
FTEA, Legum.-Papilion. 2: 909 (1971); WICKENS 1976: 111; POLHILL 1982: 190; FE 3: 207 (1989).
Syn.: *Crotalaria intermedia* Kotschy: FTA 2: 37 (1871), pro parte; FS: 177 (1929); FPNA 1: 273 (1948); FPS 2: 186 (1952); FCB 4: 220 (1953).
Imatong Mountains group, Sudan side: Kinyeti Valley, c. 100 m from Hiliu along the road to Torit, 700 m., roadside, 21.11.1983, *Kielland-Lund* 12 (C, NLH).
Imatong Mountains group, Uganda side: 4 km. south-east of Lomwaga, 1800 m., shallow soil on rock in grassland, 18.7.1974, *Katende* 2156 (MHU).
General habitat range: in lowland, medium-altitude and montane grassland, deciduous bushland and woodland.
General distribution: Nigeria to Ethiopia, south to Tanzania. Species as a whole within the same general distribution area.

Crotalaria cephalotes A. Rich.
FTA 2: 23 (1871); FPS 2: 184 (1952); FCB 4: 200 (1953); FWTA 1,2: 549 (1958); FTEA, Legum.-Papilion. 2: 983 (1971); POLHILL 1982: 311; FE 3: 217 (1989); UKWF: 146 (1994).
Didinga Mountains: Chukudum Regional District Centre (4° 14' N, 33° 29' E), 1100 m., 16.12.1983, *Kielland-Lund* 329 (C, NLH).
General habitat range: in lowland, medium-altitude and montane grassland and woodland; also in waste places and a frequent weed in cultivations.
General distribution: Senegal to Ethiopia, south to Angola, Zambia, Zimbabwe and Mozambique.

Crotalaria chrysochlora Bak. f. ex Harms
FPS 2: 188 (1952); FCB 4: 267 (1953); FTEA, Legum.-Papilion. 2: 920 (1971); POLHILL 1982: 202; UKWF: 144 (1994).
Imatong Mountains group, Sudan side: Talanga, 1000 m., in *Combretum* woodland after fire, 28.2.1950, Jackson 1166 (BM, KHF); Kinyeti Valley, 16 km. north of Katire, 900 m., woodland with *Combretum collinum, C. molle* and *Annona senegalensis*, 22.2.1982, *Friis & Vollesen* 995 (BR, C, EA, K, KHF); Upper Kinyeti Valley, above Gilo Pool (4° 02' N, 32° 50' E), no alt, 15.1.1984, *Kielland-Lund* 653 (C, NLH); at path from Gilo to Garia, 2000 m., *Loudetia arundinacea* grassland on very shallow soil, 19.3.1982, *Friis & Vollesen* 1263 (C, K, KHF).
Imatong Mountains group, Uganda side: without further locality, 2320 m., grassland, 4.1938, *Eggeling* 3550 (K).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1830 m., grassland, 2.1960, *Wilson* 807 (EA).
General habitat range: in medium-altitude and montane grassland.
General distribution: Cameroon to South Sudan, Uganda and Kenya, south to Angola and Zambia.

Crotalaria comosa Bak.
FTA 2: 34 (1871); FCB 4: 268 (1953); FWTA 1,2: 550 (1958); WICKENS 1976: 112; POLHILL 1982: 208; FE 3: 210 (1989).
Syn.: *Crotalaria dillonia* Bak.: FTA 2: 41 (1871); FS: 178 (1929). *Crotalaria petitiana* (A. Rich.) Walp.: FPS 2: 190 (1952).
Imatong Mountains group, Sudan side: Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees of *Terminalia laxiflora, T. brownii, Pterocarpus lucens, Combretum collinum* and *Vitex doniana* on rocky outcrop, 3.12.1980, *Friis & Vollesen* 667 (C, K, KHF); Kinyeti Valley, Hiliu, south-east of compound, 700 m., in cultivation, 2.12.1983, *Kielland-Lund* 155 (C, NLH).
Didinga Mountains: Lokwara (4° 40' N, 33° 27'

E), black cotton soil, 29.9.1953, *Peers* "Lokwara 9" (K).
General habitat range: in lowland and medium-altitude deciduous woodland and wooded grassland.
General distribution: Senegal to Ethiopia, south to Angola, Zambia, Malawi and Mozambique.

Crotalaria congesta Polhill
POLHILL 1982: 315.
Imatong Mountains group, Sudan side: Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* on moist slope along trail, 20.11.1980, *Friis & Vollesen* 368 (C, KHF).
General habitat range: in medium-altitude and montane deciduous woodland and grassland, sometimes in disturbed places.
General distribution: East Congo [previously Zaire] to South Sudan, south to Tanzania and Malawi. First record from the Sudan.

Crotalaria cylindrica A. Rich.
FTEA, Legum.-Papilion. 2: 920 (1971); POLHILL 1982: 203; FE 3: 209 (1989); UKWF: 144 (1994).
subsp. **cylindrica**
FTEA, Legum.-Papilion. 2: 922 (1971); POLHILL 1982: 203.
Imatong Mountains group, Sudan side: Gilo to Mt. Konoro, 2000 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 16.11.1980, *Friis & Vollesen* 257 (C, K, KHF).
General habitat range: in medium-altitude and montane evergreen bushland, especially in disturbed habitats.
General distribution: Ethiopia, South Sudan and Kenya. Species as a whole with the same general distribution area.

Crotalaria deserticola Bak. f.
FTEA, Legum.-Papilion. 2: 960 (1971); POLHILL 1982: 277; FE 3: 216 (1989); UKWF: 145 (1994).
subsp. **deserticola**
FTEA, Legum.-Papilion. 2: 960 (1971); POLHILL 1982: 277.
Imatong Mountains group, Sudan side: Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 8.12.1980, *Friis & Vollesen* 777 (BR, C, K, KHF).
General habitat range: in lowland, medium-altitude and montane grassland, and in deciduous woodland and bushland.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Tanzania, Zambia and Mozambique. First record from the Sudan.

Crotalaria glauca Willd.
FTA 2: 12 (1871); FPNA 1: 270 (1948); FPS 2: 182 (1952); FCB 4: 102 (1953); FWTA 1,2: 548 (1958); FTEA, Legum.-Papilion. 2: 885 (1971); POLHILL 1982: 136; FE 3: 202 (1989); UKWF: 143 (1994).
Imatong Mountains group, Sudan side: Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 15.11.1980, *Friis & Vollesen* 250 (BR, C, K, KHF).
General habitat range: in lowland, medium-altitude and montane grassland, deciduous woodland and bushland.
General distribution: Senegal to Ethiopia and Somalia, south to Angola, Zambia and Mozambique.

Crotalaria goreensis Guill. & Perr.
FTA 2: 28 (1871); FS: 179 (1929); FPNA 1: 281 (1948); FPS 2: 191 (1952); FCB 4: 124 (1953); FWTA 1,2: 548 (1958); FTEA, Legum.-Papilion. 2: 875 (1971); WICKENS 1976: 112; POLHILL 1982: 104; FE 3: 201 (1989); UKWF: 143 (1994).
Imatong Mountains group, Sudan side: Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees of *Terminalia laxiflora, T. brownii,*

Pterocarpus lucens, Combretum collinum and *Vitex doniana* on rocky outcrop, 3.12.1980, *Friis & Vollesen* 666 (C, K, KHF).
General habitat range: in lowland, medium-altitude and montane grassland and woodland.
General distribution: Senegal to Ethiopia, south to Angola, Zambia, Zimbabwe and Mozambique.

Crotalaria hyssopifolia Klotzsch
FTA 2: 24 (1871); FCB 4: 217 (1953); FWTA 1,2: 549 (1958); FTEA, Legum.-Papilion. 2: 991 (1971); WICKENS 1976: 112; POLHILL 1982: 363; FE 3: 218 (1989); UKWF: 146 (1994).
Imatong Mountains group, Sudan side: Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees of *Terminalia laxiflora, T. brownii, Pterocarpus lucens, Combretum collinum* and *Vitex doniana* on rocky outcrop, 3.12.1980, *Friis & Vollesen* 665 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude deciduous woodland and grassland.
General distribution: Senegal to Ethiopia, south to Zimbabwe, Malawi and Mozambique.

Crotalaria incana L.
FTA 2: 31 (1871); FPNA 1: 274 (1948); FCB 4: 148 (1953); FWTA 1,2: 550 (1958); FTEA, Legum.-Papilion. 2: 869 (1971); POLHILL 1982: 95; FE 3: 201 (1989); FSo 1: 450 (1993); UKWF: 143 (1994); HYF: 141 (1997).
subsp. **purpurascens** (Lam.) Milne-Redh.
FTEA, Legum.-Papilion. 2: 870 (1971); POLHILL 1982: 97; FE 3: 201 (1989).
Imatong Mountains group, Sudan side: Gilo to Mt. Konoro, 1800 m., *Loudetia arundinacea* grassland with scattered trees, on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 23.11.1980, *Friis & Vollesen* 410 (BR, C, K, KHF).
General habitat range: in medium-altitude and montane grassland and secondary bushland, often in disturbed places.
General distribution: Cameroon to Ethiopia, south to Zambia, Malawi and Zimbabwe; also in Madagascar and tropical Arabia. Species as a whole also as far as to Sierra Leone, in Somalia, and also widespread in tropical America. First record from the Sudan.

Crotalaria intonsa Polhill
POLHILL 1982: 206; FE 3: 209 (1989).
Imatong Mountains group, Sudan side: Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 8.11.1980, *Friis & Vollesen* 15 (BR, C, K, KHF).
General habitat range: in medium-altitude and montane forest, usually along edges and in clearings.
General distribution: South Sudan, Ethiopia. First record from the Sudan.

Crotalaria laburnifolia L.
FS: 177 (1929); FPS 2: 185 (1952); FCB 4: 227 (1953); FTEA, Legum.-Papilion. 2: 856 (1971); WICKENS 1976: 112; POLHILL 1982: 76; FE 3: 200 (1989); FSo 1: 448 (1993); UKWF: 142 (1994).
subsp. **laburnifolia**
FTEA, Legum.-Papilion. 2: 857 (1971); WICKENS 1976: 112; POLHILL 1982: 78; FE 3: 200 (1989); FSo 1: 448 (1993).
Imatong Mountains group, Sudan side: Kinyeti Valley, 3 km. south of Hiliu along Katire road, no alt., 30.5.1984, *Kielland-Lund* 796 (C, NLH).
Imatong Mountains group, Uganda side: Agoro, 910 m., savannah, 4.1943, *Purseglove* 1800 (EA, K).
Didinga Mountains: between Iwowa and Nagichot, 1920 m., wooded grassland, 24.4.1939, *Myers* 11,090 (K); Longumu River north of Chukudum (4° 21' N, 33° 21' E), 900 m., 20.12.1983, *Kielland-Lund* 406 (C, NLH).
General habitat range: in lowland and medium-altitude deciduous woodland and bushland, and in grassland, especially in disturbed places.
General distribution: Chad and East Congo [previously Zaire] to Ethiopia and Somalia, south

to Zambia, Malawi, Zimbabwe and Mozambique; also on the Mascarene Islands, and in tropical Asia to North East Australia. Species as a whole south to South Africa (Transvaal, Natal), otherwise within same general distribution area.

Crotalaria lachnocarpoides Engl.
FPS 2: 185 (1952) {Imatong Mountains}; FCB 4: 153 (1953); FTEA, Legum.-Papilion. 2: 879 (1971); POLHILL 1982: 117; FE 3: 202 (1989); UKWF: 143 (1994); KTSL: 290 (1994).
Imatong Mountains group, Sudan side: without further locality, 2.1936, *Johnston* 1435 (K); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 15.11. 1980, *Friis & Vollesen* 251 (BR, C, K, KHF); Kipia, 2680 m., rocky hillside, 1.1939, *MacDonald* 53 (BM); Kipia, 2740 m., between rocks, 30.12.1935, *Thomas* 1883 (BM, K).
Didinga Mountains: between Iwowa and Nagichot, 1920 m., wooded grassland, 24.4.1939, *Myers* 11,088 (K).
General habitat range: in medium-altitude and montane grassland, wooded grassland and evergreen bushland.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Zambia, Malawi, Zimbabwe and Mozambique.

Crotalaria lachnophora A. Rich.
FPNA 1: 281 (1948); FPS 2: 191 (1952); FCB 4: 129 (1954); FWTA 1,2: 548 (1958); FTEA, Legum.-Papilion. 2: 877 (1971); POLHILL 1982: 108; FE 3: 202 (1989); UKWF: 143 (1994); KTSL: 290 (1994).
Syn.: *Crotalaria lachnocarpa* Bak.: FTA 2: 33 (1871).
Imatong Mountains group, Sudan side: Palotaka, no alt., 1979, *Shigeta* 53 & 166 (?EA, both identified and listed by M.G. Gilbert, not traced).
General habitat range: in lowland and medium-altitude grassland and wooded grassland.
General distribution: Senegal to Ethiopia, south to Angola, Zimbabwe and Mozambique.

Crotalaria leprieurii Guill. & Perr.
FTA 2: 14 (1871); FTEA, Legum.-Papilion. 2: 944 (1971); POLHILL 1982: 239.
Syn.: *Crotalaria vogelii* Benth.: FPS 2: 182 (1952); FCB 4: 83 (1953); FWTA 1,2: 548 (1958). *Crotalaria linearifolia* De Wild.: FCB 4: 83 (1953).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 3.1.1984, *Kielland-Lund* 561 (C, NLH).
General habitat range: in lowland and medium-deciduous woodland and bushland, often in rocky places.
General distribution: Senegal to Sudan, south to Angola and Congo [previously Zaire].

Crotalaria natalitia Meissn.
FTA 2: 34 (1871); FPNA 1: 282 (1948); FPS 2: 191 (1952) {Imatong Mountains, Itibol}; FCB 4: 122 (1953); FTEA, Legum.-Papilion. 2: 871 (1971); POLHILL 1982: 100; FE 3: 201 (1989); UKWF: 143 (1994); KTSL: 291 (1994); HYF: 142 (1997).
var. **rutshuruensis** De Wild.
FTEA, Legum.-Papilion. 2: 872 (1971); POLHILL 1982: 101; FE 3: 201 (1989).
Syn.: [*Crotalaria natalitia* auct., non Meissn.: FPS 2: 191 (1952)].
Imatong Mountains group, Sudan side: Itibol, 1940 m., scrub, 17.12.1935, *Thomas* 1642 (BM, K); Mt. Itibol, 1950 m., 1939, *Andrews* 1967 (K); Gilo to Mt. Konoro, 2000 m., *Loudetia arundinacea* grassland with scattered trees, 16.11. 1980, *Friis & Vollesen* 265 (BR, C, K, KHF).
General habitat range: in lowland, medium-altitude and montane deciduous woodland and bushland.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Angola, Zambia and Zimbabwe; also in tropical Arabia. Species

as a whole also in South Africa (Transvaal, Natal).

Crotalaria ochroleuca G. Don
FTA 2: 37 (1871); FCB 4: 221 (1953); FWTA 1,2: 551 (1958); FTEA, Legum.-Papilion. 2: 908 (1971); WICKENS 1976: 112; POLHILL 1982: 188; FE 3: 207 (1989); UKWF: 144 (1994).
Syn.: *Crotalaria cannabina* Bak. f.: FS: 177 (1929); FPS 2: 186 (1952).
Imatong Mountains group, Sudan side: Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 29.11.1980, *Friis & Vollesen* 537 (C, K, KHF).
General habitat range: in lowland and medium-altitude deciduous woodland and bushland, often associated with patches of temporarily inundated grassland in depressions and on flood plains.
General distribution: Senegal to Ethiopia, south to Botswana, Zambia, Zimbabwe and Mozambique.

Crotalaria onobrychis A. Rich.
FTA 2: 28 (1871); FPS 2: 188 (1952); POLHILL 1982: 200; FE 3: 208 (1989).
Syn.: *Crotalaria impressa* Walp. subsp. *onobrychis* (A. Rich.) Cufod. *Crotalaria astragalina* A. Rich.: FCB 4: 179 (1953).
Imatong Mountains group, Sudan side: Mt. Itibol, 1950 m., 14.6.1939, *Andrews* 1974 (K).
General habitat range: in medium-altitude and montane grassland.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Malawi.

Crotalaria ononoides Benth.
FTA 2: 22 (1871); FS: 176 (1929); FPNA 1: 272 (1948); FPS 2: 185 (1952); FCB 4: 136 (1953); FWTA 1,2: 549 (1958); FTEA, Legum.-Papilion. 2: 892 (1971); POLHILL 1982: 154; FE 3: 202 (1989); UKWF: 143 (1994).
var. **ononoides**
Imatong Mountains group, Sudan side: Katire to Gilo, at road to Itibol, 1300 m., wooded grassland with *Combretum collinum, C. molle, Terminalia laxiflora* and *Entada abyssinica,* tall grass cover with *Pennisetum purpureum* and *Hyparrhenia rufa,* 25.11.1980, *Friis & Vollesen* 452 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude grasslands.
General distribution: Sierra Leone to Ethiopia, south to Angola, Zambia and Tanzania; also in Madagascar.

Crotalaria pallida Aiton
FTEA, Legum.-Papilion. 2: 905 (1971); WICKENS 1976: 112; POLHILL 1982: 184; FE 3: 205 (1989); UKWF: 144 (1994).
var. **pallida**
FTEA, Legum.-Papilion. 2: 905 (1971); WICKENS 1976: 112; FE 3: 207 (1989).
Imatong Mountains group, Sudan side: at River Khodo near Molongori (4° 10' N, 32° 52' E), 700 m., meander of stream, with *Cassia occidentalis* and weeds, 17.1.1950, *Jackson* 1054 (BM).
General habitat range: in lowland, medium-altitude and montane grassland and wooded grassland, often in disturbed places, areas liable to flooding, and along river banks.
General distribution: the species is widely cultivated throughout the tropics, and is often escaped and naturalised.

Crotalaria pychnostachya Benth.
FTA 2: 43 (1871); FS: 179 (1929); FPS 2: 189 (1952); FTEA, Legum.-Papilion. 2: 903 (1971); POLHILL 1982: 178; FE 3: 205 (1989); UKWF: 143 (1994); HYF: 142 (1997).
subsp. **pychnostachya**
POLHILL 1982: 178; FE 3: 205 (1989).
Didinga Mountains: 8 km. south of Kapoeta on

Nathilani road (4° 40' N, 33° 35' E), no alt., on sandy soil, 27.8.1953, *Peers* KM2 (K).
General habitat range: in lowland and medium-altitude grasslands and deciduous bushland, often in disturbed places.
General distribution: Sudan, Ethiopia and Somalia south to Tanzania; also in tropical Arabia. Species as a whole within the same general distribution area.

Crotalaria quartiniana A. Rich.
FTA 2: 42 (1871); FCB 4: 140 (1953); FTEA, Legum.-Papilion. 2: 863 (1971); POLHILL 1982: 89; FE 3: 200 (1989); UKWF: 142 (1994); HYF: 142 (1997).
Imatong Mountains group, Sudan side: Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 8.12.1980, *Friis & Vollesen* 764 (BR, C, EA, FT, K, KHF); Gilo to Mt. Konoro, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 18.11. 1980, *Friis & Vollesen* 324 (BR, C, K, KHF).
General habitat range: in montane evergreen bushland and at forest margins.
General distribution: Nigeria and Cameroon to Ethiopia and South Sudan, south to Kenya and North Angola; also in tropical Arabia. First record from the Sudan.
Note. The reference to *Crotalaria quartiniana* A. Rich. in FS: 178 (1929) refers to *Crotalaria taubertii* Bak. f.

Crotalaria retusa L.
FTA 2: 13 (1871); FPS 2: 182 (1952); FCB 4: 90 (1953); FWTA 1,2: 548 (1958); FTEA, Legum.-Papilion. 2: 958 (1971); POLHILL 1982: 272; FE 3: 216 (1989); FSo 1: 458 (1993); HYF: 142 (1997).
Imatong Mountains group, Sudan side: Kinyeti Valley, 11 km. south of Hiliu on road towards Katire, 700 m., groundwater savannah, 7.12. 1983, *Kielland-Lund* 255 (C, NLH).
General habitat range: in lowland, medium-altitude and montane grassland, woodland and waste places, sometimes cultivated for its fibres and becoming a weed in old cultivations.
General distribution: pantropical; probably of Asian origin, but now widespread due to it use.

Crotalaria senegalensis (Pers.) Bacle ex DC.
FTA 2: 31 (1871); FPS 2: 186 (1952); FCB 4: 144 (1953); FWTA 1,2: 550 (1958); FTEA, Legum.-Papilion. 2: 967 (1971); POLHILL 1982: 285; HYF: 142 (1997).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, near bridge west of town, 700 m., 30.11.1983, *Kielland-Lund* 134 (C, NLH).
General habitat range: in lowland and medium-altitude woodland and wooded grassland, usually on sand, and often in disturbed places.
General distribution: Cape Verde Islands and Senegal to Sudan and Ethiopia, south to Namibia, Botswana, Zimbabwe and Mozambique; also in tropical Arabia.

Crotalaria shirensis (Bak. f.) Milne-Redh.
FTEA, Legum.-Papilion. 2: 946 (1971); POLHILL 1982: 242; UKWF: 145 (1994).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 17.11.1980, *Friis & Vollesen* 287 (C, KHF).
General habitat range: in medium-altitude deciduous woodland and grassland.
General distribution: Cameroon to South Sudan and Kenya, south to Angola, Zambia, Malawi, Zimbabwe and Mozambique.

Crotalaria stenorhampha Harms
FPS 2: 184 (1952); FCB 4: 256 (1953); POLHILL 1982: 321; FE 3: 218 (1989).
Syn.: [*Crotalaria senegalensis* (Pers.) Bacle ex DC. var. *carinata* auct., non (Steud.) Bak. f.: FPS 2: 187 (1952), quoad specim. ex Imatong Mountains. *Crotalaria senegalensis* auct., non Bacle ex DC.: CHIPP 1929: 190].

Imatong Mountains group, Sudan side: near Laboni, in fire-swept grassland, a perennial herb appearing soon after grass fires, 8.2.1929, *Chipp* 33 (K, WM); Issore, 1200 m., in burnt grassland, 5.3.1951, *Jackson* 1799 (WM).
General habitat range: in lowland and medium-altitude deciduous woodland and wooded grassland.
General distribution: Cameroon to Ethiopia, south to Congo [previously Zaire] and Uganda.

Crotalaria vatkeana Engl.
FTEA, Legum.-Papilion. 2: 924 (1971); POLHILL 1982: 206; FE 3: 209 (1989); UKWF: 144 (1994).
Imatong Mountains group, Sudan side: Mt. Kinyeti, 3050 m. ("1000 ft"), rocky summit, 30.12.1935, *Thomas* 1845 (BM, K); summit of Mt. Kinyeti, 3180 m., rocky summit, 1.1.1939, *MacDonald* 35 (BM); summit of Mt. Kinyeti, 3180 m., rocky summit, 15.11.1949, *Jackson* 919 (BM); Mt. Kinyeti, 3050 m., in grassy patches just below the rocky summit, 17.3.1953, *Prowse* 334 (KHU).
General habitat range: in medium-altitude and montane evergreen bushland, at forest margins and in clearings.
General distribution: South Sudan, Ethiopia, Kenya and Tanzania.

Crotalaria verdcourtii Polhill
FTEA, Legum.-Papilion. 2: 896 (1971); POLHILL 1982: 168; FE 3: 202 (1989); UKWF: 143 (1994).
Didinga Mountains: Lokwara (4° 40' N, 33° 27' E), on black cotton soil, 29.9.1953, *Peers* "Lokwara 8" (K).
General habitat range: in lowland and medium-altitude grassland and deciduous bushland.
General distribution: South Sudan, South Ethiopia and Kenya.

Crotalaria sp.
Imatong Mountains group, Uganda side: 2 km. north-east of Lututuru, near end of road, 1800 m., grassland, 17.2.1969, *Lye* 2088 (?MHU, not traced).

Dalbergia L. f.

Dalbergia lactea Vatke
FPNA 1: 333 (1948); FPS 2: 192 (1952) {Imatong Mountains, Itibol}; FCB 6: 64 (1954); FWTA 1,2: 516 (1958); FTEA, Legum.-Papilion. 1: 111 (1971); FE 3: 107 (1989); EL AMIN 1990: 229; KTSL: 292 (1994).
Imatong Mountains group, Sudan side: Itibol, 1860 m., forest, 19.12.1935, *Thomas* 1693 (BM, K).
Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).
General habitat range: in lowland, medium-altitude and montane forest.
General distribution: Nigeria to Ethiopia, south to Zimbabwe and Mozambique.

Dalbergia melanoxylon Guill. & Perr.
FTA 2: 233 (1871); FS: 207 (1929); ITU: 300 (1952); FPS 2: 192 (1952); FCB 6: 54 (1954); FWTA 1,2: 515 (1958); FTEA, Legum.-Papilion. 1: 100 (1971); WICKENS 1976: 113; FE 3: 105 (1989); EL AMIN 1990: 229; KTSL: 293 (1994).
Imatong Mountains group, Sudan side: Hiliu, 13 km. south of Torit, 700 m., small hills with woodland in extensive cultivations, 28.2.1986, *Bodoegaard & Francis* 18 (EA); Hiliu, south of compound (4° 16' N, 32° 48' E), no alt., 25.5.1984, *Kielland-Lund* 740 (C, NLH); Kinyeti Valley, Hiliu, across Kalikoi stream, no alt., 13.3.1984, *Kielland-Lund* 1011 (C, NLH).
Imatong Mountains group, Uganda side: Agoro, no alt., 3.1935, *Eggeling* 1745 (MHU); above Agoro, 1370 m., rocky hillside, 13.11.1945, *Thomas* 4368 (EA, K).

Didinga Mountains: Boya Hill, 700 m., rocky outcrop, 8.1.1985, *Fukui* 84-129 (EA); between Tok and Iwowa (4° 17' N, 33° 42' E), 1700 m., in *Combretum* woodland, 8.4.1949, *Jackson* 661 (FHO, KHF).
General habitat range: in lowland and medium-altitude deciduous woodland and wooded grassland.
General distribution: Senegal to West Ethiopia, south to Angola and South Africa (Transvaal); also in India.

Dalbergia sp. cf. D. lactea Vatke
Imatong Mountains group, Sudan side: Lotti, 910 m., in closed forest, "tall tree to c. 30 m., bole to 1 m. in diam."), 1935, *Thomas* 1758 (BM).
Note. The specimen consists of a leaf only, probably *D. lactea* which is a climber; it is likely that there is some confusion with the supporting tree on the label.

Desmodium Desv.

Desmodium adscendens (Sw.) DC.
FTA 2: 162 (1871); FPNA 1: 328 (1948); FPS 2: 194 (1952); FCB 5: 189 (1954); FWTA 1,2: 585 (1958); FTEA, Legum.-Papilion. 1: 461 (1971); FE 3: 150 (1989); UKWF: 128 (1994).
var. **robustum** Schubert
FTEA, Legum.-Papilion. 1: 462 (1971); FE 3: 150 (1989).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 29.11.1980, *Friis & Vollesen* 545 (C, K).
General habitat range: in lowland and medium-altitude forest.
General distribution: Senegal and Guinée to South Sudan, Uganda and Kenya, south to Angola, Zambia, Malawi and Mozambique.

Desmodium dichotomum (Willd.) DC.
FPS 2: 195 (1952); FTEA, Legum.-Papilion. 1: 471 (1971); FE 3: 151 (1989).
Didinga Mountains: Lokwara, in black cotton soil, 29.29.1953, *Peers* "Lokwara 7" (K).
General habitat range: in lowland and medium-altitude grassland.
General distribution: Nigeria to Ethiopia, south to Uganda; also in India, China and Indonesia.

Desmodium gangeticum (L.) DC.
FS: 196 (1929); FPNA 1: 327 (1948); FPS 2: 193 (1952); FCB 5: 196 (1954); FWTA 1,2: 584 (1958); FTEA, Legum.-Papilion. 1: 467 (1971); WICKENS 1976: 113; FE 3: 151 (1989); UKWF: 129 (1994); HYF: 154 (1997).
Syn.: *Desmodium polygonoides* Bak.: FTA 2: 161 (1871).
Imatong Mountains group, Sudan side: Loa, at Moliandro village west of Kerepi (3° 54' N, 31° 54' E), no alt., 5.6.1984, *Kielland-Lund* 840 (C, NLH); Kinyeti Valley, just east of stream east of Hiliu, no alt., in savannah, 24.5.1984, *Kielland-Lund* 708 (C, NLH); Katire, 1000 m., gallery forest, 23.10.1949, *Jackson* 995 (BM); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* on forest floor, 26.11.1980, *Friis & Vollesen* 481 (C); Kinyeti Valley, near Imeila, 850 m., woodland with *Albizia zygia, Annona senegalensis, Combretum collinum* and *Lonchocarpus laxiflorus,* 24.2.1982, *Friis & Vollesen* 1019 (C, K, KHF).
General habitat range: in lowland and medium-altitude deciduous forest, woodland and grassland.
General distribution: Senegal and Guinée to Ethiopia, south to South Africa; widespread throughout the tropics of the Old World.

Desmodium repandum (Vahl) DC.
FPS 2: 194 (1952); FCB 5: 193 (1954); FWTA 1,2: 584 (1958); FTEA, Legum.-Papilion. 1: 465

(1971); WICKENS 1976: 113; FE 3: 150 (1989); UKWF: 128 (1994); HYF: 154 (1997).
Syn.: *Desmodium scalpe* DC.: FTA 2: 164 (1871); FS: 196 (1929); FPNA 1: 327 (1948).
Imatong Mountains group, Sudan side: without further locality, no alt., 2.1936, *Johnston* 1471 (K); without further locality, 3050 m., 12.2.1936, *Johnston* 1513 (K); Laboni, no alt., riverine vegetation along the River Laneka, 15.10.1938, *Myers* 9754 (WM); ravine of Kinyeti River, 1520-1830 m., 15.6.1939, *Andrews* 2025 (K, WM); just below Gilo forest Project Centre, 1800 m., 26.12.1983, *Kielland-Lund* 469 (C, NLH); Gilo, 1900 m., *Podocarpus latifolius* forest, 10.1948, *Jackson* 421 (BM); Kipia, 2680 m., in scrub, 1.1939, *MacDonald* 73 (BM).
General habitat range: in medium-altitude and montane forest and evergreen bushland, often in disturbed places.
General distribution: Guinée to Ethiopia, south to South Africa; also in Madagascar, on the Mascarene Islands, and in tropical Asia, including tropical Arabia.

Desmodium salicifolium (Poir.) DC.
FPNA 1: 330 (1948); FPS 2: 195 (1952); FCB 5: 198 (1954); FWTA 1,2: 584 (1958); FTEA, Legum.-Papilion. 1: 469 (1971); WICKENS 1976: 113; FE 3: 151 (1989); UKWF: 129 (1994).
var. **salicifolium**
FTEA, Legum.-Papilion. 1: 470 (1971).
Syn.: *Desmodium paleaceum* Guill. & Perr.: FTA 2: 166 (1871); FS: 196 (1929).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* at edge of forest clearing, 11.12.1980, *Friis & Vollesen* 809 (C, K, KHF); Talanga, 1000 m., swampy stream-side in forest, 6.11.1948, *Jackson* 479 (BM).
General habitat range: in lowland, medium-altitude and montane forest, especially along edges and in clearings, and in adjacent woodland and grassland.
General distribution: Senegal to Ethiopia, south to South Africa; also in Madagascar and on the Mascarene Islands.

Desmodium setigerum (E. Mey.) Harv.
FCB 5: 187 (1954); FWTA 1,2: 585 (1958); FTEA, Legum.-Papilion. 1: 460 (1971); UKWF: 128 (1994).
Imatong Mountains group, Sudan side: Talanga, 950 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, along small brook between rocks, 2.12.1980, *Friis & Vollesen* 637 (BR, C, FT, K, KHF).
General habitat range: in medium-altitude and montane grassland.
General distribution: Guinée and Liberia to Sudan, Uganda and Kenya, south to South Africa (Natal).

Desmodium velutinum (Willd.) DC.
FCB 5: 194 (1954); FWTA 1,2: 584 (1958); FTEA, Legum.-Papilion. 1: 466 (1971); FE 3: 151 (1989); UKWF: 129 (1994); KTSL: 294 (1994).
Syn.: *Desmodium lasiocarpum* (P. Beauv.) DC.: FTA 2: 162 (1871); FS: 196 (1929); FPNA 1: 327 (1948); FPS 2: 193 (1952).
Imatong Mountains group, Sudan side: Palotaka, no alt., 1979, *Shigeta* 18 (?EA, identified and listed by M.G. Gilbert, not traced); Lotelele village, west of Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 29.11.1980, *Friis & Vollesen* 532 (C, K, KHF); Hiliu, 700 m., between compound and stream, 23.11.1983, *Kielland-Lund* 24 (C, NLH); Katire, 900 m., woodland, 23.8.1957, *Jackson* 3802 (K).
General habitat range: in lowland and medium-

altitude deciduous woodland, in grassland and at forest edges.
General distribution: Senegal to Sudan, West Ethiopia and Kenya, south to Zimbabwe and Mozambique; also in tropical Asia.

Dolichos L.

Dolichos compressus Wilczek
FCB 6: 304 (1954); FTEA, Legum.-Papilion. 2: 690 (1971); UKWF: 134 (1994).
Imatong Mountains group, Uganda side: without further locality, 2290 m., 4.1938, *Eggeling* 3585 (?K, not traced); without further locality, 2290 m., grassland, 4.1938, *Eggeling* 3598 (K).
General habitat range: in medium-altitude and montane grassland and wooded grassland.
General distribution: Congo [previously Zaire], Sudan, Uganda and Kenya.
Note. This taxon is possibly not specifically distinct from *Dolichos schweinfurthii* Harms.

Dolichos kilimandscharicus Taub.
FTEA, Legum.-Papilion. 2: 684 (1971); FE 3: 179 (1989); UKWF: 134 (1994).
subsp. **kilimandscharicus**
FTEA, Legum.-Papilion. 2: 685 (1971); UKWF: 134 (1994).
Syn.: *Dolichos malosanus* Bak.: FPS 2: 196 (1952); FCB 6: 316 (1954).
Imatong Mountains group, Sudan side: Loa, between Moliandro village and Kerepi (3° 54' N, 31° 54' E), no alt., 5.6.1984, *Kielland-Lund* 851 (C, NLH); Obbo (4° 01' N, 32° 30' E), 900 m., *Albizia zygia* grassland, 24.4.1949, *Jackson* 719 (BM); on hill between Mt. Konoro and Mt. Garia, 1800 m., *Loudetia arundinacea* grassland with scattered trees on shallow soil, 12.3.1982, *Friis & Vollesen* 1178 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: near Madi Opei, 910 m., savannah woodland, 4.1943, *Purseglove* 1372 (EA); Mt. Lomwaga, 2130 m., *Combretum* woodland, 4.4.1945, *Greenway & Hummel* 7272 (EA, K); 2 km. east of Lututuru, near a rivulet, 1400 m., in open woodland, 17.2.1969, *Lye* 2092 (EA, MHU, NLH).
Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., above Sadit, 1000 m., *Acalypha fruticosa* scrub, 24.1.1950, *Jackson* 1114 (BM).
Didinga Mountains: Mt. Lotuke, Char, 1830 m., wooded grassland, erect herb, 19.4.1939, *Myers* 10,920 (K, WM); slope of Mt. Lotuke, 1890 m., *Protea* grassland, 29.3.1950, *Jackson* [number not certain, between 1295 and 1320] (BM); Nagichot, 1900 m., grassland, burnt annually, 7.4.1949, *Jackson* 653 (BM).
General habitat range: in lowland, medium-altitude and montane grassland, wooded grassland and deciduous woodland.
General distribution: Sudan and Ethiopia, south to Angola, Zambia, Zimbabwe, Malawi and Mozambique.

Dolichos schweinfurthii Harms
FS: 203 (1929); FPS 2: 196 (1952); FWTA 1,2: 571 (1958); FTEA, Legum.-Papilion. 2: 698 (1971); FE 3: 179 (1989).
Imatong Mountains group, Sudan side: Mt. Itibol, 1950 m., 14.6.1939, *Andrews* 1985 (K, WM); Bushbuck Hill, 2300 m., *Loudetia arundinacea* grassland with scattered trees, recently burnt, and in crevices of rocky outcrops, 16.2.1982, *Friis & Vollesen* 919 (C, K, KHF) & 21.2.1982, *Friis & Vollesen* 977 (C, K, KHF).
General habitat range: in medium-altitude grassland and wooded grassland, especially habitats subjected to burning.
General distribution: Mali and Guinea Bissau to Sudan and West Ethiopia, south to Tanzania.

Dolichos sericeus E. Mey.
FTEA, Legum.-Papilion. 2: 680 (1971); FE 3: 179 (1989); UKWF: 134 (1994).
subsp. **sericeus**
FTEA, Legum.-Papilion. 2: 680 (1971); FE 3: 179 (1989); UKWF: 134 (1994).
Syn.: [*Dolichos formosus* auct., non A. Rich.: FTA

2: 213 (1871), pro parte; FPS 2: 196 (1952); FWTA 1,2: 571 (1958)].
Imatong Mountains group, Sudan side: Gilo to Itibol, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 11.11.1980, *Friis & Vollesen* 152 (BR, C, K, KHF); Kipia, 2710 m., mountain meadow, 28.7.1939, *Myers* 11,704 (K, WM).
General habitat range: in medium-altitude and montane forest, especially in clearings and along edges, and in grassland.
General distribution: Cameroon to Ethiopia, south to South Africa (Natal).
subsp. **formosus** (A. Rich.) Verdc.
FTEA, Legum.-Papilion. 2: 682 (1971); UKWF: 134 (1994).
Imatong Mountains group, Sudan side: Lotti, no alt., in elephant grass at edge of forest, 10.10.1938, *Myers* 9649 (WM); Kipia, 2680 m., mountain meadow, 12.1938, *MacDonald* 12 (BM).
Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., Moimoi, 1960 m., *Acacia abyssinica* woodland, 21.1.1950, *Jackson* 1098 (BM); Nangeya Mts., peak of Mt. Lonyili, 1800 m., in tall grassland, 4.12.1971, *Katende* 1395 (EA, MHU), & 1397 (MHU).
General habitat range: in montane forest, at forest edges, in woodland and grassland.
General distribution: Sudan, Ethiopia, Uganda and Kenya.

Dolichos trilobus L.
FTEA, Legum.-Papilion. 2: 678 (1971); WICKENS 1976: 113; FE 3: 178 (1989); FSo 1: 439 (1993); UKWF: 134 (1994); HYF: 159 (1997).
subsp. **occidentalis** Verdc.
FTEA, Legum.-Papilion. 2: 680 (1971).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber in forest and along brook, 27.11. 1980, *Friis & Vollesen* 507 (BR, C, KHF) & 5.12.1980, *Friis & Vollesen* 713 (BR, C, EA, KHF).
General habitat range: in lowland and medium-altitude forest.
General distribution: Ghana to Sudan and Uganda. Species as a whole also in Somalia, tropical East Africa and tropical Arabia.

Eriosema (DC.) Reichb.

Eriosema chrysadenium Taub.
FCB 6: 244 (1954); FWTA 1,2: 559 (1958); FTEA, Legum.-Papilion. 2: 801 (1971).
var. **chrysadenium**
FTEA, Legum.-Papilion. 2: 802 (1971).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, especially *Combretum, Faurea,* etc., 26.3.1982, *Friis & Vollesen* 1321 (C).
General habitat range: in medium-altitude and montane grassland, often seasonally burnt.
General distribution: Cameroon to Sudan, Uganda and Kenya, south to Angola, Zambia, Tanzania and Zimbabwe. Species as a whole within same general distribution area.

Eriosema flemingioides Bak.
FS: 207 (1929); FPS 2: 198 (1952); FCB 6: 218 (1954); FTEA, Legum.-Papilion. 2: 783 (1971); UKWF: 138 (1994).
Imatong Mountains group, Sudan side: Talanga, 950 m., wooded grassland with *Combretum molle, C. collinum, Stereospermum kunthianum* and *Acacia hockii,* tall grass cover of *Cymbopogon giganteum* and *Hyparrhenia spp.*, 4.12.1980, *Friis & Vollesen* 668 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude grassland or wooded grassland, often in damp places.
General distribution: Nigeria to Sudan, Uganda and Kenya.

Eriosema montanum Bak. f.
FPNA 1: 354 (1948); FCB 6: 213 (1954); FWTA 1,2: 558 (1958); FTEA, Legum.-Papilion. 2: 779 (1971); FE 3: 190 (1989); UKWF: 138 (1994).
var. **montanum**
FTEA, Legum.-Papilion. 2: 780 (1971).
Imatong Mountains group, Sudan side: Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 8.11.1980, *Friis & Vollesen* 13 (BR, C, K, KHF).
General habitat range: in lowland, medium-altitude end montane grassland and deciduous bushland.
General distribution: Nigeria and Cameroon to South West Ethiopia, south to Angola, Zambia, Malawi and Zimbabwe. First record from the Sudan.

Eriosema nutans Schinz
FTEA, Legum.-Papilion. 2: 775 (1971); FE 3: 190 (1989); UKWF: 138 (1994).
Syn.: *Eriosema richardii* Bak. f. & Haydon: FPS 2: 198 (1952) {Imatong Mountains, Mt. Baghanj}. [*Eriosema polystachyum* auct., non (A. Rich.) Bak., nec E. Mey.: FTA 2: 225 (1871)].
Imatong Mountains group, Sudan side: Mt. Baghanj, near rest-house, 1830-2130 m., 13.6. 1939, *Andrews* 1918 (K).
General habitat range: in medium-altitude and montane grassland and wooded grassland, often in seasonal swamps.
General distribution: Congo [previously Zaire] to Ethiopia, south to South Africa (Transvaal).

Eriosema rhodesicum R.E. Fr.
FTEA, Legum.-Papilion. 2: 795 (1971); FE 3: 193 (1989); UKWF: 139 (1994).
var. **rhodesicum**
FTEA, Legum.-Papilion. 2: 796 (1971).
Imatong Mountains group, Sudan side: lower southern slope of Mt. Konoro, 2300 m., *Loudetia* grassland on shallow soil, 18.2.1982, *Friis & Vollesen* 947 (C, K, KHF); lower southern slope of Mt. Konoro, 2100 m., *Loudetia* grassland with scattered trees on shallow soil, recently burnt, 2.3.1982, *Friis & Vollesen* 1073 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: without further locality, 2380 m., grassland, 4.1938, *Eggeling* 3552 (K).
General habitat range: in medium-altitude and montane seasonally burnt grassland.
General distribution: Nigeria to South Ethiopia, south to Angola, Zambia, Malawi, Zimbabwe and Mozambique.

Eriosema verdickii De Wild.
FCB 6: 246 (1954); FTEA, Legum.-Papilion. 2: 803 (1971); FE 3: 193 (1989).
Syn.: *Eriosema schoutedenianum* Stan. & de Craene: FPS 2: 197 (1952) {Imatong Mountains, Mt. Baghanj}; FWTA 1,2: 559 (1958).
Imatong Mountains group, Sudan side: Mt. Baghanj, 1830-2130 m., 13.6.1939, *Andrews* 1902 (K).
General habitat range: in medium-altitude grassland and wooded grassland.
General distribution: Cameroon to Sudan, south to Congo [previously Zaire], Zambia and Malawi.

Eriosema sp. cf. E. cordifolium A. Rich.
vel forma
Imatong Mountains group, Sudan side: Gilo to Mt. Konoro, 1800 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 24.11.1980, *Friis & Vollesen* 433 (BR, C, EA, K, KHF).
Note. Perhaps identical with the material identified above as *Eriosema verdickii* De Wild.

Erythrina L.

Erythrina abyssinica DC.
FPNA 1: 346 (1948); ITU: 302 (1952); FPS 2: 201 (1952); JACKSON 1956: 356; FTEA, Legum.-Papilion. 2: 555 (1971); FE 3: 161 (1989); EL

AMIN 1990: 231; SOMMERLATTE 1990: 94; KTSL: 296 (1994).

subsp. **abyssinica**

FTEA, Legum.-Papilion. 2: 556 (1971); EL AMIN 1990: 231; KTSL: 296 (1994).

Syn.: *Erythrina tomentosa* R. Br.: CHIPP 1929: 190; FCB 6: 120 (1954).

Imatong Mountains group, Sudan side: without further locality, no alt., 1947, *Maxwell Forbes* 64 (K); above Lotti, no alt., in fire-swept grassland on mountain side, 5.2.1929, *Chipp* 22 (K, KHF, WM); Palotaka, 1200 m., in open woodland, 8.1.1979, *Shigeta* 64 (EA); Lerua Mission, above the forest at Lotti, 15 km. from Palotaka, 1200 m., on rocky outcrops in open woodland, 7.4.1984, *Sommerlatte* 37 (EA); above Katire, no alt., 10.4.1933, *Smith* 13 (K, KHF) & 14 (K, KHF); Mt. Labuki, no alt., 12.6.1939, *Andrews* 1830 (?K, WM); Katire, 1000 m., woodland, 3.3.1950, *Jackson* 1182 (KHF); Kinyeti Valley, above Katire, 1200 m., woodland with *Combretum molle, Cussonia arborea, Stereospermum kunthianum, Entada abyssinica,* etc., 24.3.1982, *Friis & Vollesen* 1301 (C, K, KHF); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 17.11.1980, *Friis & Vollesen* 280 (C, K, KHF).

Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).

General habitat range: in lowland, medium-altitude and montane wooded grassland, usually associated with regular burning or with rocky places. According to JACKSON 1956 it occurs at the Imatong Mountains in vegetation transitional between moist woodland and montane vegetation; according to SOMMERLATTE 1990 it occurs in lowland woodland, occasionally extending up to c. 2000 m in *Loudetia* grassland.

General distribution: Congo [previously Zaire] to Ethiopia, south to Zambia, Malawi, Zimbabwe and Mozambique.

Erythrina excelsa Bak.

FTA 2: 183 (1871); ITU: 303 (1952); FPS 2: 202 (1952); FCB 6: 122 (1954); JACKSON 1956: 355; FWTA 1,2: 559 (1958); FTEA, Legum.-Papilion. 2: 559 (1971); EL AMIN 1990: 233; KTSL: 297 (1994).

Imatong Mountains group, Sudan side: Talanga, 900 m., in closed forest, 8.7.1949, *Jackson* 833 (FHO).

General habitat range: in lowland and medium-altitude forest, especially associated with riverine and riparian habitats, small swamps and lake shores. According to JACKSON 1956 it occurs at the Imatong Mountains in riverine and swamp vegetation. Reported by JACKSON 1956 also from riverine and swamp vegetation.

General distribution: Ivory Coast to Sudan, Uganda and Kenya south to Congo [previously Zaire], Zambia and Tanzania.

Glycine L., pro parte. See: **Neonotonia** Lackey

Indigofera L.

Indigofera ambelacensis Schweinf.

FCB 5: 157 (1954); GILLETT 1958: 45; FTEA, Legum.-Papilion. 1: 247 (1971); FE 3: 124 (1989); UKWF: 123 (1994).

Didinga Mountains: 56 km. south-west of Kapoeta on Khor Lokililabor, no alt., 29.8.1953, *Peers* TO18 (K, WM).

General habitat range: in lowland and medium-altitude grassland and open areas in deciduous bushland.

General distribution: Cape Verde Islands and Senegal to Ethiopia and Somalia, south to South Africa (Transvaal); also in tropical Arabia and tropical Asia to Australia.

Indigofera andrewsiana Gillett

GILLETT 1958: 38; FTEA, Legum.-Papilion. 1: 237 (1971).

Didinga Mountains: Lokwara, no alt., 29.9.1953, *Peers* "Lokwara 2" (K, holotype of *I. andrewsiana*).

General habitat range: in lowland grassland on black cotton soil.
General distribution: North Nigeria, South Sudan and North Uganda.

Indigofera arrecta A. Rich.
FTA 2: 97 (1871); FS: 187 (1929); FPNA 1: 303 (1948); FPS 2: 215 (1952); FCB 5: 162 (1954); FWTA 1,2: 541 (1958); GILLETT 1958: 105; FTEA, Legum.-Papilion. 1: 307 (1971); WICKENS 1976: 114; FE 3: 135 (1989); FSo 1: 416 (1993); UKWF: 124 (1994); KTSL: 298 (1994); HYF: 147 (1997).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 17.11.1980, *Friis & Vollesen* 283 (C, K, KHF).
General habitat range: in lowland, medium-altitude and montane grassland and evergreen bushland.
General distribution: Senegal to Ethiopia and Somalia, south to South Africa (Transvaal, Natal); also in Madagascar and tropical Arabia.

Indigofera atriceps Hook. f.
FTA 2: 94 (1871); FCB 5: 165 (1954); FWTA 1,2: 541 (1954); GILLETT 1958: 78; FTEA, Legum.-Papilion. 1: 279 (1971); FE 3: 130 (1989); UKWF: 124 (1994); HYF: 147 (1997).
subsp. **atriceps**
FWTA 1,2: 541 (1954); GILLETT 1958: 78; FTEA, Legum.-Papilion. 1: 282 (1971); FE 3: 130 (1989); UKWF: 124 (1994).
Syn.: *Indigofera alboglandulosa* Engl.: FPS 2: 217 (1952) {Imatong Mountains, Loyaru, above Lomuleng}. *Indigofera atriceps* Hook. f. subsp. *alboglandulosa* (Engl.) Gillett: GILLETT 1958: 78.
Imatong Mountains group, Sudan side: Loyaru, 2320 m., forest edge, 29.12.1935, *Thomas* 1785 (BM, K); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 8.11.1980, *Friis & Vollesen* 22 (C, K, KHF); Gilo to Mt. Konoro, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 24.11. 1980, *Friis & Vollesen* 425 (BR, C, EA, K, KHF); summit of Mt. Konoro, 2500 m., *Loudetia arundinacea* grassland on very shallow soil, 16.3. 1982, *Friis & Vollesen* 1218 (C, K, KHF); above Lomuleng, 1990 m., 2.1936, *Johnston* 1456 (K); Kipia, 2680 m., in montane grassland at forest edge, 4.7.1947, *MacLeay* 155 (BM); ridge leading to summit of Mt. Kinyeti, 3000 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 22.3.1982, *Friis & Vollesen* 1285 (C, K); summit of Mt. Kinyeti, 3100 m., ericaceous bushland below summit, 15.11.1949, *Jackson* 963 (BM).
Imatong Mountains group, Uganda side: Langia, 2590 m., mountain grassland, 4.1943, *Purseglove* 1412 (K).
General habitat range: in medium-altitude and montane grassland.
General distribution: Guinée to Ethiopia, south to Tanzania, Malawi and Mozambique.
subsp. **kassneri** (Bak. f.) Gillett
GILLETT 1958: 80; FTEA, Legum.-Papilion. 1: 283 (1971); FE 3: 130 (1989); UKWF: 124 (1994); HYF: 147 (1997).
Imatong Mountains group, Sudan side: Kipia, 2680 m., scrub, 1.1939, *MacDonald* 61 (BM).
General habitat range: in medium-altitude and montane grassland and bushland.
General distribution: South Sudan and South Ethiopia to North East Zambia and Tanzania; also in tropical Arabia.
Note. We have followed Gillett in FTEA, in which subsp. *alboglandulosa* is reduced to a synonym of subsp. *atriceps,* rather than the original revision (Gillett 1958), where a more elaborate taxonomy is proposed.

Indigofera colutea (Burm. f.) Merr.
FWTA 1,2: 540 (1958); GILLETT 1958: 65; FTEA, Legum.-Papilion. 1: 266 (1971); FE 3: 127 (1989); FSo 1: 410 (1993); UKWF: 123 (1994); HYF: 148 (1997).
Syn.: *Indogofera viscosa* Lam.: FTA 2: 81 (1871);

FS: 184 (1929); FPS 2: 211 (1952); FCB 5: 144 (1954).
Imatong Mountains group, Sudan side: Kinyeti Valley, hills near junction of roads to Ngarama and Katire north of Hiliu, 650 m., 10.12.1983, *Kielland-Lund* 289 (C, NLH).
General habitat range: in lowland and medium-altitude grassland and wooded grassland, open places in bushland and old cultivation, especially on sandy soil.
General distribution: Cape Verde Islands and Senegal to Ethiopia and Socotra, south to South Africa (Transvaal); also in tropical Asia, including tropical Arabia, and Australia. Species as a whole also in Somalia.

Indigofera conjugata Bak.
FTA 2: 75 (1871); FS: 187 (1929); FPS 2: 209 (1952); FCB 5: 150 (1954); FWTA 1,2: 543 (1954); GILLETT 1958: 121; FTEA, Legum.-Papilion. 1: 319 (1971); FE 3: 137 (1989); UKWF: 125 (1994).
Imatong Mountains group, Sudan side: Kinyeti Valley, near Imeila, 850 m., woodland with *Albizia zygia, Annona senegalensis, Combretum collinum, Lonchocarpus laxiflorus,* etc., 24.2.1982, *Friis & Vollesen* 1020 (C, K).
Imatong Mountains group, Uganda side: 2 km. north-east of Lututuru, near end of road, 1800 m., grassland, 17.2.1969, *Lye* 2061 (EA, MHU, NLH).
General habitat range: in lowland and medium-altitude grassland and wooded grassland.
General distribution: Guinée to Sudan, South West Ethiopia and Kenya, south to Angola, Congo [previously Zaire] and Tanzania. We have been unable to identify the material to the varieties of GILLETT 1958.

Indigofera dendroides Jacq.
FTA 2: 100 (1871); FS: 184 (1929); FPS 2: 212 (1952); FCB 5: 166 (1954); FWTA 1,2: 540 (1958); GILLETT 1958: 42; FTEA, Legum.-Papilion. 1: 242 (1971); FE 3: 124 (1989).
Syn.: *Indigofera kengeleensis* De Wild.: FPNA 1: 300 (1948).
Imatong Mountains group, Sudan side: Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 29.11.1980, *Friis & Vollesen* 527 (C, K, KHF).
General habitat range: in lowland and medium-altitude grassland, often in disturbed places, and in swamps and flood plains.
General distribution: Senegal to Sudan and West Ethiopia, south to Angola, Zambia, Zimbabwe, Malawi and Mozambique.

Indigofera emarginella A. Rich.
FTA 2: 99 (1871); FS: 187 (1929); FPNA 1: 304 (1948); FPS 2: 217 (1952) ; FCB 5: 135 (1954); FWTA 1,2: 541 (1958); GILLETT 1958: 95; FTEA, Legum.-Papilion. 1: 300 (1971); FE 3: 131 (1989); UKWF: 124 (1994).
Imatong Mountains group, Sudan side: without further locality, 1530-1830 m., 12.6.1939, *Andrews* 1857 (K); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 17.11.1980, *Friis & Vollesen* 284 (C, K, KHF); Gilo, Tipo Hill, 2130 m., in coarse grassland, 14.6.1953, *Prowse* 280 (KHU); between Gilo and Itibol rest-house, 1950 m., *Acacia abyssinica* woodland, 24.6.1947, *MacLeay* 46 (BM).
Imatong Mountains group, Uganda side: 4 km. south-east of Lomwaga, 1900 m., tall grassland with scattered trees, 18.7.1974, *Katende* 2149 (EA, MHU).
General habitat range: in lowland, medium-altitude and montane grassland, wooded grassland and deciduous woodland.
General distribution: Nigeria to Ethiopia, south to Angola, Zambia, Zimbabwe, Malawi and Mozambique. We have not identified the material to the two varieties suggested by GILLETT 1958.

Indigofera garckeana Vatke
FS: 186 (1929); FPS 2: 217 (1952); FCB 5: 138 (1954); FWTA 1,2: 541 (1958); GILLETT 1958: 93; FTEA, Legum.-Papilion. 1: 296 (1971); FE 3: 130 (1989); UKWF: 124 (1994); KTSL: 299 (1994).
Imatong Mountains group, Sudan side: Refugee Camp north of Loa (3° 48' N, 31° 59' E), no alt., 5.6.1984, *Kielland-Lund* 863 (C, NLH); Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 3.1.1984, *Kielland-Lund* 548 (C, NLH); Kinyeti Valley, north of Katire, 750 m., woodland, 3.1982, *Friis & Vollesen* (sight record); Hiliu, east of compound, 700 m., near stream, 23.11.1983, *Kielland-Lund* 27 (C, NLH).
General habitat range: in lowland, medium-altitude and montane grassland, wooded grassland and deciduous woodland.
General distribution: Senegal to Ethiopia, south to Zambia, Zimbabwe and Mozambique.

Indigofera hirsuta L.
FTA 2: 88 (1871); FS: 185 (1929); FPS 2: 215 (1952); FCB 5: 140 (1954); FWTA 1,2: 541 (1958); GILLETT 1958: 109; FTEA, Legum.-Papilion. 1: 310 (1971); FE 3: 135 (1989); UKWF: 124 (1994).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 3.1.1984, *Kielland-Lund* 544 (C, NLH).
General habitat range: in cultivated or waste areas in lowlands or at medium altitudes.
General distribution: Senegal to Ethiopia, south to Angola, Zambia and Mozambique; also in Madagascar, tropical Asia and introduced into tropical America.

Indigofera polysphaera Bak.
FPS 2: 208 (1952); FCB 5: 128 (1954); FWTA 1,2: 538 (1958); GILLETT 1958: 27; FTEA, Legum.-Papilion. 1: 231 (1971);
Didinga Mountains: Chukudum Regional District Centre (4° 14' N, 33° 29' E), 1100 m., 16.12.1983, *Kielland-Lund* 342 (C, NLH).
General habitat range: in lowland and medium-altitude grassland, especially in overgrazed areas, old cultivations and open places with shallow soil.
General distribution: Ivory Coast to South Sudan, Uganda and Tanzania, south to Angola and Zambia.

Indigofera secundiflora Poir.
FTA 2: 94 (1871); FS: 186 (1929); FPNA 1: 303 (1948); FPS 2: 217 (1952); FCB 5: 145 (1954); FWTA 1,2: 541 (1958); GILLETT 1958: 68; FTEA, Legum.-Papilion. 1: 269 (1971); FE 3: 128 (1989); UKWF: 123 (1994).
var. **rubripilosa** De Wild.
GILLETT 1958: 69; FTEA, Legum.-Papilion. 1: 269 (1971); FE 3: 128 (1989).
Syn.: [*Indigofera secundiflora* auct., non Poir. sensu stricto: FPNA 1: 303 (1948)].
Imatong Mountains group, Sudan side: Talanga, 950 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, on rocks along small brook, 2.12.1980, *Friis & Vollesen* 625 (BR, C, EA, FT, K, KHF).
General habitat range: in lowland and medium-altitude grassland and swamps.
General distribution: Central African Republic to Ethiopia, south to Congo [previously Zaire], Zambia and Malawi.
var. **secundiflora**
FTEA, Legum.-Papilion. 1: 269 (1971).
Imatong Mountains group, Sudan side: Palotaka, no alt., 1979, *Shigeta* 11 (?EA, identified and listed by M.G. Gilbert, not traced).
General habitat range: in lowland and medium-altitude grassland.
General distribution: Senegal to Sudan. Species as a whole within the combined area of the two varieties.

Indigofera spicata Forssk.
FWTA 1,2: 542 (1958); GILLETT 1958: 119; FTEA, Legum.-Papilion. 1: 317 (1971); WICKENS 1976: 115; FE 3: 136 (1989); UKWF: 125 (1994); HYF: 149 (1997).
Syn.: *Indigofera hendecaphylla* Jacq.: FTA 2: 96 (1871); FS: 188 (1929); FPNA 1: 301 (1948) (all three as 'I. endecaphylla'); FPS 2: 212 (1952).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., woodland, 1.2.1979, *Shigeta* 169 (EA); Kinyeti Valley, near Kalikoi stream, no alt., 13.3.1984, *Kielland-Lund* 1010 (C, NLH); 16 km. north of Katire, 900 m., woodland with *Combretum collinum, C. molle* and *Annona senegalensis*, 22.2.1982, *Friis & Vollesen* 999 (C, K, KHF).
General habitat range: in lowland, medium-altitude and montane grassland and wooded grassland, often in disturbed places.
General distribution: Senegal to Ethiopia, south to South Africa (Transvaal, Natal); also in Madagascar, Mascarene Islands, tropical Arabia, and tropical Asia; introduced in America.

Indigofera stenophylla Guill. & Perr.
FTA 2: 83 (1871); FS: 184 (1929); FPS 2: 218 (1952); FCB 5: 160 (1994); FWTA 1,2: 539 (1958); GILLETT 1958: 38; FTEA, Legum.-Papilion. 1: 236 (1971); WICKENS 1976: 115;
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 3.1.1984, *Kielland-Lund* 547 (C, NLH); Kinyeti Valley, Hiliu, south-east of compound, 700 m., in cultivation, 2.12.1983, *Kielland-Lund* 149 (C, NLH).
General habitat range: in lowland and medium-altitude grassland and cultivations, often along paths.
General distribution: Senegal to South Sudan and Uganda, possibly also Ethiopia, south to Congo [previously Zaire] and Tanzania.

Indigofera trita L. f.
FTA 2: 86 (1871); GILLETT 1958: 101; FTEA, Legum.-Papilion. 1: 303 (1971); FE 3: 133 (1989); FSo 1: 414 (1993); UKWF: 124 (1994); KTSL: 299 (1994); HYF: 150 (1997).
var. **scabra** (Roth) Ali
FTEA, Legum.-Papilion. 1: 304 (1971); FE 3: 134 (1989); FSo 1: 414 (1993); HYF: 150 (1997).
Imatong Mountains group, Sudan side: Palotaka, no alt., 1979, *Shigeta* 195 (?EA, identified and listed by M.G. Gilbert, not traced); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, scrambling at forest edge, 11.12.1980, *Friis & Vollesen* 808 (C, K, KHF).
General habitat range: in lowland and medium-altitude deciduous woodland and bushland, most often in disturbed places.
General distribution: Nigeria to Ethiopia and North Somalia, south to South Africa (Transvaal); also in Madagascar, tropical Arabia, India and central America. Species as a whole within the same general distribution area. First record from the Sudan.

Indigofera volkensii Taub.
GILLETT 1958: 118; FTEA, Legum.-Papilion. 1: 315 (1971); FE 3: 136 (1989); FSo 1: 417 (1993); UKWF: 125 (1994).
Didinga Mountains: 8 km. south of Kapoeta on road to Nathilani, no alt., sandy soil, 27.8.1953, *Peers* KO17 (K).
General habitat range: in dry lowland and medium-altitude bushland and wooded grassland.
General distribution: Sudan, Ethiopia and Somalia, south to Tanzania.

Indigofera welwitschii Bak.
FTA 2: 84 (1871); FS: 184 (1929); FPS 2: 211 (1952); FCB 5: 171 (1954); FWTA 1,2: 543 (1958); GILLETT 1958: 134; FTEA, Legum.-Papilion. 1: 326 (1971); FE 3: 138 (1989).

var. **welwitschii**
GILLETT 1958: 134; FTEA, Legum.-Papilion. 1: 326 (1971).
Imatong Mountains group, Sudan side: Talanga, 950 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 30.11. 1980, *Friis & Vollesen* 580 (BR, C, EA, K, KHF).
General habitat range: in grassland, wooded grassland and deciduous woodland, associated with rocky outcrops.
General distribution: Congo [previously Zaire] to Sudan and Uganda, south to Angola, Zambia and Malawi. Species as a whole from Ghana to Congo [previously Zaire] and Tanzania, south to Angola, Zambia, Malawi and Mozambique.

Kotschya Endl.

Kotschya aeschynomenoides (Bak.) Dewit & Duvign.
FCB 5: 338 (1954); FTEA, Legum.-Papilion. 1: 421 (1971); UKWF: 127 (1994); KTSL: 300 (1994).
Syn.: *Smithia volkensii* Taub.: FPS 2: 233 (1956) {Imatong Mountains, Ibahin}.
Imatong Mountains group, Sudan side: without further locality, 2130 m., 2.1936, *Johnston* 1421 (K); near pool in Kinyeti River near Gilo, 1750 m., 26.12.1983, *Kielland-Lund* 477 (C, NLH); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 13.11.1980, *Friis & Vollesen* 209 (C, KHF); Ibahin, 1980 m., among rocks, 18.12.1935, *Thomas* 1670 (BM, K); at trail across Kinyeti River from Itibol to Issore, 1850 m., at path in old cultivation, 9.3.1982, *Friis & Vollesen* 1142 (BR, C, KHF); Kipia, 2680 m., rocky slope, 1.1939, *MacDonald* 55 (BM); summit area of Mt. Kinyeti, 3100 m., ericaceous scrub near rocky summit, 15.11.1949, *Jackson* 967 (BM); Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 825 (C).
General habitat range: in medium-altitude and montane grassland and deciduous woodland, and in evergreen bushland.
General distribution: East Congo [previously Zaire] to Sudan, Uganda and Kenya, south to Angola, Zambia, Malawi and Tanzania.

Lablab Adans.

Lablab purpureus (L.) Sweet
FTEA, Legum.-Papilion. 2: 696 (1971); WICKENS 1976: 115; FE 3: 179 (1989); UKWF: 135 (1994).
subsp. **uncinatus** Verdc.
FTEA, Legum.-Papilion. 2: 699 (1971); WICKENS 1976: 115.
Imatong Mountains group, Sudan side: Lotti, no alt., in elephant grass at forest edge, 10.10.1038, *Myers* 9649 (K); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber at edge of clearing, 4.12.1980, *Friis & Vollesen* 693 (C, K, KHF); Gilo to Mt. Konoro, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 23.11.1980, *Friis & Vollesen* 412 (BR, C, K, KHF).
General habitat range: in lowland, medium-altitude and montane grassland, deciduous and evergreen bushland and in cultivations.
General distribution: Senegal to Ethiopia, south to South Africa (Cape Prov.); frequently cultivated and escaped. Species as a whole frequently cultivated throughout the tropics.

Lathyrus L.

Lathyrus hygrophilus Taub.
FPNA 1: 336 (1948); FPS 2: 219 (1952) {Ima-

tong Mountains, Kipia}; FCB 6: 78 (1954); HEDBERG 1957: 122; FTEA, Legum.-Papilion. 2: 1077 (1971); UKWF: 151 (1994).

Imatong Mountains group, Sudan side: Kipia, 2440 m., grassland, 29.12.1935, *Thomas* 1815 (BM, K); Kipia, 2650 m., mountain meadow, 28.7.1939, *Myers* 11,699 (K).

General habitat range: in medium-altitude and montane grassland and evergreen bushland, especially in depressions and swamps, in forest clearings and bamboo thickets.

General distribution: East Congo [previously Zaire] to South Sudan and Kenya, south to Tanzania and Malawi.

Lonchocarpus Kunth

Lonchocarpus laxiflorus Guill. & Perr.

FTA 2: 242 (1871), pro parte; FS: 208 (1929); ITU: 304 (1952); FPS 2: 221 (1952); FCB 6: 12 (1954); JACKSON 1956: 350; FWTA 1,2: 523 (1958); FTEA, Legum.-Papilion. 1: 67 (1971); WICKENS 1976: 115; FE 3: 104 (1989); EL AMIN 1990: 237; SOMMERLATTE 1990: 126.

Imatong Mountains group, Sudan side: without further locality, 1947, *Maxwell Forbes* 72 (K); Loa, 5 km. south of Bagheri (3° 48' N, 31° 59' E), 800 m., 5.1.1984, *Kielland-Lund* 587 (C, NLH); Laboni, 1160 m., dry grassland on forest edge, 21.12.1935, *Thomas* 1735 (BM, K); between Palotaka and Magwe, 1000 m., open woodland with *Combretum*, persists in newly cultivated areas, 26.1.1984, *Sommerlatte* 2 (EA).

General habitat range: in lowland and medium-altitude deciduous woodland and wooded grassland. According to JACKSON 1956 it occurs at the Imatong Mountains in moist woodland west and north of the mountains; according to SOMMERLATTE 1990 it occurs as a common tree species in lowland woodland, and it is one of the first colonisers of disused cultivated land.

General distribution: Gambia and Senegal to Ethiopia, south to Uganda.

Lotus L.

Lotus bequetii Boutique

FCB 4: 303 (1953); FTEA, Legum.-Papilion. 2: 1044 (1971); UKWF: 149 (1994).

Syn.: [*Lotus corniculatus* auct., non L.: JACKSON 1956: 368].

Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 21.11.1980, *Friis & Vollesen* 375 (BR, C, K, KHF); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 16.11. 1980, *Friis & Vollesen* 273 (C); summit of Mt. Kinyeti, 3050 m., grassland, 30.12.1935, *Thomas* 1831 (BM, K); Mt. Kinyeti, summit, 3180 m., 27.7.1939, *Myers* 11,644 (K, WM); summit of Mt. Kinyeti, 3180 m., rocky summit, 15.11.1949, *Jackson* 931 (BM).

General habitat range: in montane grassland and evergreen bushland.

General distribution: Uganda, Kenya, East Congo [previously Zaire] and South Sudan.

Macrotyloma (Wight & Arn.) Verdc.

Macrotyloma axillare (E. Mey.) Verdc.

FTEA, Legum.-Papilion. 2: 586 (1971); FE 3: 166 (1989); FSo 1: 433 (1993); UKWF: 135 (1994); HYF: 159 (1997).

var. **glabrum** (E. Mey.) Verdc.

FTEA, Legum.-Papilion. 2: 586 (1971); FE 3: 166 (1989); FSo 1: 433 (1993).

Imatong Mountains group, Sudan side: Gilo to Mt. Konoro, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 16.11.1980, *Friis & Vollesen* 269 (BR, C, KHF); lower slope of Mt. Konoro, 2300 m., *Loudetia arundinacea* grassland on shallow soil, recently burnt, 18.2.1982, *Friis & Vollesen* 952 (C, K, KHF).

Imatong Mountains group, Uganda side: 2 km.

north-east of Lututuru, 1800 m., dry grassland, 17.2.1969, *Lye* 2058 (K, MHU, NLH, UPS).
General habitat range: in lowland, medium-altitude and montane grassland, wooded grassland, bushland and woodland.
General distribution: Congo [previously Zaire] to Ethiopia and Somalia, south to South Africa (Transvaal, Natal); also in Madagascar, Mascarene Islands and India. Species as a whole also in West Africa and tropical Arabia.

Macrotyloma stenophyllum (Harms) Verdc.
FTEA, Legum.-Papilion. 2: 588 (1971); FE 3: 168 (1989).
Imatong Mountains group, Sudan side: Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees, on rocky outcrop with thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.*, 26.11.1980, *Friis & Vollesen* 455 (C).
General habitat range: in lowland and medium-altitude grassland, wooded grassland and deciduous woodland.
General distribution: Togo to Sudan and Ethiopia, south to Angola, Congo [previously Zaire] and Tanzania.

Mucuna Adans.

Mucuna poggei Taub.
FPS 2: 223 (1952); FCB 6: 134 (1954); FWTA 1,2: 561 (1958); FTEA, Legum.-Papilion. 2: 565 (1971); UKWF: 131 (1994); KTSL: 303 (1994).
var. **pesa** (De Wild.) Verdc.
FTEA, Legum.-Papilion. 2: 566 (1971).
Imatong Mountains group, Sudan side: Katire to Gilo, at road to Itibol, 1500 m., secondary transitional forest with *Harungana madagascariensis*, forest edge, 12.11.1980, *Friis & Vollesen* 181 (C, K, KHF).
General habitat range: in lowland and medium-altitude evergreen bushland and riverine vegetation.
General distribution: Congo [previously Zaire] to Sudan and Uganda, south to Zimbabwe, Malawi and Mozambique. Species as a whole also in to Sierra Leone, Angola and Zimbabwe.

Mucuna pruriens DC.
FTA 2: 187 (1871); FS: 200 (1929); FCB 6: 128 (1954); FWTA 1,2: 561 (1958); FTEA, Legum.-Papilion. 2: 566 (1971); FE 3: 164 (1989); HYF: 157 (1997).
var. **pruriens**
Imatong Mountains group, Sudan side: Itibol, 1560 m., ravine forest, 17.12.1935, *Thomas* 1617B (K, carp. col.).
Imatong Mountains group, Uganda side: 1 km. south-east of Lomwaga peak, 1900 m., climbing over tall grass among trees, 18.7.1974, *Katende* 2120 (MHU).
General habitat range: in lowland wooded grassland, evergreen bushland, at forest edges and in abandoned cultivations.
General distribution: Guinée to Sudan and Uganda, south to Angola, Zambia, Zimbabwe, Malawi and Mozambique; also in Madagascar, Mascarene Islands, and in tropical Asia, including tropical Arabia, and tropical America. The cultivated variety, var. *utilis* (Wight) Burck, is widely cultivated in the tropics.
Note. *Thomas* 1617A is *Rhynchosia resinosa.*

Neonotonia Lackey
Syn.: *Glycine* L., pro parte.

Neonotonia wightii (Wight & Arn.) Lackey
HYF: 156 (1997).
Syn.: *Glycine wightii* (Wight & Arn.) Verdc.: FTEA, Legum.-Papilion. 2: 528 (1971); FE 3: 158 (1989); UKWF: 130 (1994).
subsp. **pseudojavanica** (Taub.) Lackey
Syn.: *Glycine javanica* L. subsp. *pseudojavanica* (Taub.) Hauman: FCB 6: 97 (1954). *Glycine wightii* (Wight & Arn.) Verdc. subsp. *pseudojavanica* (Taub.) Verdc.: FTEA, Legum.-Papilion. 2: 530 (1971); UKWF: 130 (1994).

var. **pseudojavanica**
Imatong Mountains group, Sudan side: Lotti, near rest house, no alt., forest, 9.6.1939, *Andrews* 1743 (K).
subsp. **wightii**
FTEA, Legum.-Papilion. 2: 529 (1971); UKWF: 130 (1994).
var. **longicauda** (Schweinf.) Lackey
Syn.: *Glycine wightii* (Wight & Arn.) Verdc. subsp. *wightii* var. *longicauda* (Schweinf.) Verdc.: FTEA, Legum.-Papilion. 2: 529 (1971); FE 3: 158 (1989).
Imatong Mountains group, Sudan side: Palotaka, no alt., 1979, *Shigeta* 32 & 192 (?EA, both identified and listed by M.G. Gilbert, not traced); Katire, 900 m., along path, 10.1948, *Jackson* 383 (BM); Katire, 1000 m., tall grassland, 27.10. 1949, *Jackson* 865 (BM); Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 8.12.1980, *Friis & Vollesen* 772 (BR, C, KHF); Gilo to Mt. Konoro, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 18.11.1980, *Friis & Vollesen* 325 (C, K, KHF); between Gilo and Bushbuck Hill, 2000 m., clearing in *Cupressus lusitanica* plantation, with regrowth of *Albizia-Croton-Macaranga* forest, 10.11.1980, *Friis & Vollesen* 124 (BR, C, EA, K, KHF).
General habitat range: in lowland, medium-altitude and montane grassland, wooded grassland and bushland.
General distribution: Sierra Leone to Ethiopia, south to Angola and South Africa; also in tropical Arabia. Species as a whole also widespread in tropical Asia.

Neorautanenia Schinz

Neorautanenia mitis (A. Rich.) Verdc.
FTEA, Legum.-Papilion. 2: 700 (1971); FE 3: 181 (1989); FSo 1: 439 (1993).
Syn.: *Pachyrhizus ? orbicularis* Bak.: FTA 2: 208 (1871). *Dolichos pseudopachyrizus* Harms: FS: 203 (1929). *Neorautanenia pseudopachyrhiza* (Harms) Milne-Redh.: FPS 2: 223 (1952); FCB 6: 89 (1954); FWTA 1,2: 563 (1958).
Imatong Mountains group, Sudan side: Kinyeti Valley, 12 km. south of Hiliu along Katire road, no alt., 1.6.1984, *Kielland-Lund* 818 (C, NLH).
General habitat range: in lowland grassland, wooded grassland, woodland and bushland, often in rocky places.
General distribution: Ghana to Ethiopia and Somalia, south to Namibia, Zimbabwe and Mozambique.

Ormocarpum P. Beauv.

Ormocarpum trichocarpum (Taub.) Engl.
ITU: 309 (1952); FPS 2: 224 (1952) {Torit}; FCB 5: 247 (1954); FTEA, Legum.-Papilion. 1: 357 (1971); FE 3: 143 (1989); FSo 1: 423 (1993); UKWF: 126 (1994); KTSL: 306 (1994).
Imatong Mountains group, Sudan side: Molongori (4° 10' N, 32° 52' E), 800 m., *Combretum-Balanites aegyptiaca* woodland, 11.11.1948, *Jackson* 505 (FHO).
Imatong Mountains group, Uganda side: Agoro, *Acacia* bushland, no date, *Eggeling* 789 (K).
Didinga Mountains: Boya Hill, 640 m., open bushland, 7.1.1985, *Fukui* 84-110 (EA).
Recorded by ANDREWS in FPS 1952 from the area round Torit.
General habitat range: in lowland and medium-altitude wooded grassland, grassland and deciduous bushland, especially on well drained hill slopes.
General distribution: East Congo [previously Zaire] to Ethiopia and South Somalia, south to Botswana and South Africa (Transvaal, Natal).

Pseudarthria Wight & Arn.

Pseudarthria confertiflora (A. Rich.) Bak.
FTA 2: 167 (1871); FS: 197 (1929); FPS 2: 225 (1952); FCB 5: 236 (1954); FWTA 1,2: 585 (1958); FTEA, Legum.-Papilion. 1: 485 (1971); FE 3: 152 (1989); UKWF: 129 (1994).
Syn.: *Pseudarthria hookeri* Wight & Arn. var. *confertiflora* (A. Rich.) Schindl.
Imatong Mountains group, Sudan side: Gilo to Mt. Konoro, 2000 m., *Loudetia arundinacea* grassland with scattered trees, 16.11.1980, *Friis & Vollesen* 255 (C, K, KHF); Mt. Baghanj, 1830-2140 m., 13.6.1939, *Andrews* 1890 (K).
General habitat range: in lowland, medium-altitude and montane grassland, wooded grassland and in forest glades.
General distribution: Ghana to Ethiopia, south to Angola, Congo [previously Zaire] and Tanzania.

Pseudarthria hookeri Wight & Arn.
FTA 2: 167 (1871); FS: 197 (1929); FPNA 1: 313 (1948); FPS 2: 225 (1952); FCB 5: 235 (1954); FWTA 1,2: 586 (1958); FTEA, Legum.-Papilion. 1: 484 (1971); FE 3: 152 (1989); UKWF: 129 (1994); KTSL: 306 (1994).
Imatong Mountains group, Sudan side: Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 29.11.1980, *Friis & Vollesen* 535 (C, KHF).
General habitat range: in lowland, medium-altitude and montane grassland, wooded grassland and in forest glades.
General distribution: Senegal to Ethiopia, south to Angola, Zambia, Zimbabwe, Malawi and Mozambique.

Pseudoeriosema Hauman

Pseudoeriosema adongense (Bak.) Hauman
FCB 6: 108 (1954); FWTA 1,2: 564 (1958); FTEA, Legum.-Papilion. 2: 521 (1971).
subsp. **adongense**
FTEA, Legum.-Papilion. 2: 521 (1971).
Syn.: *Psoralea adongense* Bak.: FTA 2: 65 (1871).
Imatong Mountains group, Sudan side: Loa, between Moliandro village and Kerepi (3° 54' N, 31° 54' E), no alt., 5.6.1984, *Kielland-Lund* 850 (C, NLH).
General habitat range: in lowland grassland and wooded grassland.
General distribution: Benin to Sudan, south to Angola and Zambia. Species as a whole also in Congo [previously Zaire].

Pterocarpus Jacq.

Pterocarpus lucens Guill. & Perr.
FTA 2: 238 (1871); FS: 208 (1929); FPS 2: 226 (1952); FCB 6: 17 (1954); JACKSON 1956: 359; FWTA 1,2: 517 (1958); FTEA, Legum.-Papilion. 1: 82 (1971); WICKENS 1976: 116; FE 3: 105 (1989); SOMMERLATTE 1990: 84.
Syn.: *Pterocarpus abyssinicus* Hochst. ex A. Rich.: ITU: 310 (1952).
Imatong Mountains group, Sudan side: between Palwar and Talanga (3° 53' N, 32° 39' E), 1000 m., wooded grassland and woodland with *Combretum*, 29.3.1984, *Sommerlatte* 36 (EA); Kinyeti Valley, hills south of Hiliu, 700 m., 12.12.1983, *Kielland-Lund* 309 (C, NLH).
General habitat range: in lowland and medium-altitude wooded grasslands and deciduous woodlands, especially on rocky outcrops. According to JACKSON 1956 and SOMMERLATTE 1990 it occurs at the Imatong Mountains as a medium sized tree on rocky sites of lowland woodland; it is tolerant of frequent burning.
General distribution: Senegal to Ethiopia, south to Congo [previously Zaire] and Uganda.

Note: Surprisingly little herbarium material has been seen from the study area of this species which according to our field observations is very common, but it has been reported as a frequent species in the woodlands of the Kinyeti Valley by JACKSON 1956 and SOMMERLATTE 1990.

Rhynchosia Lour.

Rhynchosia densiflora (Roth) DC.
FPNA 1: 349 (1948); FCB 6: 173 (1954); FWTA 1,2: 555 (1958); FTEA, Legum.-Papilion. 2: 723 (1971); FE 3: 183 (1989); FSo 1: 441 (1993); UKWF: 136 (1994).
subsp. **debilis** (G. Don) Verdc.
FTEA, Legum.-Papilion. 2: 724 (1971); FE 3: 183 (1989).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber in forest, 26.11.1980, *Friis & Vollesen* 482 (C, K, KHF).
General habitat range: in lowland and medium-altitude deciduous woodland and bushland, especially at edges of clumps of evergreen bushland and forest.
General distribution: Ghana, Nigeria and Cameroon to Sudan and Uganda, south to Angola, Zambia and Malawi. Species as a whole also Ethiopia, Somalia, Botswana, South Africa (Transvaal, Natal), and India and Burma. First record from the Sudan.

Rhynchosia elegans A. Rich.
FCB 6: 161 (1954); FTEA, Legum.-Papilion. 2: 739 (1971); FE 3: 184 (1989); FSo 1: 443 (1993); UKWF: 137 (1994).
Imatong Mountains group, Sudan side: Bushbuck Hill, east of Itibol, 2100 m., *Hagenia abyssinica-Gnidia glauca* woodland in ecotone between upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum* and *Loudetia arundinacea* grassland, 21.11.1980, *Friis & Vollesen* 394 (BR, C, K, KHF).
General habitat range: in medium-altitude and montane grassland, evergreen bushland and dry evergreen forest, often at rocky outcrops or edges of swamps.
General distribution: East Congo [previously Zaire] to Ethiopia and North Somalia, south to Tanzania. First record from the Sudan.

Rhynchosia minima (L.) DC.
FTA 2: 219 (1871); FS: 205 (1929); FPNA 1: 352 (1948); FPS 2: 228 (1952); FCB 6: 166 (1954); FWTA 1,2: 555 (1958); FTEA, Legum.-Papilion. 2: 756 (1971); WICKENS 1976: 116; FE 3: 187 (1989); FSo 1: 445 (1993); UKWF: 137 (1994)H HYF: 161 (1997).
var. **nuda** (DC.) O. Kuntze
FTEA, Legum.-Papilion. 2: 757 (1971); FE 3: 187 (1989); FSo 1: 445 (1993).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, south-east of compound, 700 m., in cultivation, 2.12.1983, *Kielland-Lund* 150 (C, NLH); 16 km. north of Katire, 900 m., woodland with *Combretum collinum, C. molle* and *Annona senegalensis,* 22.2.1982, *Friis & Vollesen* 996 (C, K, KHF).
General habitat range: in lowland and medium-altitude grassland, wooded grassland and deciduous bushland.
General distribution: Cape Verde Islands and Senegal to Ethiopia and South Somalia, south to Tanzania; also in Mascarene Islands and tropical Asia to Australia. First record from the Sudan.
var. **prostrata** (Harv.) Meikle
FTEA, Legum.-Papilion. 2: 758 (1971); FE 3: 188 (1989); FSo 1: 445 (1993); HYF: 161 (1997).
Syn.: *[Rhynchosia memnonia* auct., non (Del.) DC.: FPS 2: 228 (1952)].
Didinga Mountains: near Kapoeta, no alt., on black cotton soil, 28.8.1953, *Peers* KM32 (WM).

General habitat range: in lowland and medium-altitude grassland, wooded grassland and deciduous bushland.
General distribution: Senegal to Somalia, south to South Africa; also in tropical Arabia. Species as a whole within the same general distribution area as the two varieties recorded here.

Rhynchosia nyassica Bak.
FPS 2: 230 (1952); FCB 6: 175 (1954); FWTA 1,2: 555 (1958); FTEA, Legum.-Papilion. 2: 736 (1971); FE 3: 184 (1989); UKWF: 136 (1994).
Imatong Mountains group, Sudan side: Kinyeti Valley, 15 km. north of Katire, 900 m., open woodland with *Combretum collinum, C. molle, Steganotaenia araliacea,* etc., on rocky outcrop, 6.3.1982, *Friis & Vollesen* 1113 (BR, C, EA, K, KHF).
General habitat range: in lowland and medium-altitude grassland, wooded grassland and semi-desert bushland.
General distribution: Mali and Nigeria to Sudan, Uganda and Kenya, south to Angola, Zambia, Malawi and Mozambique.

Rhynchosia orthobotrya Harms
FPS 2: 228 (1952); FCB 6: 176 (1954); FWTA 1,2: 554 (1958); FTEA, Legum.-Papilion. 2: 735 (1971); FE 3: 183 (1989); UKWF: 136 (1994).
Imatong Mountains group, Sudan side: Kinyeti Valley, 16 km. north of Katire, 900 m., woodland with *Combretum collinum, C. molle* and *Annona senegalensis,* 22.2.1982, *Friis & Vollesen* 994 (C, K, KHF).
General habitat range: in lowland and medium-altitude grassland, wooded grassland and deciduous bushland, often associated with rocky outcrops.
General distribution: Senegal to Ethiopia, south to Congo [previously Zaire] and Tanzania.

Rhynchosia resinosa (A. Rich.) Bak.
FTA 2: 218 (1871); FS: 206 (1929); FPNA 1: 349 (1948); FPS 2: 227 (1952); FCB 6: 162 (1954); FWTA 1,2: 554 (1958); FTEA, Legum.-Papilion. 2: 727 (1971); WICKENS 1976: 116; FE 3: 183 (1989); UKWF: 136 (1994); KTSL: 308 (1994).
Imatong Mountains group, Sudan side: Gilo to Itibol, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 11.11.1980, *Friis & Vollesen* 139 (C, K, KHF); Itibol, 1550 m., ravine forest, 17.12.1935, *Thomas* 1617A (BM, K).
Lafit, Dongotona and Nangeya Mountains: Lafit Mts., Mt. Loba, no alt., 21.10.1938, *Myers* 9827 (K).
General habitat range: in lowland, medium-altitude and montane grassland, wooded grassland and evergreen bushland.
General distribution: Guinée to Ethiopia and Kenya, south to Angola and South Africa (Transvaal, Natal).

Rhynchosia sublobata (Schumach.) Meikle
FPS 2: 228 (1952); FCB 6: 155 (1954); FWTA 1,2: 555 (1958); FTEA, Legum.-Papilion. 2: 751 (1971); FE 3: 185 (1989); FSo 1: 444 (1993); UKWF: 137 (1994); HYF: 161 (1997).
Syn.: [*Rhynchosia caribaea* auct., non (Jacq.) DC.: FTA 2: 220 (1871); FS: 205 (1929).]
Imatong Mountains group, Sudan side: Loa, Moliandro village west of Kerepi (3° 54' N, 31° 54' E), no alt., 5.6.1984, *Kielland-Lund* 842 (NLH).
General habitat range: in lowland and medium-altitude grassland, wooded grassland and woodland, sometimes also invading abandoned cultivations.
General distribution: Senegal to Ethiopia and Somalia, south to Namibia and South Africa (Transvaal); also in tropical Arabia.

Rhynchosia tricuspidata Bak. f.
FTEA, Legum.-Papilion. 2: 731 (1971).
subsp. **imatongensis** Verdc.
FTEA, Legum.-Papilion. 2: 731 (1971).
Imatong Mountains group, Sudan side: Bushbuck Hill, 2300 m., rocky outcrop in *Loudetia* grass-

land, 21.2.1982, *Friis & Vollesen* 978 (BR, C, EA, K); Mt. Lawurot (3° 58' N, 32° 48' E), 2100 m., montane grassland, 15.1.1949, *Jackson* 595 (BM).
Imatong Mountains group, Uganda side: Langia, no alt., 4.1943, *Purseglove* 1409 (K, holotype of *R. tricuspidata* subsp. *imatongense*; EA, isotype).
Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., Mt. Emogadung, near summit, 2500 m., grassland, 21.1.1950, *Jackson* 1090 (BM).
General habitat range: in montane grassland, often associated with rocky outcrops.
General distribution: North Uganda and South Sudan. Species as a whole also in Zimbabwe.

Sesbania Scop.

Sesbania macrantha Phil. & Hutch.
ITU: 311 (1952); FPS 2: 232 (1952) {Imatong Mountains}; FCB 5: 79 (1954); FWTA 1,2: 532 (1958); GILLETT 1963: 117; FTEA, Legum.-Papilion. 1: 341 (1971); UKWF: 126 (1994); KTSL: 309 (1994).
var. **macrantha**
GILLETT 1963: 117; FTEA, Legum.-Papilion. 1: 341 (1971); KTSL: 309 (1994).
Imatong Mountains group, Uganda side: Lututuru, 1650 m., grassy valley, 27.5.1947, *Maxwell Forbes* 113 (K).
General habitat range: in lowland and medium-altitude swamps and stream-sides, except in the most humid places.
General distribution: Cameroon to Sudan, Uganda and Kenya, south to Angola and South Africa (Transvaal). Species as a whole within the same general distribution area.

Sesbania rostrata Brem. & Oberm.
GILLETT 1963: 122; FTEA, Legum.-Papilion. 1: 343 (1971); FE 3: 140 (1989).
Syn.: [*Sesbania pachycarpa* auct., non DC., sensu str.: FTA 2: 134 (1871); FS: 192 (1929); FPS 2: 231 (1952); FWTA 1,2: 532 (1958).] *Sesbania hirticalyx* Cronq.: FCB 5: 82 (1954).
Imatong Mountains group, Sudan side: Kinyeti Valley, 2 km. from junction of Katire and Ngarama roads along Imatong road and 500 m. east of road (4° 21' N, 32° 39' E), no alt., 26.5.1984, *Kielland-Lund* 758 (C, NLH).
General habitat range: in lowland marshes and swamps, and at edges of shallow ponds.
General distribution: Senegal and Mauritania to Sudan and Ethiopia, south to Botswana, Zimbabwe and Malawi; also in Madagascar.

Sesbania sesban (L.) Merr.
FPNA 1: 316 (1948); ITU: 311 (1952); FPS 2: 232 (1952); FCB 5: 76 (1954); FWTA 1,2: 532 (1958); GILLETT 1963: 112; FTEA, Legum.-Papilion. 1: 339 (1971); WICKENS 1976: 117; FE 3: 140 (1989); FE 3: 140 (1989); EL AMIN 1990: 245; FSo 1: 420 (1993); UKWF: 125 (1994); KTSL: 310 (1994).
var. **nubica** Chiov.
GILLETT 1963: 112; FTEA, Legum.-Papilion. 1: 339 (1971); WICKENS 1976: 117; FSo 1: 421 (1993); KTSL: 310 (1994).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 3.1.1984, *Kielland-Lund* 575 (C, NLH); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* in grassy swamp with stagnant water along the river, 21.11.1980, *Friis & Vollesen* 372 (C, K, KHF).
General habitat range: in lowland, medium-altitude and montane swamps and riversides.
General distribution: Chad to Ethiopia and Somalia, south to South Africa (Natal). Species as a whole also to Senegal and in the warm temperate regions of the Middle East and in tropical Asia; introduced in tropical America.

Sesbania tetraptera Bak.
FTA 2: 136 (1871); FS: 193 (1929); FPS 2: 232

(1952); GILLETT 1963: 149; FTEA, Legum.-Papilion. 1: 351 (1971); FE 3: 142 (1989).
Lafit, Dongotona and Nangeya Mountains: Lafon Regional District Centre (5° 02' N, 32° 27-28' E), no alt., 29.12.1983, *Kielland-Lund* 516 (C, NLH).
General habitat range: in temporarily flooded lowland grassland.
General distribution: Sudan, Ethiopia, Tanzania, Mozambique, South Africa (Transvaal).

Smithia Aiton

Smithia elliotii Bak. f.
FPNA 1: 322 (1948); FCB 5: 346 (1954); FWTA 1,2: 582 (1958); FTEA, Legum.-Papilion. 1: 408 (1971); FE 3: 146 (1989); UKWF: 127 (1994).
var. **elliotii**
FTEA, Legum.-Papilion. 1: 408 (1971); FE 3: 146 (1989).
Imatong Mountains group, Sudan side: Gilo to Mt. Konoro, 1850 m., seepage meadow on edge between upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea* and grassland with *Loudetia arundinacea*, 18.11.1980, *Friis & Vollesen* 317 (BR, C, EA, FT, K, KHF).
General habitat range: in medium-altitude and montane grassland, in swamps and along streams.
General distribution: Nigeria and Cameroon to Ethiopia, south to Congo [previously Zaire], Zambia, Malawi and Mozambique; also in Madagascar. First record from the Sudan.

Stylosanthes Sw.

Stylosanthes fruticosa (Retz.) Alston
FTEA, Legum.-Papilion. 1: 437 (1971); WICKENS 1976: 117; FE 3: 147 (1989); FSo 1: 426 (1993); HYF: 154 (1997).
Syn.: *Stylosanthes mucronata* Willd.: FTA 2: 157 (1871); FCB 5: 348 (1954); FWTA 1,2: 575 (1958). *Stylosanthes bojeri* Vogel: FTA 2: 157 (1871). *Stylosanthes flavicans* Bak.: FTA 2: 156 (1871); FS: 195 (1929); FPS 2: 234 (1952).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, at the cross-roads, 700 m., 30.11.1983, *Kielland-Lund* 110 (C, NLH).
General habitat range: in lowland and medium-altitude grassland and wooded grassland, and in old cultivations.
General distribution: Senegal and Gambia to Somalia, south to Namibia and South Africa (Transvaal); also in Madagascar and tropical Arabia to India and Ceylon.

Tephrosia Pers.

Tephrosia bracteolata Guill. & Perr.
FTA 2: 116 (1871); FPS 2: 240 (1952); FCB 5: 112 (1954); FWTA 1,2: 530 (1958); FTEA, Legum.-Papilion. 1: 199 (1971); WICKENS 1976: 117; FE 3: 116 (1989).
Didinga Mountains: Lokwara (4° 40' N, 33° 27' E), no alt., 29.9.1953, *Peers* "Lokwara 5" (K).
General habitat range: in lowland and medium-altitude grassland, usually in swampy places.
General distribution: Senegal to Ethiopia, south to Angola, Zambia, Malawi and Tanzania.

Tephrosia interrupta Engl.
FTEA, Legum.-Papilion. 1: 204 (1971); FE 3: 118 (1989); SOMMERLATTE 1990: 266; UKWF: 120 (1994); KTSL: 312 (1994).
subsp. **interrupta**
FTEA, Legum.-Papilion. 1: 206 (1971); KTSL: 312 (1994).
Syn.: *Tephrosia dichroocarpa* A. Rich., pro parte.: FTA 2: 110 (1871); FS: 191 (1929); FPS 2: 239 (1952) {Imatong Mountains, near Itibol}.
Imatong Mountains group, Sudan side: without further locality, 2140 m., 2.1936, *Johnston* 1419 (K); Gilo, 1900 m., scrub, 20.1.1949, *Jackson* 603 (BM); Gilo, 1900 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*,

forest edge, 11.12.1980, *Friis & Vollesen* 813 (C, K, KHF); Itibol, 1940 m., in scrub, 17.12.1935, *Thomas* 1634 (BM, K); summit of Mt. Kinyeti, 2900 m., ericaceous scrub, 15.11.1949, *Jackson* 962 (BM, KHF).

Imatong Mountains group, Uganda side: 2 km. north-east of Lututuru, near end of road, 1800 m., grassland, 17.2.1969, *Lye* 2081 (MHU).

General habitat range: in medium-altitude and montane grassland and evergreen bushland, often associated with rocky outcrops. According to SOMMERLATTE 1990 it is a frequent species in montane grassland and *Hagenia* woodland of the Imatong Mountains.

General distribution: Ethiopia, South Sudan, Uganda, Kenya and Tanzania.

subsp. **mildbraedii** (Harms) Gillett

FTEA, Legum.-Papilion. 1: 206 (1971).

Syn.: *Tephrosia atroviolacea* Bak. f.: CHIPP 1929: 190; FPNA 1: 313 (1948); FPS 2: 240 (1952) {Imatong Mountains, above Kipia}. *Tephrosia mildbraedii* Harms: FPNA 1: 313 (1948); FCB 5: 114 (1954).

Imatong Mountains group, Sudan side: without further locality, 12.4.1933, *Smith* 19 (K, KHF); further data lost, 1950, *Jackson* 230 (KHF); Kipia, 2680 m., rocky places and at forest edges, 1939, *MacDonald* 57 (BM); above Kipia, 2740 m., in scrub in mountain ravines, 12.2. 1929, *Chipp* 96 (K, WM).

General habitat range: in medium-altitude and montane grassland and evergreen bushland, often associated with forest margins.

General distribution: East Congo [previously Zaire] to South Sudan and Uganda, south to Tanzania and Malawi. Species as a whole within the combined general distribution area of the two subspecies.

Tephrosia lebrunii Cronquist

FCB 5: 107 (1954); FTEA, Legum.-Papilion. 1: 209 (1971).

Imatong Mountains group, Sudan side: Mt. Baghanj, 1830-2140 m., 13.6.1939, *Andrews* 1914 (K).

Imatong Mountains group, Uganda side: without further locality, 2290 m., grassland, 4.1938, *Eggeling* 3583 (K); Langia, 1830 m., grassland, 4.1943, *Purseglove* 1435 (EA, K); Lututuru, 5.6.1963, *Kertland* s.n. (EA, K); 4 km. south-east of Lomwaga, no alt., tall-grass grassland with scattered trees, 18.7.1974, *Katende* 2135 (MHU); 5 km. south-east of Lomwaga, no alt., tall-grass grassland with scattered trees, 18.7.1974, *Katende* 2184 (EA, MHU).

General habitat range: in medium-altitude and montane grassland.

General distribution: North Uganda, North East Congo [previously Zaire] and South Sudan.

Tephrosia linearis (Willd.) Pers.

FTA 2: 120 (1871); FS: 189 (1929); FPNA 1: 308 (1948); FPS 2: 238 (1952); FCB 5: 94 (1954); FWTA 1,2: 531 (1958); FTEA, Legum.-Papilion. 1: 179 (1971); FE 3: 113 (1989); UKWF: 120 (1994).

Syn.: *Tephrosia discolor* E. Mey.: FCB 5: 95 (1954). *Teprosia pulchella* Hook. f.: FTA 2: 120 (1871). [*Tephrosia longipes* auct., non Meisn.: FTA 2: 120 (1871); FS: 191 (1929).]

Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 3.1.1984, *Kielland-Lund* 549 (C, NLH); Kinyeti Valley, Hiliu, east of compound and stream, 700 m., 9.12.1983, *Kielland-Lund* 286 (C, NLH).

General habitat range: in lowland and medium-altitude grassland, rocky slopes and old cultivations, often in seasonal swamps.

General distribution: Senegal and Gambia to Ethiopia, south to South Africa (Natal); also in Madagascar.

Tephrosia pumila (Lam.) Pers.

FTEA, Legum.-Papilion. 1: 184 (1971); FE 3: 115 (1989); FSo 1: 401 (1993); UKWF: 120 (1994); HYF: 151 (1997).

var. **pumila**
FTEA, Legum.-Papilion. 1: 184 (1971).
Imatong Mountains group, Sudan side: Talanga, 950 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 30.11. 1980, *Friis & Vollesen* 560 (C, KHF).
Didinga Mountains: 38 km. north of Kapoeta, on road to Karakamuge, no alt., 28.8.1953, *Peers* KAM33 (K, WM).
General habitat range: in lowland and medium-altitude grassland and deciduous bushland.
General distribution: Ghana to Ethiopia and Somalia, south to Angola and South Africa (Transvaal); also in Madagascar and tropical Arabia.

Tephrosia vogelii Hook. f.
FTA 2: 110 (1871); FS: 189 (1929); FPNA 1: 312 (1948); FPS 2: 240 (1952); FCB 5: 108 (1954); FWTA 1,2: 530 (1958); FTEA, Legum.-Papilion. 1: 210 (1971); FE 3: 119 (1989); UKWF: 121 (1994); KTSL: 312 (1994).
Imatong Mountains group, Sudan side: Palotaka, no alt., 1979, *Shigeta* 34 (?EA, identified and listed by M.G. Gilbert, not traced).
General habitat range: in lowland, medium-altitude and montane grassland and evergreen bushland, often in disturbed places.
General distribution: Sierra Leone to Ethiopia, south to Angola, Zambia, Zimbabwe and Mozambique; widely cultivated as a fish poison; large parts of the East African distribution area is presumably due to this cultivation.

Teramnus P. Browne

Teramnus micans (Bak.) Bak. f.
FCB 6: 103 (1954); FWTA 1,2: 573 (1958); FTEA, Legum.-Papilion. 2: 540 (1971); FE 3: 160 (1989).
Imatong Mountains group, Uganda side: 4 km. south-east of Lomwaga, no alt., beside rocks in tall-grass grassland with scattered trees, 18.7.1974, *Katende* 2150 (MHU).
General habitat range: in medium-altitude and montane grassland and wooded grassland.
General distribution: Guinea Bissau and Sierra Leone to Ethiopia, south to Angola, Zambia, Zimbabwe, Malawi and Mozambique.

Teramnus uncinatus (L.) Sw.
FTEA, Legum.-Papilion. 2: 539 (1971); FE 3: 160 (1989); UKWF: 131 (1994).
Imatong Mountains group, Uganda side: 5 km. south-east of Lomwaga, 1500 m., tall-grass grassland with scattered trees, 18.7.1974, *Katende* 2175 (MHU).
General habitat range: in lowland and medium-altitude grassland, woodland and bushland.
General distribution: throughout tropical Africa, and in tropical America, including the West Indies.

Trifolium L.

Trifolium elgonense Gillett
HEDBERG 1957: 122; FTEA, Legum.-Papilion. 2: 1035 (1971); FE 3: 241 (1989); UKWF: 147 (1994).
Imatong Mountains group, Sudan side: Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 848 (C, K).
General habitat range: in montane grassland and evergreen bushland or in forest clearings.
General distribution: Uganda, Kenya, South Sudan and South Ethiopia. First record from the Sudan.

Trifolium multinerve A. Rich.
FTA 2: 56 (1871); FPNA 1: 286 (1948); FPS 2: 242 (1952) {Imatong Mountains, Mt. Kinyeti, summit}; FCB 4: 299 (1953); HEDBERG 1957:

121; FTEA, Legum.-Papilion. 2: 1034 (1971); FE 3: 241 (1989); UKWF: 148 (1994).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 21.11.1980, *Friis & Vollesen* 379 (BR, C, EA, K, KHF); summit of Mt. Kinyeti, ericaceous scrub, no alt., 15.11.1949, *Jackson* 946 (BM); summit of Mt. Kinyeti, 3050 m., rocky summit, 30.12.1935, *Thomas* 1837 (BM, K).
General habitat range: in montane grassland and evergreen bushland, sometimes in swamps.
General distribution: East Congo [previously Zaire], South Sudan, Ethiopia, Uganda and Kenya.

Trifolium polystachyum Fresen.
FTA 2: 58 (1871); FPS 2: 242 (1952) {Imatong Mountains, Mt. Kinyeti, summit}; FCB 4: 293 (1953); FTEA, Legum.-Papilion. 2: 1024 (1971); FE 3: 236 (1989); UKWF: 147 (1994).
Imatong Mountains group, Sudan side: Kipia, 2680 m., montane grassland, 20.9.1940, *Myers* 13,487 (K); Kipia, 2740 m., rocky ground, 6.7.1947, *MacLeay* 192 (BM); summit of Mt. Kinyeti, 3050 m., rocky ground at summit, 30.12.1935, *Thomas* 1851 (BM, K); Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 818 (C); summit of Mt. Kinyeti, 3180 m., montane grassland, 1.1.1939, *MacDonald* 60 (BM).
General habitat range: in medium-altitude and montane forest, especially along margins and in clearings, in evergreen bushland and swampy grassland.
General distribution: South Sudan to Ethiopia, south to Angola, Zambia and Tanzania.

Trifolium rueppellianum Fresen.
FTA 2: 58 (1871); FPNA 1: 287 (1948); FPS 2: 243 (1952) {Imatong Mountains, Atiaro}; FCB 4: 296 (1953); HEDBERG 1957: 120; FTEA, Legum.-Papilion. 2: 1030 (1971); FE 3: 238 (1989); UKWF: 148 (1994).
Imatong Mountains group, Sudan side: Atiaro (between Itibol and Ibahin), 1950 m., in *Acacia abyssinica* woodland, 18.12.1935, *Thomas* 1655 (BM, K); Dumuso, 2500 m., *Hagenia* woodland, 16.11.1949, *Jackson* 988 (BM).
General habitat range: in medium-altitude and montane grassland, woodland, evergreen bushland and clearings in forest, usually in wet places.
General distribution: Cameroon to Ethiopia, south to Tanzania.

Trifolium simense Fresen.
FTA 2: 57 (1871); FPS 2: 242 (1952) {Imatong Mountains, Kipia}; FCB 4: 293 (1953); FTEA, Legum.-Papilion. 2: 1022 (1971); FE 3: 236 (1989); UKWF: 147 (1994).
Imatong Mountains group, Sudan side: Gilo, 1980 m., in burnt grassland, 26.6.1947, *MacLeay* 61 (BM); Kipia, 2650 m., mountain meadow, 28.7.1939, *Myers* 11,693 (K, WM); Kipia, 2930 m., in grassy forest clearings, 4.7.1947, *MacLeay* 181 (BM); summit of Mt. Kinyeti, 3180 m., ericaceous scrub, 15.11.1949, *Jackson* 942 (BM).
Imatong Mountains group, Uganda side: Lomwaga, 2590 m., 6.1942, *Eggeling* 5074 (EA).
General habitat range: in medium-altitude and montane grassland and evergreen bushland.
General distribution: Cameroon to Ethiopia, south to Malawi and Zambia.

Trifolium usambarense Taub.
FWTA 1,2: 553 (1958); FTEA, Legum.-Papilion. 2: 1024 (1971); FE 3: 236 (1989); UKWF: 147 (1994).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Oco-*

tea, on moist slope along trail, 9.11.1980, *Friis & Vollesen* 92 (BR, C, EA, K, KHF).
General habitat range: in medium-altitude and montane forest and grassland, especially along streams.
General distribution: Cameroon to Ethiopia, south to Tanzania and Zambia.

Vicia L.

Vicia hirsuta (L.) S.F. Gray
FTA 2: 173 (1871); FCB 6: 81 (1954); FTEA, Legum.-Papilion. 2: 1072 (1971); FE 3: 249 (1989); UKWF: 150 (1994).
Imatong Mountains group, Sudan side: Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 846 (C).
General habitat range: in montane grassland, evergreen bushland and along forest margins and in clearings.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Angola and Tanzania; also in North Africa, Europe and Asia. First record from the Sudan.

Vicia sativa L.
FTA 2: 172 (1871); FCB 6: 80 (1954); FTEA, Legum.-Papilion. 2: 1068 (1971); FE 3: 249 (1989); UKWF: 150 (1994); HYF: 155 (1997).
var. **angustifolia** L.
FTEA, Legum.-Papilion. 2: 1069 (1971); FE 3: 249 (1989); HYF: 155 (1997).
Imatong Mountains group, Sudan side: Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 860 (C).
General habitat range: in montane grassland and evergreen bushland, along forest edges and in bamboo thicket.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Zimbabwe; also in tropical Arabia, North Africa, Middle East, Europe and North West India.

Vigna Savi

Vigna ambacensis Bak.
FTA 2: 201 (1871); FPS 2: 245 (1952); FCB 6: 355 (1954); FWTA 1,2: 568 (1958); FTEA, Legum.-Papilion. 2: 632 (1971); FE 3: 173 (1989); UKWF: 133 (1994).
Imatong Mountains group, Sudan side: Talanga, 950 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 30.11. 1980, *Friis & Vollesen* 561 (C, K, KHF).
General habitat range: in lowland and medium-altitude grassland and bushland.
General distribution: Nigeria to Ethiopia, south to Angola, Congo [previously Zaire] and Tanzania.

Vigna comosa Bak.
FTA 2: 202 (1871); FTEA, Legum.-Papilion. 2: 630 (1971); UKWF: 132 (1994).
Syn.: *Vigna micrantha* Harms: FPNA 1: 361 (1948); FCB 6: 353 (1954); FWTA 1,2: 568 (1958).
Imatong Mountains group, Sudan side: Gilo to Mt. Konoro, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 24.11.1980, *Friis & Vollesen* 430 (C, K, KHF); Gilo to Mt. Konoro, 2000 m., *Loudetia arundinacea* grassland with scattered trees, 16.11.1980, *Friis & Vollesen* 268 (BR, C, EA, FT, K, KHF).
General habitat range: in medium-altitude and montane grassland.
General distribution: Sierra Leone to Sudan, Uganda and Kenya, south to Angola, Zambia, Malawi and Tanzania. First record from the Sudan.

Vigna frutescens A. Rich.
FTA 2: 196 (1871); FTEA, Legum.-Papilion. 2: 647 (1971); WICKENS 1976: 117; FE 3: 174 (1989); UKWF: 133 (1994).
subsp. **frutescens**
FTEA, Legum.-Papilion. 2: 647 (1971); FE 3: 176 (1989)
var. **frutescens**
FTEA, Legum.-Papilion. 2: 648 (1971).
Syn.: *Vigna fragrans* Bak. f.: FPS 2: 246 (1952) {Didinga Mountains, Nagichot}. *Vigna esculenta* (De Wild.) De Wild.: FCB 6: 373 (1954).
Imatong Mountains group, Sudan side: Kinyeti Valley, 16 km. north of Katire, 900 m., woodland with *Combretum collinum, C. molle* and *Annona senegalensis,* 22.2.1982, *Friis & Vollesen* 998 (BR, C, K, KHF); Kinyeti Valley, just above Katire, 1000 m., woodland with *Combretum molle, Stereospermum kunthianum, Erythrina abyssinica, Entada abyssinica,* etc., 24.3.1982, *Friis & Vollesen* 1308 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: near Agoro, 1830 m., 12.1932, *Eggeling* 821 (K, MHU); Langia, 2130 m., grassland, 4.1943, *Purseglove* 1397 (EA, K).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 2000 m., climber in grassland, 17.5.1972, *Synnott* 1060 (EA, MHU).
Didinga Mountains: near Nagichot, 1920 m., open wooded grassland, 28.4.1939, *Myers* 11,209 (K, WM).
General habitat range: in lowland and medium-altitude grassland, bushland and woodland.
General distribution: Nigeria to Ethiopia, south to Angola, Botswana and Mozambique.
subsp. **kotschyi** (Schweinf.) Verdc.
FTEA, Legum.-Papilion. 2: 649 (1971); FE 3: 176 (1989).
Syn.: *Vigna kotschyi* Schweinf.: FS: 202 (1929).
Imatong Mountains group, Sudan side: lower southern slope of Mt. Konoro, 2300 m., *Loudetia arundinacea* grassland on shallow soil, recently burnt, 18.2.1982, *Friis & Vollesen* 949 (C, K, KHF); Bushbuck Hill, 2300 m., *Loudetia arundinacea* grassland with scattered trees, recently burnt, 14.3.1982, *Friis & Vollesen* 1205 (C, K, KHF).
General habitat range: in lowland and medium-altitude grassland.
General distribution: Sudan. Species as a whole within the same general area as the subspecies mentioned here.

Vigna heterophylla A. Rich.
FTA 2: 197 (1871); FCB 6: 337 (1954); FTEA, Legum.-Papilion. 2: 631 (1971); FE 3: 173 (1989); UKWF: 133 (1994); HYF: 158 (1997).
Imatong Mountains group, Sudan side: Palotaka, no alt., 1979, *Shigeta* 198 (?EA, identified and listed by M.G. Gilbert, not traced).
General habitat range: in medium-altitude and montane grassland.
General distribution: Cameroon to Ethiopia, south to Zambia and Tanzania; also in tropical Arabia.

Vigna luteola (Jacq.) Benth.
FS: 202 (1929); FCB 6: 363 (1958); FWTA 1,2: 569 (1958); FTEA, Legum.-Papilion. 2: 625 (1971); FE 3: 172 (1989); UKWF: 132 (1994); HYF: 158 (1997).
Imatong Mountains group, Sudan side: along path from Bushbuck Hill to Mt. Konoro, 2400 m., *Hagenia abyssinica* woodland with recently burnt ground cover, 23.2.1982, *Friis & Vollesen* 1003 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: 4 km. south-east of Lomwaga, no alt., beside track in tall-grass grassland, 18.7.1974, *Katende* 2139 (MHU).
General habitat range: in lowland and medium-altitude grassland, bushland and woodland.
General distribution: Senegal to Ethiopia, south to South Africa; also in Egypt, Middle East, and widespread in tropical Asia, including tropical Arabia, and tropical America.

Vigna macrorhyncha (Harms) Milne-Redh.
FPNA 1: 359 (1948); FPS 2: 245 (1952); FWTA 1,2: 568 (1958); FTEA, Legum.-Papilion. 2: 658 (1971); FE 3: 177 (1989); FSo 1: 437 (1993); UKWF: 133 (1994).
Syn.: *Phaseolus stenocarpus* Harms: FS: 201 (1929). *Phaseolus schimperi* Taub.: FCB 6: 335 (1954).
Imatong Mountains group, Uganda side: 2 km. north-east of Lututuru, near end of road, 1800 m., grassland, 17.2.1969, *Lye* 2059 (EA, K, MHU, NLH).
General habitat range: in lowland, medium-altitude and montane grassland and woodland.
General distribution: Nigeria to Ethiopia and Somalia, south to Zambia, Zimbabwe and Tanzania.

Vigna membranacea A. Rich.
FTA 2: 197 (1871); FS: 201 (1929); FPS 2: 247 (1952); FTEA, Legum.-Papilion. 2: 638 (1971); FE 3: 173 (1989); FSo 1: 434 (1993); UKWF: 133 (1994); HYF: 158 (1997).
subsp. **membranacea**
FTEA, Legum.-Papilion. 2: 639 (1971); HYF: 158 (1997).
Syn.: *Vigna membranaceoides* Robyns & Boutique: FPNA 1: 365 (1948); FCB 6: 385 (1954).
Imatong Mountains group, Sudan side: Gilo to Itibol, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 11.11.1980, *Friis & Vollesen* 155 (BR, C, K, KHF).
General habitat range: in lowland, medium-altitude and montane grassland, bushland and dry forest.
General distribution: Sudan and Ethiopia south to Tanzania; also in tropical Arabia.
subsp. **caesia** (Chiov.) Verdc.
FTEA, Legum.-Papilion. 2: 640 (1971); FSo 1: 435 (1993).
Imatong Mountains group, Sudan side: Talanga to Upper Talanga, 1300 m., medium-altitude rain forest with *Diospyros abyssinica, Garcinia buchananii, Uvariopsis congoensis, Turraea floribunda, Manilkara butugi,* etc., scrambling at edge of recently burnt area in forest, 10.12.1980, *Friis & Vollesen* 789 (C, K, KHF).
General habitat range: in lowland deciduous bushland.
General distribution: Sudan, Ethiopia, Somalia, south to North Tanzania. Species as a whole also in Congo [previously Zaire].
Note. Typical subsp. *membranacea* is new to the Sudan.

Vigna racemosa (G. Don) Hutch. & Dalziel
FCB 6: 370 (1954); FWTA 1,2: 569 (1958); FTEA, Legum.-Papilion. 2: 633 (1971).
Imatong Mountains group, Sudan side: Talanga, 950 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, growing along small brook, 2.12.1980, *Friis & Vollesen* 620 (BR, C, FT, K, KHF).
General habitat range: in lowland grassland and woodland.
General distribution: Senegal to Sudan and Uganda, south to Angola, Congo [previously Zaire] and Zambia.

Vigna reticulata Hook. f.
FTA 2: 198 (1871); FS: 202 (1929); FPS 2: 247 (1952); FTEA, Legum.-Papilion. 2: 650 (1971); FE 3: 176 (1989).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., edge of forest, 16.2.1979, *Shigeta* 196 (EA).
General habitat range: in lowland, medium-altitude and montane grassland.
General distribution: Sierra Leone to West Ethiopia, south to Angola, Zimbabwe and Mozambique; also in Madagascar.

Vigna schimperi Bak.
CHIPP 1929: 190; FPS 2: 246 (1952) {Imatong Mountains, Ras Logoforok}; FCB 6: 365 (1954); FTEA, Legum.-Papilion. 2: 628 (1971); FE 3: 172 (1989); UKWF: 132 (1994).

Imatong Mountains group, Sudan side: without further locality, 2.1936, *Johnston* 1458 (K); Palotaka, 1200 m., open woodland, 9.1.1979, *Shigeta* 75 (EA); Gilo to Mt. Konoro, 2000 m., *Loudetia arundinacea* grassland with scattered trees, 16.11.1980, *Friis & Vollesen* 260 (BR, C, K, KHF); Ras Logoforok, edge of forest, 12.2. 1929, *Chipp* 105 (K).
Imatong Mountains group, Uganda side: Langia, 2740 m., montane grassland, 4.1943, *Purseglove* 1436 (EA, K).
General habitat range: in medium-altitude and montane grassland, bushland and at forest edges.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Tanzania.

Vigna unguiculata (L.) Walp.
FPS 2: 246 (1952); FCB 6: 387 (1954); FWTA 1,2: 569 (1958); FTEA, Legum.-Papilion. 2: 642 (1971); FE 3: 174 (1989); FSo 1: 436 (1993); UKWF: 133 (1994); HYF: 158 (1997).
subsp. **cylindrica** (L.) van Esseltine
FTEA, Legum.-Papilion. 2: 644 (1971).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., open woodland, 22.2.1979, *Shigeta* 202 (EA).
General habitat range and distribution: Cultivated subspecies frequently met in the lowlands of East Africa.
subsp. **dekindtiana** (Harms) Verdc.
FTEA, Legum.-Papilion. 2: 644 (1971); FE 3: 174 (1989); UKWF: 133 (1994).
Imatong Mountains group, Sudan side: Talanga, 950 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, and on rocks along brook, 30.11.1980, *Friis & Vollesen* 570 (C, K, KHF), & 2.12.1980, *Friis & Vollesen* 624 (C, K, KHF); Kinyeti Valley, Hiliu, south-east of compound, 700 m., in cultivation, 2.12.1983, *Kielland-Lund* 156 (C, NLH).
General habitat range: in lowland and medium-altitude grassland, bushland, and along forest edges, often cultivated.
General distribution: West Africa to Ethiopia, south to South Africa; cultivated in many other parts of the tropics. Species as a whole widespread in the Old World tropics.

Vigna vexillata (L.) A. Rich.
FTA 2: 199 (1871); FS: 202 (1929); FPS 2: 247 (1952); FCB 6: 379 (1954); FWTA 1,2: 567 (1958); FTEA, Legum.-Papilion. 2: 652 (1971); WICKENS 1976: 118; FE 3: 176 (1989); FSo 1: 436 (1993); HYF: 158 (1997).
var. **vexillata**
FTEA, Legum.-Papilion. 1: 653 (1971).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., at dam, 6.1.1984, *Kielland-Lund* 594 (C, NLH); Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 8.12.1980, *Friis & Vollesen* 768 (C, K, KHF); Gilo, at bridge on Ngairigi River, 1700 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 17.11.1980, *Friis & Vollesen* 295 (C, KHF).
General habitat range: in lowland, medium-altitude and montane grassland, bushland and at forest edges, often in abandoned cultivated land.
General distribution: Senegal to Ethiopia and Somalia, south to South Africa; widespread in all parts of the tropics. Species as a whole within the same general distribution area.

Zornia Gmel.

Zornia glochidiata DC.
FPS 2: 248 (1952); FCB 5: 356 (1954); FWTA 1,2: 575 (1958); FTEA, Legum.-Papilion. 1: 444 (1971); WICKENS 1976: 118; FE 3: 148 (1989); UKWF: 128 (1994).

Syn.: [*Zornia diphylla* auct., non (L.) Pers.: FTA 2: 158 (1871); FS: 195 (1929); FPNA 1: 325 (1948)].
Imatong Mountains group, Sudan side: 5 km. south-east of Torit, 630 m., sandy soil in *Acacia* bushland, 12.6.1961, *Jackson* 4241 (K); Kinyeti Valley, Hiliu, 700 m., at margin of main road, 28.11.1983, *Kielland-Lund* 63 (C, NLH).
General habitat range: in lowland and medium-altitude woodland and wooded grassland.
General distribution: Senegal to Ethiopia, south to South Africa (Cape Prov.); also in Madagascar.

Zornia pratensis Milne-Redh.
FCB 5: 358 (1954); FTEA, Legum.-Papilion. 1: 445 (1971); FE 3: 148 (1989); UKWF: 128 (1994).
subsp. **pratensis**
FTEA, Legum.-Papilion. 1: 446 (1971); FE 3: 140 (1989).
Syn.: [*Zornia diphylla* auct., non (L.) Pers.: FPNA 1: 325 (1948)].
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1830 m., grassland, 4.1960, *Wilson* 998 (EA, K).
General habitat range: in lowland and medium-altitude woodland and wooded grassland.
General distribution: Congo [previously Zaire] to Ethiopia, south to Angola, Zambia Zimbabwe, Malawi and Tanzania. Species as a whole also as far west as Cameroon.

Order 45. **Hamamelidales** Griseb.

Fam. 85. **Hamamelidaceae** R. Br.

Trichocladus Pers.

Trichocladus ellipticus Eckl. & Zeyh.
FTEA, Hamamelidac.: 2 (1971); FE 3: 252 (1989); El Amin 1990: 249; KTSL: 314 (1994).
subsp. **malosanus** (Bak.) Verdc.
FTEA, Hamamelidac.: 2 (1971); FE 3: 252 (1989); KTSL: 314 (1994).
Syn.: *Trichocladus malosanus* Bak.: ITU: 155 (1952); FPS 2: 249 (1952) {Didinga Mountains, Naligede, Mt. Lotuke}.
Imatong Mountains group, Uganda side: head-waters of Aringa River, 2290 m., understorey of riverine forest, 6.4.1945, *Greenway & Hummel* 7297 (EA, FHO, K, MHU).
Lafit, Dongotona and Nangeya Mountains: Dongotona Mountains, Mt. Emogadung, 2500 m., in *Podocarpus latifolius-Syzygium* forest, 21.1. 1950, *Jackson* 1091 (FHO, KHF).
Didinga Mountains: Mt. Lotuke, 1980 m., lower montane forest, 20.4.1939, *Myers* 10,962 (K); Naligede, 1770 m., 21.4.1939, *Myers* 10,986 (K); path from Nathilani to Nagichot, 1900 m., in undergrowth of *Albizia gummifera* forest, 10.4. 1949, *Jackson* 681 (FHO, KHF).
General habitat range: in medium-altitude and montane forest.
General distribution: Uganda to Ethiopia, south to Angola, Zambia, Malawi and Mozambique. Species as a whole south to South Africa (Natal, East Cape Prov.)

Order 46. **Salicales** Lindl.

Fam. 86. **Salicaceae** Mirb.

Salix L.

Salix mucronata Thunb.
HYF: 118 (1997).
Syn.: *Salix subserrata* Willd.: FTA 6,2: 318 (1917); ITU: 371 (1952); FPS 2: 250 (1952); FWTA 1,2: 588 (1958); FAC, Salicac.: 2 (1967); Wickens 1976: 118; FTEA, Salicac.: 3 (1985); FE 3: 258 (1989); El Amin 1990: 251; KTSL: 316 (1994). *Salix safsaf* Forssk., nom. inval.: FTA 6,2: 318 (1917); FS: 209 (1929).

Imatong Mountains group, Uganda side: at Lututuru, 1980 m., in stream-bed, 4.1938, *Eggeling* 3543 (K).
General habitat range: in lowland and medium-altitude riverine vegetation.
General distribution: Gambia to Egypt and Ethiopia, south to South Africa; also in tropical Arabia.

Order 47. **Myricales** Engl.

Fam. 87. **Myricaceae** Blume

Myrica L.

Myrica humilis Cham. & Schlecht.
WHITE 1993: 177.
Syn.: *Myrica salicifolia* Hochst. ex A. Rich.: FCB 1: 34 (1948); FPNA 1:38 (1948); ITU: 266 (1952); FE 3: 261 (1989); EL AMIN 1990: 247 {Mt. Kinyeti}; SOMMERLATTE 1990: 350; KTSL: 316 (1994); HYF: 75 (1997). *Myrica arborea* Hutch.: FTA 6,2: 309 (1917); FWTA 1,2: 589 (1958).
Imatong Mountains group, Sudan side: slope of Mt. Kinyeti, 15.11.1949, *Jackson* 978 (KHF); a small hill on the south-east slope of Mt. Konoro, 2400 m., *Loudetia arundinacea* grassland with scattered trees, mainly *Protea gaguedi*, 14.3.1982, *Friis & Vollesen* 1211 (C, K, KHF).
General habitat range: in medium-altitude and montane woodland, evergreen bushland and forest. According to SOMMERLATTE 1990 it occurs in *Erica arborea* thicket and in mixed *Podocarpus latifolius* forest of the Imatong Mountains.
General distribution: Cameroon to Ethiopia, south to South Africa (Cape Prov.); also in Madagascar and tropical Arabia.

Order 48. **Urticales** Dumort.

Fam. 88. **Ulmaceae** Mirb.

Celtis L.

Celtis africana Burm. f.
FWTA 1,2: 592 (1958); FTEA, Ulmac.: 4 (1966); FC 8: 14 (1968); FE 3: 266 (1989); EL AMIN 1990: 251; SOMMERLATTE 1990: 276; KTSL: 318 (1994); HYF: 68 (1997).
Syn.: *Celtis kraussiana* Benth.: FTA 6,2: 3 (1916); FCB 1: 43 (1948); FPNA 1: 43 (1948); ITU: 434 (1952); FPS 2: 253 (1952) {Didinga Mountains}.
Imatong Mountains group, Sudan side: without further locality, 1980 m., forest, 13.12.1976, *Howard* IM 31 (K, KHF); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 15.11.1980, *Friis & Vollesen* 217 (C).
Imatong Mountains group, Uganda side: 2300 m., forest, 4.1938, *Eggeling* 3557 (K, MHU); near headwaters of Aringa River, 2300 m., *Podocarpus latifolius-Syzygium* forest, 7.4.1945, *Greenway & Hummel* 7307 (EA, FHO, K, MHU).
Didinga Mountains: head of the River Loghak (4° 14' N, 33° 33' E), 1800 m., riverine forest, 11.4.1949, *Jackson* 688 (FHO, KHF); Iwowa, 1620 m., in khor, 22.4.1939, *Myers* 11,033 (K, WM); Mt. Lotuke, 1980 m., lower montane forest, 20.4.1939, *Myers* 10,958 (K, WM); Mt. Lotuke, along River Kurumo, 1900 m., edge of gallery forest, 31.3.1950, *Jackson* 1362 (BM, K, WM).
General habitat range: in lowland, medium-altitude and montane forest and evergreen bushland, often as pioneer. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in *Albizia* forest.
General distribution: Ghana to Ethiopia, south to Angola and South Africa (Cape Prov.); also in tropical Arabia and widespread in tropical Asia, including tropical Arabia.

Celtis gomphophylla Bak.
FC 8: 39 (1968); FE 3: 267 (1989); KTSL: 318 (1994).
Syn.: *Celtis durandii* Engl.: FTA 6,2: 4 (1916); FCB 1: 42 (1948); FPNA 1: 43 (1948); FWTA 1,2: 592 (1958); FTEA, Ulmac.: 5 (1966). *Celtis durandii* Engl. var. *ugandensis* Rendle: FPNA 1: 43 (1948); ITU: 432 (1952).
Imatong Mountains group, Sudan side: in dip between Lotti and Kerifi, 1900 m., in forest, 8.10.1938, *Myers* 9602 (WM); Upper Talanga Tea project, 1800 m., upland rain forest, understorey tree, 18.11.1981, *Howard* UTT 17 (BR, C, K); Lomariti Range, Upper Talanga Tea project, 1850 m., 4.1980, *Loehr* in EA 16481 (K); Upper Talanga, 2000 m., *Albizia* forest, 5.1984, *Sommerlatte* 73 (EA).
General habitat range: in lowland, medium-altitude and montane forest.
General distribution: Ivory Coast to Ethiopia, south to Angola and South Africa (Cape Prov.).

Celtis mildbraedii Engl.
FCB 1: 45 (1948); FWTA 1,2: 592 (1958); FTEA, Ulmac.: 7 (1966); El Amin 1990: 253 {Talanga}; Sommerlatte 1990: 146; KTSL: 318 (1994).
Syn.: [*Celtis soyauxii* auct., non Engl.: FTA 6,2: 5 (1916); ITU. 435 (1952); FPS 2: 251 (1952) {Imatong Mountains, Talanga}; Jackson 1956: 353 {Talanga, Lotti}].
Imatong Mountains group: no specimen seen; recorded by Jackson 1956 from the forests at Talanga and Lotti, by El Amin 1990 and FPS 2 (1952) from Talanga, and by Sommerlatte 1990 from lowland forest in the general area.
General habitat range: in lowland and medium-altitude forest. According to Sommerlatte 1990 it occurs at the Imatong Mountains as a frequent tree in the canopy of lowland forest.
General distribution: Guinée to Ethiopia, south to Angola, Zimbabwe and South Africa (Natal).

Celtis philippensis Blanco
FC 8: 26 (1968); FE 3: 267 (1989); KTSL: 318 (1994).
Syn.: *Celtis wightii* Planch.: FTEA, Ulmac.: 9 (1966); El Amin 1990: 253; Sommerlatte 1990: 198. *Celtis brownei* Rendle: FTA 6,2: 10 (1916); ITU: 430 (1952); Jackson 1956: 353 {Talanga, Lotti, Laboni}; FWTA 1,2: 592 (1916).
Imatong Mountains group, Sudan side: Talanga, 1000 m., in tropical rain forest, 6.4.1950, *Jackson* 1385 (K, WM); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 26.11. 1980, *Friis & Vollesen* 479 (BR, C, EA, K, KHF).
General habitat range: in lowland and medium-altitude forest. According to Sommerlatte 1990 it occurs at the Imatong Mountains as a tree in lowland forest.
General distribution: Senegal and Guinée to Ethiopia, south to Angola, Zimbabwe and Mozambique; also in tropical Asia and North Australia.

Celtis toka (Forssk.) Hepper & Wood
FE 3: 267 (1989); HYF: 68 (1997).
Syn.: *Celtis integrifolia* Lam.: FTA 6,2: 7 (1916); FS: 158 (1929); ITU: 432 (1952); FPS 2: 251 (1952); FWTA 1,2: 592 (1958); FTEA, Ulmac.: 7 (1966); FC 8: 19 (1968); Wickens 1976: 118; El Amin 1990: 253.
Imatong Mountains group, Sudan side: Hiliu, between Katire and Torit, 850 m., along temporary stream with *Tamarindus indica, Lannea barteri, Crateva adansonii, Diospyros mespiliformis, Antiaris africana,* etc., 21.1.1947, *Dawkins* 229 (FHO, MHU).
Imatong Mountains group, Uganda side: Agoro, at riverside, 3.1935, *Eggeling* 1721 (K, MHU); Agoro, 1220 m., on banks of dried up river, with *Ficus thonningii, Ficus vallis-choudae, Ficus sycomorus, Trichilia emetica, Acacia albida, Acacia polyacantha* subsp. *campylacantha, Albizia zygia, Albizia amara, Cadaba farinosa,* and *Capparis sp.,*

9.4.1945, *Greenway & Hummel* 7327 (EA, FHO, K, MHU).
Lafit, Dongotona and Nangeya Mountains: 1 km. south of Lafon (5° 02' N 32° 27-28' E), no alt., 28.12.1983, *Kielland-Lund* 506 (C, NLH).
Didinga Mountains: Boya Hill, Kimatong, 700 m., wooded grassland, 17.11.1983, *Fukui* 83-1 (EA); Boya Hill, Thuguru region (4° 40' N, 33° 17' E), no alt., 12.6.1984, *Kielland-Lund* 934 (C, NLH).
General habitat range: in lowland and medium-altitude riverine forest.
General distribution: Senegal to Ethiopia, south to Uganda; also tropical Arabia.

Celtis zenkeri Engl.
FTA 6,2: 6 (1916); FCB 1: 45 (1948); FPNA 1: 44 (1948); ITU: 435 (1952); FPS 2: 251 (1952) {Lotti}; JACKSON 1956: 353 {Talanga, Lotti, Laboni}; FWTA 1,2: 592 (1958); FTEA, Ulmac.: 8 (1966); FC 8: 19 (1968); FE 3: 267 (1989); EL AMIN 1990: 255; SOMMERLATTE 1990: 138.
Imatong Mountains group, Sudan side: Lotti, near rest house, no alt., 9.6.1939, *Andrews* 1752 (K); Lotti, 1000 m., dense forest with *Khaya grandifoliola, Schrebera,* etc., 20.5.1949, *Jackson* 739 (FHO, destroyed); Lotti, no alt., very tall tree in forest, 5.8.1939, *Myers* 11,809 (K, WM); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 27.11.1980, *Friis & Vollesen* 490 (BR, C, K, KHF); Talanga, 1000 m., in forest, 8.11.1948, *Jackson* 491 (FHO, KHF).
General habitat range: in lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree of mature lowland forest.
General distribution: Guinée to Ethiopia, south to Angola, Congo [previously Zaire] and Tanzania.

Chaetachme Planch.

Chaetachme aristata Planch.
ITU: 436 (1952); FPS 2: 254 (1952); JACKSON 1956: 354 {Talanga, Lotti}; FWTA 1,2: 593 (1958); FTEA, Ulmac.: 12 (1966); FC 8: 56 (1968); EL AMIN 1990: 255; SOMMERLATTE 1990: 290; KTSL: 319 (1994).
Syn.: *Chaetachme microcarpa* Rendle: FTA 6,2: 13 (1916); FCB 1: 51 (1948).
Imatong Mountains group, Sudan side: Lotti, 1000 m., closed forest, 24.6.1953, *Jackson* 3029 (FHO, KHF); Talanga, 1000 m., at forest edge, 2.1951, *Jackson* 1753 (FHO, KHF); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 15.11.1980, *Friis & Vollesen* 241 (C, KHF).
Imatong Mountains group, Uganda side: without further locality, 1840 m., riverine vegetation, 4.1945, *Hummel* 760 (FHO); Lututuru, no alt., 1992, *Katende* (sight record).
Didinga Mountains: Iwowa, 1620 m., in deep khor, 22.9.1939, *Myers* 11,037 (K, WM) & 11,039 (K); Nathilani, Didinga foothills, 1200 m., in scrub along stream, 9.4.1949, *Jackson* 669 (FHO).
General habitat range: in lowland, medium-altitude and montane forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree mainly at forest edges and in secondary forest, but also in mature forest, between 1000 and 2400 m.
General distribution: Sierra Leone and Ivory Coast to South Sudan, south to Angola, Congo [previously Zaire] and Tanzania; also in Madagascar.

Trema Lour.

Trema orientalis (L.) Blume
FTEA, Ulmac.: 10 (1966); FC 8: 48 (1968); WICKENS 1976: 118; FE 3: 268 (1989); EL AMIN

1990: 257; SOMMERLATTE 1990: 288; KTSL: 319 (1994); HYF: 68 (1997).
Syn.: *Trema guineensis* (Schumach.) Ficalho: FTA 6,2: 11 (1916); FS: 159 (1929); FCB 1: 48 (1948); FPNA 1: 46 (1948); JACKSON 1951: 340 {Didinga Mountains, Mt. Lotuke}; ITU: 438 (1952); FPS 2: 256 (1952); FWTA 1,2: 592 (1958).
Imatong Mountains group, Sudan side: 30 km. south of Hiliu along Katire road, no alt., 26.12.1983, *Kielland-Lund* 457 (C, NLH); Ibahin, 1860 m., forest, 18.12.1935, *Thomas* 1662 (BM, K); Mt. Baghanj, 1850-2150 m., forest, 14.6.1939, *Andrews* 1942 (K); Gilo, 1900 m., in *Albizia* tangle, 1.2.1947, *Jackson* 176 (FHO, KHF); Gilo, 2000 m., along road in forest, 19.4.1984, *Sommerlatte* 63 (EA); Gilo to Itibol, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 11.11. 1980, *Friis & Vollesen* 145 (C).
General habitat range: in lowland, medium-altitude and montane forest or evergreen bushland, often as a pioneer tree. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in forest gaps and at edges between 1000 and 2400 m.
General distribution: Senegal to Ethiopia, south to South Africa; also in Madagascar, Mascarene Islands and tropical Asia, including tropical Arabia.
Note. No herbarium record has been seen from the Didinga Mountains.

Fam. 89. **Moraceae** Link

Antiaris Lesch.

Antiaris toxicaria Lesch.
ITU: 233 (1952); JACKSON 1956: 353 {Talanga, Lotti, Laboni}; FG 26: 109 (1984); FC 28: 106 (1985); FTEA, Morac.: 10 (1989); FE 3: 301 (1989); SOMMERLATTE 1990: 156; KTSL: 320 (1994); HYF: 72 (1997).
subsp. **welwitschii** (Engl.) C.C. Berg
FG 26: 109 (1984); FC 28: 106 (1985); FTEA, Morac.: 13 (1989).
Syn.: *Antiaris welwitschii* Engl.: FCB 1: 93 (1948).
var. **africana** A. Chev.
FC 28: 110 (1985).
Syn.: *Antiaris africana* Engl.: FTA 6,2: 223 (1916); FCB 1: 94 (1948); FPS 2: 257 (1952); FWTA 1,2: 612 (1958); FTEA, Morac.: 13 (1989); FE 3: 301 (1989); EL AMIN 1990: 257.
Imatong Mountains group, Sudan side: on the road between Opari and Torit, summit of Mt. Iro, c. 700 m., on rocks, 5.10.1938, *Myers* 9519 (K).
Didinga Mountains: near Kiduru north of Chukudum (4° 17' N, 33° 26' E), 1100 m., 20.12. 1983, *Kielland-Lund* 408 (C, NLH).
General habitat range: in lowland and medium-altitude forest and woodland. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in lowland forest.
General distribution: Senegal to South Sudan and South West Ethiopia, south to Angola and Zambia. Species as a whole also in Madagascar and widespread in tropical Asia, including tropical Arabia.

Dorstenia L.

Dorstenia annua Friis & Vollesen
FRIIS & VOLLESEN 1982: 473.
Imatong Mountains group, Sudan side: Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* on moist slope along trail, together with *Dorstenia brownii,* 8.11.1980, *Friis & Vollesen* 29 (C, holotype, BR, EA, K, KHF, isotypes).
General habitat range: in medium-altitude forest (see note).
General distribution: not known elsewhere (see note).
Note. M. Hijman has on a label identified *Faden* 69/2110 (EA) from Kakamega Forest in West

Kenya, 1680 m., as *D. annua*. Previously this specimen was identified at Kew as *D. schlechteri* Engl. *D. annua* has some resemblance with forms of *D. hildebrandtii* Engl. var. *schlechteri* (Engl.) Hijman (as the taxon is referred to now), but the long appendages are marginal and in the same row as the short ones in *D. annua*, while the appendages are submarginal and the longer and the shorter ones in two different rows in *D. hildebrandtii*. The appendages of *Faden* 69/2110 agree with the latter situation, and the present authors therefore uphold the opinion that *D. annua* is not known elsewhere.

Dorstenia barnimiana Schweinf.
FTA 6,2: 70 (1916); FS: 210 (1929); FCB 1: 80 (1948); FPNA 1: 50 (1948); FPS 2: 259 (1952); FC 28: 96 (1985); FTEA, Morac.: 41 (1989); FE 3: 278 (1989); UKWF: 151 (1994); HYF: 69 (1997).
var. **barnimiana**
FTEA, Morac.: 42 (1989).
Imatong Mountains group, Uganda side: without further locality, 2130 m., grassland, 4.1938, *Eggeling* 3602 (K).
General habitat range: in medium-altitude and montane grassland, deciduous bushland and woodland.
General distribution: Cameroon to Ethiopia and Somalia, south to Zambia and Tanzania; also in tropical Arabia.

Dorstenia benguellensis Welw.
FTA 6,2: 63 (1916); FCB 1: 74 (1948); FC 28: 94 (1985); FTEA, Morac.: 38 (1989); UKWF: 151 (1994).
Imatong Mountains group, Uganda side: without further locality, 2350 m., 4.1938, *Eggeling* 3542 (K).
General habitat range: in medium-altitude and montane grassland, deciduous bushland and woodland.
General distribution: Cameroon to South Sudan, Uganda and Kenya, south to Angola, Zambia, Zimbabwe and Mozambique.

Dorstenia brownii Rendle
FTA 6,2: 36 (1916); FCB 1: 62 (1948); FPNA 1: 49 (1948); FTEA, Morac.: 30 (1989); FE 3: 275 (1989); UKWF: 151 (1994).
Imatong Mountains group, Sudan side: Lotti, 910 m., in forest, 24.6.1953, *Prowse* 389 (KHU); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, 26.11.1980, *Friis & Vollesen* 463 (BR, C, EA, K, KHF); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, on moist slope along trail, 8.11.1980, *Friis & Vollesen* 32 (BR, C, EA, K, KHF); Bushbuck Hill, 2150 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, 10.11. 1980, *Friis & Vollesen* 119 (BR, C, EA, FT, K, KHF).
General habitat range: in medium-altitude and montane forest.
General distribution: South Sudan, Ethiopia, East Congo [previously Zaire], Uganda, Kenya and Tanzania.

Dorstenia psilurus Welw.
FTA 6,2: 50 (1916); FS: 210 (1929); FCB 1: 69 (1948); FPNA 1: 50 (1948); FPS 2: 259 (1952); FG 26: 77 (1984); FC 28: 74 (1985); FTEA, Morac.: 31 (1989).
Syn.: *Dorstenia bicornis* Schweinf.: FTA 6,2: 49 (1916); FS: 210 (1929); FPS 2: 258 (1952).
Imatong Mountains group, Sudan side: Lotti, 1000 m., ground cover in rain forest, 23.6.1953, *Jackson* 3023 (K, KHF).
General habitat range: in lowland and medium-altitude forest, often riverine.
General distribution: Cameroon to South Sudan and Uganda, south to Angola, Zambia, Zimbabwe and Mozambique.

Ficus L.

Ficus abutilifolia (Miq.) Miq.
FTA 6,2: 191 (1916); FS: 214 (1929); FPS 2: 272 (1952); FWTA 1,2: 609 (1958); FC 28: 162 (1985); FTEA, Morac.: 67 (1989); FE 3: 296 (1989); EL AMIN 1990: 261.
Imatong Mountains group, Sudan side: at the northernmost point of the continuous mountain chain, just south-east of Ngarama on the track to Molongori, 700 m., on rocky outcrop with *Sterculia setigera, Cordyla richardii, Ficus abutilifolia,* etc., 13.3.1982, *Friis & Vollesen* 1190 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude woodlands, especially in riverine vegetation and on rocky outcrops.
General distribution: Guinée and Mali to Ethiopia, south to Botswana and South Africa (Transvaal).

Ficus amadiensis De Wild.
FCB 1: 150 (1948); FTEA, Morac.: 70 (1989); KTSL: 323 (1994).
Imatong Mountains group, Uganda side: Lututuru, 2140 m., 4.1938, *Eggeling* 3575 (K, MHU).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1900 m., old high forest, 16.5.1972, *Synnott* 1047 (EA, MHU).
General habitat range: in medium-altitude and montane wooded grassland, usually on termite mounds, riparian forest, at forest edges or in thicket.
General distribution: Congo [previously Zaire] to South Sudan and Kenya, south to Rwanda and Tanzania; sometimes planted for bark cloth.

Ficus asperifolia Miq.
FTA 6,2: 111 (1916); FCB 1: 127 (1948); FWTA 1,2: 606 (1958); FG 26: 127 (1984); FC 28: 124 (1985); FTEA, Morac.: 53 (1989); FE 3: 284 (1989); KTSL: 323 (1994).
Syn.: *Ficus urceolaris* Welw. ex Hiern: FTA 6,2: 113 (1916); FS: 212 (1929); FCB 1: 128 (1948); FPNA 1: 60 (1948); FPS 2: 268 (1952); JACKSON 1956: 354 {Talanga, Lotti}; EL AMIN 1990: 273. *Ficus storthophylla* Warb.: FS: 212 (1929); FCB 1: 128 (1948); FPNA 1: 61 (1948).
Imatong Mountains group, Sudan side: without further locality, 1410 m., 12.6.1939, *Andrews* 1821 (K); 1947, *Maxwell Forbes* 58 (K); Lotti, at rest house, no alt., 9.6.1939, *Andrews* 1738 (K); Talanga, 890 m., forest, 16.12.1935, *Thomas* 1591 (BM, K); Imeila forest, 750 m., understorey below *Khaya grandifoliola* and *Cola gigantea,* 27.5.1949, *Jackson* 770 (FHO); Katire, edge of gallery forest with *Khaya grandifoliola,* etc., 8.2.1950, *Jackson* 1130 (FHO); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* in moist places near river, 15.11.1980, *Friis & Vollesen* 218 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).
General habitat range: in lowland and medium-altitude forest, often riverine, or at moist places in grassland.
General distribution: Senegal to South West Ethiopia, south to Angola, Zambia and Tanzania.

Ficus capraeifolia Del.
FTA 6,2: 107 (1916); FS: 212 (1929); ITU: 243 (1952); FPS 2: 268 (1952); FWTA 1,2: 605 (1958); FC 28: 127 (1985); FTEA, Morac.: 53 (1989); FE 3: 281 (1989); EL AMIN 1990: 263; KTSL: 325 (1994).
Imatong Mountains group, Sudan side: Talanga, bank of Kinyeti River, 910 m., near forest edge, 16.12.1935, *Thomas* 1597 (BM, K).
Imatong Mountains group, Uganda side: Agoro, no alt., thicket-forming in stream-bed, 4.1938, *Eggeling* 3574 (K, MHU).
General habitat range: in lowland and medium-altitude riverine vegetation.
General distribution: Senegal to Ethiopia and

Somalia, south to Angola and South Africa (Natal).

Ficus cordata Thunb.
FTA 6,2: 119 (1916); FC 28: 152 (1985); FTEA, Morac.: 60 (1989); KTSL: 325 (1994).
subsp. **salicifolia** (Vahl) C.C. Berg
FTEA, Morac.: 63 (1989); KTSL: 325 (1994).
Syn.: *Ficus salicifolia* Vahl: FTA 6,2: 115 (1916); FS: 213 (1929); FCB 1: 121 (1948); FPS 2: 265 (1952); FE 3: 290 (1989); HYF: 71 (1997). *Ficus pretoriae* Burtt Davy: FTA 6,2: 116 (1916); ITU: 257 (1952).
Imatong Mountains group, Uganda side: Agoro, 1980 m., no date, *Eggeling* 2407 (K).
General habitat range: in lowland, medium-altitude and montane woodland, usually on rocky outcrops.
General distribution: Sudan and Uganda to Ethiopia and Somalia, north to Egypt, south to Zambia and South Africa (Transvaal); also in tropical Arabia. Species as a whole from Senegal to Cameroon and south to South Africa (Cape Prov.).

Ficus cyathistipula Warb.
FTA 6,2: 153 (1916); FCB 1: 172 (1948); FPNA 1: 62 (1948); ITU: 245 (1952); FG 26: 232 (1984); FC 28: 246 (1985); FTEA, Morac.: 83 (1989); EL AMIN 1990: 265; KTSL: 325 (1994).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 29.11.1980, *Friis & Vollesen* 552 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).
General habitat range: in lowland and medium-altitude forest, often in riverine vegetation or on rocks.
General distribution: Ivory Coast to South Sudan, Uganda and Kenya, south to Angola, Zambia and Tanzania.

Ficus dicranostyla Mildbr.
FTA 6,2: 119 (1916); FPS 2: 265 (1952); ITU: 247 (1952); FWTA 1,2: 607 (1958); FG 26: 144 (1984); FC 28: 146 (1985); FTEA, Morac.: 59 (1989); FE 3: 289 (1989).
Imatong Mountains group, Sudan side: Kinyeti Valley, village about 500 m. south west of Hiliu, no alt., in savannah, 7.6.1984, *Kielland-Lund* 877 (C, NLH).
Imatong Mountains group, Uganda side: Agoro, no alt., dry plains, 3.1935, *Eggeling* 1714 (K).
General habitat range: in wooded grassland, usually associated with rocky outcrops.
General distribution: Senegal to Ethiopia, south to Congo [previously Zaire], North Zambia and Uganda.

Ficus exasperata Vahl
FTA 6,2: 110 (1916); FCB 1: 126 (1948); FPNA 1: 59 (1948); ITU: 248 (1952); FPS 2: 268 (1952) {Lotti}; JACKSON 1956: 353 {Talanga}; FWTA 1,2: 605 (1958); FG 26: 124 (1984); FC 28: 121 (1985); FTEA, Morac.: 52 (1989); FE 3: 284 (1989); EL AMIN 1990: 265; SOMMERLATTE 1990: 196; KTSL: 325 (1994); HYF: 69 (1997).
Imatong Mountains group, Sudan side: Lofulong (4° 7' N, 32° 54' E), 800 m., scrub on rocky ground, 18.1.1950, *Jackson* 1059 (FHO, KHF); Talanga, 1000 m., edge of closed forest, being colonised by *Khaya grandifoliola,* 28.2.1950, *Jackson* 1161 (FHO); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* at forest edge, 17.3.1982, *Friis & Vollesen* 1230 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude forest, often as pioneer tree at edges or in riverine vegetation. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in lowland forest.
General distribution: Senegal to Ethiopia and Djibouti, south to Angola, Zimbabwe and Mozambique; also in tropical Arabia, Sri Lanka and India.

Ficus glumosa Del.
FTA 6,2: 171 (1916); FS: 213 (1929); FCB 1: 147 (1948); ITU: 248 (1952); FPS 2: 270 (1952); FWTA 1,2: 609 (1958); WICKENS 1976: 118; FTEA, Morac.: 65 (1989); FE 3: 293 (1989); EL AMIN 1990: 267; SOMMERLATTE 1990: 98; KTSL: 326 (1994); HYF: 69 (1997).
Syn.: *Ficus glumosa* Del. var. *glaberrima* Martelli: FTA 6,2: 172 (1916); FPS 2: 270 (1952); JACKSON 1956: 349; FWTA 1,2: 609 (1958).
Imatong Mountains group, Sudan side: Kinyeti Valley, hill west of Hiliu (4° 17' N, 32° 40' E), no alt., 14.1.1984, *Kielland-Lund* 630 (C, NLH); at Hiliu, 700 m., c. 100 m from river, 21.11. 1983, *Kielland-Lund* 15 (C, NLH); above Katire, 920 m., on rocks in long grassland, 11.10.1947, *Jackson* 224 (FHO, KHF); Lerua mission near Palotaka, 1200 m., on rocky outcrops with *Erythrina abyssinica* in *Combretum* open woodland, 7.4.1984, *Sommerlatte* 51 (EA); Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees of *Terminalia laxiflora, T. brownii, Pterocarpus lucens, Combretum collinum* and *Vitex doniana* on rocky outcrop, 5.12.1980, *Friis & Vollesen* 706 (BR, C, K, KHF); Gilo to Mt. Konoro, lower slopes of Konoro, 1950 m., *Loudetia arundinacea* grassland with scattered trees, 24.11.1980, *Friis & Vollesen* 442 (C, K, KHF).
Didinga Mountains: Chukudum Regional District Centre (4° 14' N, 33° 29' E), 1100 m., 16.12.1983, *Kielland-Lund* 338 (C, NLH).
General habitat range: in lowland, medium-altitude and montane woodland, often on rocky outcrops and old lava flows. According to JACKSON 1956 it occurs at the Imatong Mountains in moist woodland west and north of the mountains; according to SOMMERLATTE 1990 it occurs as a tree on rocky outcrops in lowland woodland and in *Loudetia* grassland.
General distribution: Senegal to Ethiopia, south to South Africa (Transvaal, Cape Prov.); also in tropical Arabia.

Ficus ingens (Miq.) Miq.
FTA 6,2: 121 (1916); FS: 213 (1929); FCB 1: 121 (1948); FPNA 1: 58 (1948); ITU: 250 (1952); FPS 2: 268 (1952); FWTA 1,2: 607 (1958); WICKENS 1976: 119; FG 26: 148 (1984); FC 28: 149 (1985); FTEA, Morac.: 60 (1989); FE 3: 291 (1989); EL AMIN 1990: 267; KTSL: 326 (1994); HYF: 71 (1997).
Syn.: *Ficus ingentoides* Hutch.: FTA 6,2: 123 (1916); FS: 213 (1929); FCB 1: 124 (1948); FPS 2: 268 (1952); HYF: 71 (1997). [*Ficus lutea* auct., non Vahl.]
Imatong Mountains group, Sudan side: Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees of *Terminalia laxiflora, T. brownii, Pterocarpus lucens, Combretum collinum* and *Vitex doniana* on rocky outcrop, 5.12.1980, *Friis & Vollesen* 699 (BR, C, KHF); Gilo to Mt. Konoro, lower slope of Konoro, 1950 m., *Loudetia arundinacea* grassland with scattered trees, 24.11.1980, *Friis & Vollesen* 443 (C, KHF).
Didinga Mountains: Chukudum Regional District Centre, 1100 m., 16.12.1983, *Kielland-Lund* 340 (NLH).
General habitat range: in lowland and medium-altitude woodland, often on rocky outcrops or old lava flows.
General distribution: Senegal to Ethiopia and Somalia, south to Botswana and South Africa (Transvaal, Cape Prov.); also in tropical Arabia.

Ficus lutea Vahl
FTA 6,2: 215 (1917); FG 26: 193 (1984); FC 28: 206 (1985); FTEA, Morac.: 69 (1989); FE 3: 294 (1989); KTSL: 326 (1994).
Syn.: *Ficus vogelii* (Miq.) Miq.: FTA 6,2: 179 (1916); FCB 1: 146 (1948); FWTA 1,2: 609 (1958). *Ficus quibeba* Ficalho: FTA 6,2: 177 (1916). *Ficus verrucocarpa* Warb.: FCB 1: 157 (1948).
Imatong Mountains group, Sudan side: Issore, no alt., no date, *Jackson* 1725 (KHF).
General habitat range: in lowland and medium-altitude forest.

General distribution: Cape Verde Islands, Senegal and Sierra Leone to Ethiopia, south to Angola and South Africa (Natal); also in Madagascar and Seychelles.

Ficus mucuso Welw. ex Ficalho
FTA 6,2: 98 (1916); FCB 1: 114 (1948); ITU: 253 (1952); JACKSON 1956: 353 {Talanga, Lotti}; FWTA 1,2: 606 (1958); FG 26: 131 (1984); FC 28: 132 (1985); FTEA, Morac.: 56 (1989); FE 3: 287 (1989).
Imatong Mountains group: no specimen seen. Reported by JACKSON 1956 from lowland forest.
General habitat range: in lowland and medium-altitude forest.
General distribution: Guinea Bissau to Ethiopia, south to Angola and Tanzania.

Ficus ovata Vahl
FTA 6,2: 164 (1916); FS: 213 (1929); FCB 1: 160 (1948); FPS 2: 270 (1952); FWTA 1,2: 608 (1958); FG 26: 216 (1984); FC 28: 230 (1985); FTEA, Morac.: 81 (1989); FE 3: 292 (1989); KTSL: 327 (1994).
Syn.: *Ficus brachypoda* Hutch., nom. illeg.: FCB 1: 173 (1948); ITU: 242 (1952).
Imatong Mountains group, Uganda side: Lututuru, 2140 m., 4.1938, *Eggeling* 3579 (K, MHU).
General habitat range: in lowland and medium-altitude forest.
General distribution: Senegal and Guinea Bissau to Ethiopia, south to Angola and Tanzania.

Ficus platyphylla Del.
FTA 6,2: 197 (1917); FS: 215 (1929); ITU: 256 (1952); FPS 2: 272 (1952); FWTA 1,2: 609 (1958); FRIIS 1985: 333 (1985); FC 28: 165 (1985); FTEA, Morac.: 64 (1989); FE 3: 296 (1989); EL AMIN 1990: 269.
Imatong Mountains group, Uganda side: near Agoro, no alt., at stream-side, 3.1935, *Eggeling* 1751 (K); Agoro, no alt., at stream, 1935, *Eggeling* 1752 (MHU); near Agoro, no alt., at stream-side, 3.1935, *Eggeling* 1753 (EA, K).
Didinga Mountains: Chukudum Regional District Centre (4° 14' N, 33° 29' E), 1100 m., 16.12.1983, *Kielland-Lund* 339 (C, NLH); Boya Hill, Thuguru region (4° 40' N, 33° 17' E), no alt., 12.6.1984, *Kielland-Lund* 929 (C, NLH).
General habitat range: in lowland and medium-altitude grassland and woodland, often in rocky places.
General distribution: Senegal to Ethiopia and Somalia, south to Uganda.

Ficus populifolia Vahl
FTA 6,2: 197 (1917); FS: 214 (1929); ITU: 257 (1952); FPS 2: 270 (1952); FWTA 1,2: 609 (1958); FC 28: 160 (1985); FTEA, Morac.: 68 (1989); FE 3: 295 (1989); KTSL: 327 (1994); HYF: 71 (1997).
Imatong Mountains group, Sudan side: hill 3 km. south of Hiliu, 700 m., stony hillside, 6.12.1983, *Kielland-Lund* 219 (NLH).
Imatong Mountains group, Uganda side: Agoro, no alt., stream-side, 3.1935, *Eggeling* 1726 (K, MHU).
General habitat range: in lowland and medium-altitude deciduous bushland and woodland, often on rocky outcrops.
General distribution: Senegal to Ethiopia and Somalia, south to Tanzania; also in tropical Arabia.

Ficus saussureana DC.
FC 28: 209 (1985); FTEA, Morac.: 69 (1989); KTSL: 328 (1994).
Syn.: *Ficus eriobotryoides* Kunth & Bouché: FTA 6,2: 160 (1916); FWTA 1,2: 608 (1958). *Ficus dawei* Hutch.: FTA 6,2: 161 (1916); ITU: 245 (1952).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 4.12.1980, *Friis & Vollesen* 691 (C, K, KHF).
General habitat range: in lowland and medium-altitude forest.

General distribution: Guinée and Sierra Leone to South Sudan, south to Uganda and Tanzania.

Ficus sur Forssk.
FTA 6,2: 100 (1916); WICKENS 1976: 119; FG 26: 134 (1984); FC 28: 135 (1985); FTEA, Morac.: 56 (1989); FE 3: 287 (1989); EL AMIN 1990: 271; SOMMERLATTE 1990: 194; KTSL: 328 (1994); HYF: 71 (1997).
Syn.: *Ficus capensis* Thunb.: FTA 6,2: 101 (1916); FS: 211 (1929); FCB 1: 116 (1948); FPNA 1: 55 (1948); ITU: 243 (1952); FPS 2: 265 (1952); JACKSON 1956: 353 {Talanga, Lotti}; FWTA 1,2: 606 (1958); WICKENS 1976: 118; EL AMIN 1990: 263. *Ficus riparia* A. Rich.: FTA 6,2: 100 (1916). *Ficus mallotocarpa* Warb.: FCB 1: 113 (1948).
Imatong Mountains group, Sudan side: Loa, north of Pageri (3° 48' N, 31° 59' E), 800 m., in field of tobacco farm, 4.1.1984, *Kielland-Lund* 580 (C, NLH); near Lotti rest house, no alt., 8.6.1939, *Andrews* 1690 (K); Laboni, 1000 m., in woodland with *Albizia zygia*, 8.12.1948, *Jackson* 566 (FHO); Talanga, 1000 m., immature forest regrowth, 1.3.1950, *Jackson* 1174 (FHO, KHF); Gilo, at bridge on Ngairigi River, 1700 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 17.11.1980, *Friis & Vollesen* 297 (C, K, KHF).
Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., Moimoi, 1700 m., at stream, 25.2.1948, *Jackson* 269 (FHO).
General habitat range: in lowland, medium-altitude and montane forest, especially in moist places or in riverine vegetation. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in lowland and medium-altitude forest.
General distribution: Cape Verde Islands, Senegal and Guinea Bissau to Ethiopia, south to Angola and South Africa (East Cape Prov.); also in tropical Arabia.

Ficus sycomorus L.
FTA 6,2: 95 (1916); FS: 211 (1929); FCB 1: 113 (1948); ITU: 260 (1952); FPS 2: 263 (1952); WICKENS 1976: 119; FTEA, Morac.: 54 (1989); FE 3: 285 (1989); EL AMIN 1990: 271; KTSL: 329 (1994); HYF: 71 (1997).
Syn.: *Ficus gnaphalocarpa* A. Rich.: FTA 6,2: 104 (1916); FS: 212 (1929); FCB 1: 119 (1948); FPNA 1: 58 (1948); ITU: 250 (1952); FPS 2: 265 (1952); FWTA 1,2: 606 (1958); EL AMIN 1990: 267. *Ficus sycomorus* L. subsp. *gnaphalocarpa* (A. Rich.) C.C. Berg: FC 28: 130 (1985).
Imatong Mountains group, Sudan side: near Palotaka on road to Magwe, 900 m., *Combretum* wooded grassland, 29.3.1984, *Sommerlatte* 38 (EA); Kinyeti Valley, near Kinyieti River 5 km. south of Hilieu, 700 m., 6.12.1983, *Kielland-Lund* 232 (C, NLH); north-eastern side of mountains, just north of Molongori, 750 m., at base of almost bare rocky slope with *Boswellia papyrifera, Terminalia brownii, Euphorbia magnicapsula, Xerophyta simulans,* etc., 10.3.1982, *Friis & Vollesen* 1145 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: Agoro, no alt., 3.1935, *Eggeling* 1554 (FHO); Agoro, no alt., stream-side, 3.1935, *Eggeling* 1728 (K); banks of Agoro River, 1220 m., no date, *Hummel* 768 (FHO); Agoro, 1220 m., riverbank, 10.4.1945, *Greenway & Hummel* 7332 (EA, K); Agoro, 1220 m., in gully, 5.12.1945, *Dawkins* 125 (EA, FHO, MHU) & 126 (EA, FHO, MHU).
General habitat range: in a wide range of lowland, medium-altitude and montane habitats, most common at forest edges, in riverine vegetation and on lake shores, in evergreen bushland and moist woodland, or on rocky outcrops.
General distribution: Senegal to Ethiopia, south to Namibia and South Africa; also in Syria and Egypt (perhaps introduced), in Madagascar, the Comoro Islands, and in tropical Arabia.
Note. The two taxa (species or subspecies)–*F. sycomorus* sensu stricto, and *F. gnaphalocarpa*–seem

to occur mixed in the study area, and it is frequently not possible to distinguish them.

Ficus thonningii Blume
FTA 6,2: 187 (1916); FS: 214 (1929); FCB 1: 148 (1948); FPNA 1: 66 (1948); ITU: 260 (1952); FPS 2: 270 (1952); FWTA 1,2: 610 (1958); FG 26: 161 (1984); FC 28: 175 (1985); FTEA, Morac.: 73 (1989); FE 3: 298 (1989); EL AMIN 1990: 273; SOMMERLATTE 1990: 310; KTSL: 329 (1994).
Syn.: *Ficus dekdekena* (Miq.) A. Rich.: FTA 6,2: 211 (1917); FS: 216 (1929); ITU: 247 (1952); FPS 2: 272 (1952); FWTA 1,2: 610 (1958); EL AMIN 1990: 265.
Imatong Mountains group, Sudan side: Opari rest house, no alt., 8.6.1930, *Andrews* 1687 (K); Laboni, 1000 m., planted, 6.12.1948, *Jackson* 565 (FHO); Upper Talanga, 1800 m., *Albizia* forest, 6.4.1984, *Sommerlatte* 49 (EA); 2 km. south of Torit (4° 23' N, 32° 35' E), 650 m., 13.12.1983, *Kielland-Lund* 310 (C, NLH); Gilo, 1900 m., forest edge, 27.8.1957, *Jackson* 3817 (K); Gilo, at bridge on Ngairigi River, 1800 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, 19.11.1980, *Friis & Vollesen* 342 (BR, C, K, KHF); Bushbuck Hill, 2300 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, at forest edge, 14.3.1982, *Friis & Vollesen* 1210 (BR, C, EA, K, KHF).
Imatong Mountains group, Uganda side: Agoro, no alt., stream-side, 3.1935, *Eggeling* 1692 (K, MHU); Lututuru, 2140 m., 4.1938, *Eggeling* 3577 (K); Lututuru, 2140 m., 4.1938, *Eggeling* 3580 (K, MHU); Lututuru, 2140 m., 4.1938, *Eggeling* 3581 (MHU); Agoro, 1220 m., river banks, 9.4.1945, *Greenway & Hummel* 7326 (K, MHU).
Didinga Mountains: Longumu Valley north of Chukudum (4° 20' N, 33° 23' E), 900 m., 20.12.1983, *Kielland-Lund* 394 (C, NLH); at the base of Mt. Lotuke, Ero, 1220 m., residual tree in cultivations, 16.4.1939, *Myers* 10,877 (K).
General habitat range: in a wide range of lowland, medium-altitude and montane habitats, most common in forest, including riverine vegetation, evergreen bushland and moist woodland. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains in *Albizia* forest and in mixed *Podocarpus latifolius* forest.
General distribution: Cape Verde Islands and Senegal to Ethiopia, south to Angola and South Africa (Cape Prov.).

Ficus vallis-choudae Del.
FTA 6,2: 103 (1916); FS: 211 (1929); FCB 1: 119 (1948); FPNA 1: 56 (1948); ITU: 261 (1952); FPS 2: 265 (1952); FWTA 1,2: 606 (1958); FC 28: 142 (1985); FTEA, Morac.: 58 (1989); FE 3: 289 (1989); EL AMIN 1990: 273; SOMMERLATTE 1990: 200; KTSL: 330 (1994).
Imatong Mountains group, Sudan side: Talanga, at Kinyeti River, 950 m., degraded riverine forest, 17.3.1982, *Friis & Vollesen* 1237 (C, K, KHF).
Imatong Mountains group, Uganda side: Agoro, no alt., streambank, 3.1935, *Eggeling* 1729 (EA, FHO, K, MHU); Agoro, upper reach of Aringa River, in dry gully next to permanent stream, 20.1.1946, *Dawkins* 160 (EA, FHO, MHU).
General habitat range: in lowland, medium-altitude and montane riverine forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a shrub or small tree in gallery forest in the lowland.
General distribution: Guinée and Mali to Ethiopia, south to Zambia, Malawi, Zimbabwe and Mozambique.

Ficus variifolia Warb.
FTA 6,2: 114 (1916); FCB 1: 125 (1948); ITU: 261 (1952); FWTA 1,2: 606 (1958); FG 26: 143 (1984); FC 28: 145 (1985); FTEA, Morac.: 59 (1989); EL AMIN 1990: 275.
Imatong Mountains group, Sudan side: Lotti, at rest house, 9.6.1939, *Andrews* 1759 (K) & 1760

(K); Lomariti Range, Upper Talanga Tea project, 1530 m., 4.1980, *Loehr* in EA 16482 (K).
General habitat range: in lowland and medium-altitude forest, often as a pioneer tree.
General distribution: Guinée and Sierra Leone to South Sudan, south to Uganda and Tanzania.

Ficus vasta Forssk.
FTA 6,2: 194 (1917); FS: 214 (1929); ITU: 262 (1952); FPS 2: 271 (1952); FTEA, Morac.: 64 (1989); FE 3: 296 (1989); El Amin 1990: 275; KTSL: 330 (1994); HYF: 72 (1997).
Imatong Mountains group, Sudan side: Mt. Baghanj, 1830-2130 m., 13.6.1939, *Andrews* 1922 (K); Katire to Gilo, at road to Itibol, 1400 m., wooded grassland with *Combretum molle, C. collinum, Entada abyssinica* and *Erythrina abyssinica*, the grasses *Pennisetum purpureum* and *Hyparrhenia rufa* dominant, on rocky outcrops, 12.11. 1980, *Andrews* 1922 (K); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, especially *Combretum, Faurea,* etc., 26.3.1982, *Friis & Vollesen* 1319 (C).
Imatong Mountains group, Uganda side: Agoro, no alt., 3.1935, *Eggeling* 1553 (FHO, K) & *Eggeling* 1727 (K, MHU); Lututuru, 1990 m., in woodland, 2.1938, *Eggeling* 3500 (FHO, MHU).
Didinga Mountains: Mt. Lotuke, Char, 1830 m., in valley, 19.4.1939, *Myers* 10,912 (K).
General habitat range: in medium-altitude and montane forest, often riverine, in evergreen bushland or on rocky outcrops.
General distribution: South Sudan, Ethiopia, North Somalia, Uganda and Kenya; also in tropical Arabia.

Ficus sp.
Imatong Mountains group, Sudan side: Mt. Baghanj, 1830-2140 m., in riverbed, 13.6.1939, *Andrews* 1923 (K); Mt. Itibol, 1960 m., 14.6.1939, *Andrews* 1987 (K, WM); Itibol, 1980 m., 19.8.1940, *Myers* 13,424 (?K, WM).
Note. This is a heterogeneous assemblage of taxa. *Andrews* 1987 may be *Ficus ovata,* and *Myers* 13,424 is probably *Ficus thonningii.*

Milicia Sim
Syn.: [*Chlorophora* auct., non Gaudich.]

Milicia excelsa (Welw.) C.C. Berg
FG 26: 6 (1984); FC 28: 9 (1985); FTEA, Morac.: 4 (1989); FE 3: 272 (1989); Sommerlatte 1990: 142; KTSL: 331 (1994).
Syn.: *Chlorophora excelsa* (Welw.) Benth. & Hook. f.: FTA 6,2: 22 (1916); FS: 209 (1929); Chipp 1929: 190; FCB 1: 56 (1948); FPNA 1: 51 (1948); ITU: 234 (1952); FPS 2: 257 (1952); Jackson 1956: 353 {Talanga, Lotti, Laboni}; FWTA 1,2: 595 (1958); El Amin 1990: 259.
Imatong Mountains group, Sudan side: Lotti, 1220 m., closed forest, tall dominant tree, 5.2.1929, *Chipp* 19 (K) & 20 (K); Talanga, 1010 m., in forest, 27.5.1950, *Ali* 10 (KHU); Katire, 900 m., 2.3.1964, *Beshir Agwatta* 2 (KHF); Kinyeti Valley, at Katire, 900 m., single large tree at roadside in woodland, 24.3.1982, *Friis & Vollesen* 1309 (C, also carpological collection, accession no. 15942, KHF).
General habitat range: in lowland and medium-altitude forest, often riverine, or left in land cleared for cultivations. According to Sommerlatte 1990 it occurs at the Imatong Mountains as a tree in lowland forest and as a forest pioneer.
General distribution: Guinea Bissau to South West Ethiopia, south to Angola, Malawi, Zimbabwe and Mozambique.

Morus L.

Morus mesozygia Stapf
FTA 6,2: 594 (1917); FCB 1: 55 (1948); FPS 2: 273 (1952); FWTA 1,2: 594 (1958); FC 28: 6 (1985); FTEA, Morac.: 2 (1989); FE 3: 272 (1989); El Amin 1990: 275; KTSL: 331 (1994).

Syn.: *Morus lactea* (Sim) Mildbr.: FCB 1: 55 (1948); ITU: 263 (1952); JACKSON 1956: 353 {Talanga, Lotti, Laboni}; EL AMIN 1990: 275.
Imatong Mountains group, Sudan side: Talanga, 1000 m., forest edge, colonising woodland, 25.2.1950, *Jackson* 1155 (FHO, KHF); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, 17.3.1982, *Friis & Vollesen* 1228 (C).
General habitat range: in lowland and medium-altitude forest.
General distribution: Senegal to South West Ethiopia, south to Angola, Zambia and South Africa (Natal).

Trilepisium Thouars

Trilepisium madagascariense DC.
FG 26: 105 (1984); FC 28: 103 (1985); FTEA, Morac.: 17 (1989); FE 3: 299 (1989); SOMMERLATTE 1990: 168; KTSL: 333 (1994).
Syn.: *Bosqueia phoberos* Baill.: FTA 6,2: 219 (1917); ITU: 234 (1952); JACKSON 1956: 353 {Talanga, Lotti}. *Bosqueia angolensis* Ficalho: FTA 6,2: 218 (1916); FCB 1: 95 (1948); FWTA 1,2: 612 (1958); EL AMIN 1990: 257.
Imatong Mountains group, Sudan side: Issore, 1300 m., in gallery forest, 5.3.1951, *Jackson* 1798 (WM).
General habitat range: in lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in the canopy of lowland forest.
General distribution: Guinée to Ethiopia, south to Angola and South Africa (Natal); also in Madagascar and Seychelles.

Fam. 90. **Cecropiaceae** C.C. Berg

Myrianthus P. Beauv.

Myrianthus arboreus P. Beauv.
FTA 6,2: 231 (1917); FCB 1: 83 (1948); ITU: 264 (1952); FPS 2: 273 (1952); JACKSON 1956: 353 {Talanga, Lotti}; FWTA 1,2: 614 (1958); FG 26: 251 (1984); FC 28: 262 (1985); FTEA, Morac.: 87 (1989); EL AMIN 1990: 277; SOMMERLATTE 1990: 208.
Imatong Mountains group, Sudan side: Lotti, no alt., forest, 5.8.1939, *Myers* 11,807 (K); Lotti, near rest house, no alt., forest, 8.6.1939, *Andrews* 1706 (K); Talanga, 1000 m., forest edge near stream, 25.2.1950, *Jackson* 1003 (FHO, KHF).
General habitat range: in lowland and medium-altitude forest, often as a pioneer tree. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as an understorey tree in lowland forest.
General distribution: Guinée and Sierra Leone to South Sudan, south to Angola and Tanzania.

Fam. 91. **Urticaceae** Juss.

Boehmeria Jacq.

Boehmeria macrophylla Hornem.
FTEA, Urticac.: 44 (1989); FE 3: 314 (1989); UKWF: 153 (1994); KTSL: 333 (1994).
Syn.: *Boehmeria platyphylla* D. Don: FTA 6,2: 285 (1917); FS: 217 (1929); FCB 1: 211 (1948); FPNA 1: 84 (1948); FPS 2: 275 (1952); FWTA 1,2: 622 (1958); FC 8: 196 (1968); EL AMIN 1990: 279 {Imatong Mountains, Gilo}.
Imatong Mountains group, Sudan side: Mt. Nargi, 1830-2140 m., 14.6.1939, *Andrews* 1957 (K); near Kinyeti River, 1830-2140 m., 15.6.1939, *Andrews* 2034 (K); Gilo, 1900 m., in secondary forest, 10.6.1953, *Jackson* 3006 (K, KHF); Gilo, 1850 m., upland rain forest with *Albizia, Maca-*

ranga, Croton, and *Ocotea,* 8.11.1980, *Friis & Vollesen* 64 (C, KHF).
General habitat range: in lowland and medium-altitude forest, woodland and wooded grassland.
General distribution: Guinée and Sierra Leone to South West Ethiopia, south to Angola, Zimbabwe and Mozambique; also in Madagascar, and widespread in tropical Asia.

Droguetia Gaudich.

Droguetia iners (Forssk.) Schweinf.
FTA 6,2: 303 (1917); FCB 1: 217 (1948); FPNA 1: 88 (1948); FPS 2: 276 (1952) {Imatong Mountains, Ngairigi River}; FWTA 1,2: 622 (1958); FC 8: 212 (1968); FTEA, Urticac.: 56 (1989); FE 3: 322 (1989); UKWF: 154 (1994); HYF: 75 (1997).
subsp. **iners**
FTEA, Urticac.: 57 (1989).
Imatong Mountains group, Sudan side: at Ngairigi River, 1600 m., at stream-sides in forest, 8.1.1950, *Jackson* 1037 (BM); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 8.11.1980, *Friis & Vollesen* 46 (C, KHF); Lowiliwili, 2700 m., open *Podocarpus latifolius* forest, 14.11.1949, *Jackson* 906 (BM); slopes of Mt. Kinyeti, 2300-2700 m., very common on moist ground of forest floor in *Podocarpus latifolius* forest, 1980, *Friis & Vollesen* (sight record).
General habitat range: in montane forest.
General distribution: Cameroon to Ethiopia, south to South Africa; also in tropical Arabia. Species as a whole also widespread in tropical Asia.

Elatostema J.R. & G. Forst.

Elatostema monticola Engl.
FTA 6,2: 281 (1917); FCB 1: 207 (1948); FWTA 1,2: 620 (1958); FC 8: 141 (1968); FTEA, Urticac.: 41 (1989); FE 3: 314 (1989); UKWF: 153 (1994).
Syn.: *Elatostema orientale* Engl.: FCB 1: 206 (1948); FPNA 1: 83 (1948); FPS 2: 276 (1952) {Imatong Mountains, Kinyeti River}.
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* on banks of small brook in forest, 4.12.1980, *Friis & Vollesen* 681 (C, KHF); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 15.11.1980, *Friis & Vollesen* 244 (C, K, KHF); forest near Kinyeti River, 1830-2130 m., 15.6.1939, *Andrews* 2024 (K).
General habitat range: in montane forest.
General distribution: Cameroon to Ethiopia, south to Zimbabwe.

Girardinia Gaudich.

Girardinia bullosa (Steud.) Wedd.
FTA 6,2: 265 (1917); FCB 1: 195 (1948); FPNA 1: 75 (1948); FTEA, Urticac.: 12 (1989); FE 3: 306 (1989); UKWF: 153 (1994).
Imatong Mountains group, Sudan side: Mt. Kinyeti, upland forest with *Podocarpus latifolius, Syzygium guineense* subsp. *afromontanum* and *Dombeya torrida,* 1980, *Friis & Vollesen* (sight record; photograph).
General habitat range: in montane forest and bushland, often along margins and in clearings.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Rwanda, Burundi, and North Tanzania.

Girardinia diversifolia (Link) Friis
FTEA, Urticac.: 89 (1989); FE 3: 308 (1989); UKWF: 153 (1994); HYF: 74 (1997).
Syn.: *Girardinia condensata* (Hochst. ex Steud.) Wedd.: FTA 6,2: 266 (1917); FCB 1: 196

(1948); FPNA 1: 76 (1948); FPS 2:278 (1952) {Imatong Mountains, Kimisu Forest}; FWTA 1,2: 618 (1958). *Girardinia heterophylla* (Vahl) Decne.: FC 8: 110 (1968); WICKENS 1976: 120.
Imatong Mountains group, Sudan side: Talanga, 1000 m., in clearings in forest, 8.11.1948, *Jackson* 493 (BM); Itibol to Issore, Kimisu [= Dumuso] forest, 2100 m., 20.12.1935, *Thomas* 1721 (BM, K); Bushbuck Hill, 2100 m., edge of cultivations in upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, 10.11.1980, *Friis & Vollesen* 127 (C, KHF).
General habitat range: in montane forest.
General distribution: Guinée to Ethiopia, south to South Africa (Transvaal); also in Madagascar, tropical Arabia, and tropical Asia.

Laportea Gaudich.

Laportea aestuans (L.) Chew
FC 8: 121 (1968); FTEA, Urticac.: 23 (1989); FE 3: 309 (1989); UKWF: 152 (1994); HYF: 72 (1997).
Syn.: *Fleurya aestuans* (L.) Miq.: FTA 6,2: 246 (1917); FS: 216 (1929); FBC 1: 188 (1948); FPNA 1: 74 (1948); FPS 2: 277 (1952); FWTA 1,2: 619 (1958).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, on forest floor, 27.11.1980, *Friis & Vollesen* 487 (C, KHF).
General habitat range: in a wide range of moist habitats (forest, evergreen bushland, etc.), usually in disturbed sites.
General distribution: Senegal to Ethiopia, south to Angola, Zimbabwe and Mozambique; also in Madagascar, Arabia, tropical Asia and tropical America.

Pilea Lindl.

Pilea angolensis Rendle
FTA 6,2: 273 (1917); FCB 1: 200 (1948); FWTA 1,2: 621 (1958); FC 8: 160 (1968); FTEA, Urticac.: 29 (1989); FE 3: 310 (1989).
subsp. **angolensis**
FTEA, Urticac.: 29 (1989).
Imatong Mountains group, Sudan side: Talanga, 950 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 30.11. 1980, *Friis & Vollesen* 554 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude forest and moist woodland, usually on rocks.
General distribution: Guinée to Ethiopia, south to Angola.

Pilea johnstonii Oliv.
FTA 6,2: 273 (1917); FCB 1: 200 (1948); FPNA 1: 78 (1948); FPS 2: 279 (1952) {Imatong Mountains, Mt. Kinyeti}; FTEA, Urticac.: 33 (1989); FE 3: 312 (1989); UKWF: 153 (1994).
subsp. **johnstonii**
FTEA, Urticac.: 34 (1989); FE 3: 312 (1989).
Imatong Mountains group, Sudan side: Mt. Kinyeti, above 3050 m., *Podocarpus latifolius* forest, 27.7.1939, *Myers* 11,672 (K); Itibol to Issore, near bridge on Kinyeti River, 1850 m., in ravine near waterfall on the river, 22.11.1980, *Friis & Vollesen* 402 (C, K, KHF).
General habitat range: in medium-altitude and montane forest.
General distribution: Congo [previously Zaire] to Ethiopia, south to East Zimbabwe.

Pilea rivularis Wedd.
FC 8: 163 (1968); FTEA, Urticac.: (1989); FE 3: 312 (1989); UKWF: 153 (1994).
Syn.: *Pilea ceratomera* Wedd.: FTA 6,2: 269 (1917); FCB 1: 203 (1948); FPNA 1: 80 (1948); FPS 2: 279 (1952) {Imatong Mountains, Itibol}; FWTA 1,2: 621 (1958).

Imatong Mountains group, Sudan side: Ibahin to Itibol, near Itibol, *Podocarpus latifolius* forest, at stream, 19.12.1935, *Thomas* 1697 (BM, K); Bushbuck Hill, 2200 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum,* at brook in forest, 16.2.1982, *Friis & Vollesen* 901 (C, KHF).
General habitat range: in medium-altitude and montane forest.
General distribution: Nigeria to Ethiopia, south to South Africa (Transvaal); also in Madagascar.

Pilea tetraphylla (Steud.) Blume
FTA 6,2: 270 (1917); FCB 1: 199 (1948); FPNA 1: 78 (1948); FPS 2: 279 (1952) {Imatong Mountains, Itibol}; FWTA 1,2: 621 (1958); FC 8: 173 (1968); WICKENS 1976: 120; FTEA, Urticac.: 27 (1989); FE 3: 310 (1989); UKWF: 153 (1994).
Imatong Mountains group, Sudan side: Ibahin to Itibol, at Itibol, 1860 m., forest, 19.12.1935, *Thomas* 1692 (BM, K); Lowiliwili to Dumuso, 2200 m., in *Podocarpus latifolius* forest, 16.11. 1949, *Jackson* 985 (BM); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* on moist slope along trail, 8.11.1980, *Friis & Vollesen* 47 (BR, C, K, KHF).
General habitat range: in montane forest and evergreen bushland.
General distribution: Nigeria and Cameroon to Ethiopia, south to Angola, Congo [previously Zaire] and Malawi; also in Madagascar.

Pouzolzia Gaudich.

Pouzolzia guineensis Benth.
FTA 6,2: 287 (1917); FCB 1: 214 (1948); FWTA 1,2: 622 (1958); FC 8: 184 (1968); FTEA, Urticac.: 47 (1989); FE 3: 317 (1989).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 26.11.1980, *Friis & Vollesen* 456 (C, K, KHF); Kinyeti Valley, hill 3 km. south of Hiliu, 700 m., stony hillside, 6.12.1983, *Kielland-Lund* 223 (C, NLH).
General habitat range: in lowland and intermediate forest, usually along edges and trails and in clearings.
General distribution: Senegal to West Ethiopia, south to Angola and Tanzania.

Pouzolzia parasitica (Forssk.) Schweinf.
FTA 6,2: 293 (1917); FCB 1: 215 (1948); FPNA 1: 84 (1948); FC 8: 194 (1968); FTEA, Urticac.: 51 (1989); FE 3: 317 (1989); UKWF: 153 (1994); HYF: 74 (1997).
Imatong Mountains group, Sudan side: Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 15.11.1980, *Friis & Vollesen* 234 (C, KHF).
General habitat range: in medium-altitude and montane forest, often at edges, riverine forest, moist woodland.
General distribution: Sierra Leone to Ethiopia, south to South Africa, also in tropical Arabia.

Urera Gaudich.

Urera hypselodendron (Hochst. ex A. Rich.) Wedd.
FTA 6,2: 255 (1917); FCB 1: 181 (1948); FPNA 1: 70 (1948); EL AMIN 1990: 279 {Imatong Mountains, Gilo, Lotti}; FTEA, Urticac.: 9 (1989); FE 3: 304 (1989); KTSL: 334 (1994).
Imatong Mountains group, Sudan side: without further locality, 2440 m., *Podocarpus latifolius-Dombeya* open forest, 2.-3.1976, *Howard* IM 71 (K, KHF); 2290 m., *Podocarpus latifolius-Syzygium* forest, 13.2.1976, *Howard* IM 86 (K); Lotti, near rest house, no alt., forest, 9.6.1939, *Andrews* 1745 (K); Lotti, 1000 m., rain forest, climber in forest, 23.6.1953, *Jackson* 3016 (K,

KHF); Gilo, no alt., forest, 25.10.1949, *Jackson* 859 (KHF).
General habitat range: in medium-altitude and montane forest, often in clearings and at edges.
General distribution: South Sudan and Ethiopia through eastern Africa, south to East Zimbabwe.

Urera trinervis (Hochst.) Friis & Immelman
FTEA, Urticac.: 6 (1989); FE 3: 304 (1989); KTSL: 335 (1994).
Syn.: *Urera cameroonensis* Wedd. ex DC.: FTA 6,2: 261 (1917); FCB 1: 185 (1948); JACKSON 1956: 354 {Lotti}; FWTA 1,2: 618 (1958); FC 8: 76 (1968).
Imatong Mountains group, Sudan side: Talanga, 900 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber, 1.3.1982, *Friis & Vollesen* 1058 (C, K, KHF).
General habitat range: in lowland and intermediate forest, often in clearings.
General distribution: Ghana to South West Ethiopia, south to South Africa (Natal); also in Madagascar.

Fam. 92. **Cannabaceae** Endl.

Cannabis L.

Cannabis sativa L.
FTA 6,2: 16 (1916); FS: 217 (1929); FPS 2: 280 (1952); FWTA 1,2: 623 (1958); FG 22: 56 (1973); FC 19: 68 (1975); FTEA, Cannabac.: 1 (1975); FE 3: 327 (1989); HYF: 68 (1997).
Imatong Mountains group, Sudan side: Talanga, 900 m., growing where forest labourers have been working, 8.7.1949, *Jackson* 834 (KHF); Lowiliwili, 2600 m., escaped, 24.4.1950, *Jackson* 1435 (WM); Palotaka, 1200 m., open woodland, 6.1.1979, *Shigeta* 37 (EA).
General habitat range: cultivated and naturalised, also a weed of cultivations.
General distribution: a Central Asian species widely and often illegally cultivated for its fibres, its seeds, and as a drug plant; also naturalised throughout the world; widely naturalised in Africa.

Order 49. **Celastrales** Baskerville

Fam. 93. **Aquifoliaceae** Bartl.

Ilex L.

Ilex mitis (L.) Radlk.
FPNA 1: 493 (1948); ITU: 31 (1952); FWTA 1,2: 623 (1958); FCB 9: 110 (1960); FZ 2,1: 353 (1966); FTEA, Aquifoliac.: 1 (1968); FC 19: 34 (1975); FE 3: 329 (1989); EL AMIN 1990: 279 {Imatong Mountains, Gilo}; KTSL: 335 (1994).
var. **mitis**
FE 3: 329 (1989).
Syn.: *Ilex capensis* Harv. & Sond.: FTA 1: 359 (1868).
Imatong Mountains group, Sudan side: without further locality, no alt., *Podocarpus latifolius-Syzygium* open forest, 12.2.1976, *Howard* IM 41 (EA, KHF) & 45 (K), & 2290 m., in open *Syzygium-Podocarpus latifolius* forest, 10.2.1976, *Howard* IM 95 (K, KHF); Gilo, 1700 m., *Podocarpus latifolius* forest, near stream with *Schefflera abyssinica,* etc., 9.11.1949, *Jackson* 892 (FHO); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 9.11.1980, *Friis & Vollesen* 68 (C, K, KHF), & 20.11.1980, *Friis & Vollesen* 354 (C, K, KHF); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 15.11. 1980, *Friis & Vollesen* 220 (BR, C, EA, K, KHF).
General habitat range: in montane forest.
General distribution: Sierra Leone (Nimba and Loma Mts.), Nigeria and Cameroon to Ethi-

opia, south to South Africa (East Cape Prov.); also in Madagascar. Another variety, *Ilex mitis* var. *schliebenii* Loes., is restricted to Tanzania.

Fam. 94. **Celastraceae** R. Br.

Catha Schreb.

Catha edulis (Vahl) Endl.
FTA 1: 365 (1868); FPNA 1: 502 (1948); FCB 9: 126 (1960); FZ 2: 381 (1966); FE 3: 340 (1989); FTEA, Celastrac.: 25 (1994); KTSL: 336 (1994).
Didinga Mountains: Nagichot, east of Malala, 2000 m., on edge of "fire island" in grassland, 8.4.1949, *Jackson* 662 (FHO, KHF); above Duguru village, Nagichot (4° 16' N, 33° 35' E), 2100 m., 17.12.1983, *Kielland-Lund* 366 (C, NLH).
General habitat range: in medium-altitude and montane dry forest, often near margins or in clearings, in scrub on rocky hills, apparently often escaped from cultivation.
General distribution: East and North East Tropical Africa, occurring from East Congo [previously Zaire] to Ethiopia, south to Angola and South Africa (Cape Prov.).

Elaeodendron Jacq.

Elaeodendron buchananii (Loes.) Loes.
ITU: 79 (1952); FPS 2: 280 (1952); FZ 2: 388 (1966); FC 19: 7 (1975); FE 3: 344 (1989); FTEA, Celastrac.: 32 (1994); KTSL: 337 (1994).
Syn.: *Cassine buchananii* Loes.: FWTA 1,2: 626 (1958); FCB 9: 130 (1960); El Amin 1990: 280. *Elaeodendron sp.* sensu ITU: ITU (2.ed.): 80 (1952).
Imatong Mountains group, Uganda side: above Lututuru, 1830 m., montane forest, 2.1938, *Eggeling* 3498 (K, MHU); without further locality, 2290 m., *Podocarpus latifolius* forest, 4.1938, *Eggeling* 3565 (K, MHU).
General habitat range: in medium-altitude and montane evergreen forest and bushland, sometimes on termite mounds in woodland.
General distribution: Sierra Leone to Ethiopia, south to Angola, Zambia and Malawi.
Note. The ecologically and morphologically similar species, *Mystroxylon aethiopicum* (Thunb.) Loes., is known from many isolated hills in Karamoja in North East Uganda (Moroto, Rom, etc.), but no material has been recorded from the study area.

Hippocratea L.

Hippocratea sp.
Jackson 1956: 354 {Talanga, Lotti} & 366 {Imatong Mountains, *Podocarpus-Olea-Syzygium* forest}.
The identity of these *Jackson*-records is not certain; probably both the records from Talanga and Lotti and the record from the *Podocarpus-Olea-Syzygium* forest at higher altitude represent *Loeseneriella africana.*

Loeseneriella A.C. Sm.

Loeseneriella africana (Willd.) N. Hallé
FCB 9: 154 (1960); FG 29: 252 (1986); FC 32: 212 (1990); FTEA, Celastrac.: 68 (1994).
Syn.: *Hippocratea africana* (Willd.) Loes. ex Engl.: FWTA 1,2: 628 (1958); FZ 2: 408 (1966); FE 3: 342 (1989); El Amin 1990: 283 {Imatong Mountains, Gilo, Kapoeta}; KTSL: 338 (1994). *Hippocratea richardiana* Cambess.: FPNA 1: 509 (1948); FPS 2: 285 (1952); FWTA 1,2: 628 (1958). *Hippocratea africana* (Willd.) Loes. var. *richardiana* (Cambess) N. Robson: FZ 2: 409 (1966); FE 3: 342 (1989). *Loeseneriella africana* (Willd.) N. Hallé var. *richardiana* (Cambess.) N. Hallé: FG 29: 255 (1986); FC 32: 214 (1990); FTEA, Celastrac.: 69 (1994). [*Hippocratea obtusifolia* auct., non Roxb.: FS: 219 (1929)].

Imatong Mountains group, Sudan side: Torit, near bridge to one of the suburbs (4° 24' N, 32° 34' E), no alt., 12.1.1984, *Kielland-Lund* 611 (C, NLH); south of Torit (4° 25' N, 32° 34' E), 630 m., in evergreen tangle in *Combretum* woodland, 21.4.1949, *Jackson* 696 (FHO); Hiliu, 700 m., woodland on small hills in extensive cultivations, 28.2.1986, *Bodoegaard & Francis* 30 (EA); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, climber at forest edge, 20.11.1980, *Friis & Vollesen* 357 (BR, C, K, KHF); Gilo, 1900 m., climber in *Podocarpus latifolius-Olea capensis* forest, 27.4.1951, *Jackson* 1803 (KHF).
Imatong Mountains group, Uganda side: Lututuru, on banks of Aringa River, 25.1.1946, *Dawkins* 163 (FHO, MHU).
Didinga Mountains: Boya Hill, Kimatong, 700 m., woodland on rocks, 9.1.1985, *Fukui* 84-177 (EA).
General habitat range: in lowland, medium-altitude and low-altitude montane forest and bushland.
General distribution: Mauritania and Senegal to Ethiopia, south to South Africa (Transvaal) and Botswana; also in India, Sri Lanka, Burma and Laos.
Note. Verdcourt (in FTEA, l.c.) points out that the species as a whole is very variable with many medium-altitude forms, and that any attempts to construct a detailed infraspecific classification is unsatisfactory, even in the area of the FTEA; yet, he has maintained two varieties in that work. It has not been possible satisfactorily to refer the material cited above to these two varieties, and they have therefore formally been cited in synonymy.

Maytenus Molina

Maytenus buchananii (Loes.) Wilczek
FCB 9: 125 (1960); FZ 2: 363 (1966); FG 22: 11 (1973); FC 19: 28 (1975); WICKENS 1976: 120; SEBSEBE 1985: 58; FE 3: 335 (1990); SOMMERLATTE 1990: 254; FTEA, Celastrac.: 10 (1994); KTSL: 340 (1994).
Syn.: [*Gymnosporia atkaio* auct., non (A. Rich.) Loes.: ITU: 82 (1952), quoad *Eggeling* 3507].
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 19.11.1980, *Friis & Vollesen* 338 (BR, C, EA, FT, K, KHF); Observation hill above Gilo, 2000 m., rocky area in grassland with colonising thicket, 18.4.1984, *Sommerlatte* 56 (EA).
Imatong Mountains group, Uganda side: Agoro, 2600 m., grassland, 2.1938, *Eggeling* 3507 (K).
Didinga Mountains: Nagichot, 2020 m., small copse on basalt plateau, 30.10.1941, *Myers* 14,197 (K).
General habitat range: in lowland, medium-altitude and montane bushland, especially associated with forest edges. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a shrub or small tree in colonising thickets in montane grassland and in *Hagenia* woodland.
General distribution: Ivory Coast to Ethiopia, south to Angola, Zambia, Malawi and Mozambique.

Maytenus gracilipes (Welw.) Exell
FPS 2: 281 (1952) {Imatong Mountains, Mt. Aguagi}; JACKSON 1956: 355 {Talanga}; SEBSEBE 1985: 50; FE 3: 332 (1989); FTEA, Celastrac.: 5 (1994).
Syn.: *Celastrus gracilipes* Welw.: FTA 1: 361 (1868).
subsp. **arguta** (Loes.) Sebsebe
SEBSEBE 1985: 53; FE 3: 332 (1989); FTEA, Celastrac.: 5 (1994).
Syn.: *Gymnosporia gracilipes* (Oliv.) Loes. var. *arguta* Loes.: FPNA 1: 500 (1948); ITU: 81 (1952). *Gymnosporia serrata* (A. Rich.) Loes. var. *niansaica* Loes.: FPNA 1: 500 (1948). *Maytenus serrata* (A. Rich.) Wilczek var. *arguta* (Loes.) Wilczek: FCB 9: 120 (1960).

Imatong Mountains group, Sudan side: without further locality, 1990 m., dense forest, 11.4. 1933, *Smith* 18 (K); without further locality, 10.2.1976, *Howard* IM 92 (KHF); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* in forest, 6.12.1980, *Friis & Vollesen* 728 (C, K, KHF); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 8.11. 1980, *Friis & Vollesen* 52 (BR, C, EA, K, KHF); Jebel Agnargi, 1830-2140 m., 4.6.1939, *Andrews* 1949 (K, WM); Dumuso, 2290 m., in undergrowth of *Podocarpus latifolius-Olea capensis* forest, 4.7.1947, *MacLeay* 200 (BM); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 58' N, 32° 53' E), 2200 m., undergrowth in low montane forest, 10.6.1984, *Kielland-Lund* 905 (NLH).
Imatong Mountains group, Uganda side: Lututuru, no alt., stream-side, 2.1938, *Eggeling* 3502 (K, MHU); Aringa River, 2140 m., 7.4.1945, *Hummel* 665 (FHO, MHU).
General habitat range: in understorey of medium-altitude and montane evergreen forest and riverine forest, at forest margins and in bushland.
General distribution: East Congo [previously Zaire] to Ethiopia, south to West Tanzania.

Maytenus heterophylla (Eckl. & Zeyh.) N. Robson
FZ 2: 364 (1966); FC 19: 30 (1975); SEBSEBE 1985: 88; FE 3: 336 (1989); FTEA, Celastrac.: 14 (1994); KTSL: 340 (1994).
Syn.: *Gymnosporia buxifolia* (L.) Szyszyl.: ITU: 81 (1952). *Gymnosporia maranguensis* (Loes.) Loes.: FPNA 1: 501 (1948). *Maytenus cymosa* (Solander) Exell, non Krug & Urban: FCB 9: 122 (1960). *Gymnosporia brevipetala* Loes.: FPNA 1: 498 (1948). *Maytenus brevipetala* (Loes.) Wilczek: FCB 9: 118 (1960).
Imatong Mountains group, Uganda side: Lututuru, no alt., stream-side, 2.1938, *Eggeling* 3503 (K, MHU).
Didinga Mountains: Nagichot, 1980 m., forest edge, 25.4.1939, *Myers* 11,121 (K).
General habitat range: in lowland, medium-altitude and montane forest, at forest margins, in bushland and clumps of thicket in woodland and wooded grassland.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Angola and South Africa (Cape Prov.); also in Madagascar.

Maytenus obscura (A. Rich.) Cufod.
SEBSEBE 1985: 78; FE 3: 333 (1989); FTEA, Celastrac.: 11 (1994); KTSL: 341 (1994).
Imatong Mountains group, Sudan side: Itibol, 1800 m., at forest edge and in *Pteridium*-grassland, 31.1.1947, *Jackson* 172 (FHO).
General habitat range: in montane evergreen forest, especially at forest edges, in bushland and thicket-clumps in grassland.
General distribution: Burundi to Ethiopia and Kenya, south to Tanzania. First record from the Sudan.

Maytenus senegalensis (Lam.) Exell
FPS 2: 281 (1952); JACKSON 1956: 350; FWTA 1,2: 624 (1958); FCB 9: 121 (1960); FZ 2: 367 (1966); FC 19: 23 (1975); WICKENS 1976: 120; SEBSEBE 1985: 85; FE 3: 336 (1989); EL AMIN 1990: 281; SOMMERLATTE 1990: 118; FTEA, Celastrac.: 17 (1994); KTSL: 341 (1994); HYF: 177 (1997).
Syn.: *Gymnosporia senegalensis* (Lam.) Loes.: FS: 218 (1929); FPNA 1: 501 (1948); ITU 82 (1952). *Celastrus senegalensis* Lam.: FTA 1: 361 (1868).
Imatong Mountains group, Sudan side: between Palwar and Talanga (3° 53' N, 32° 39' E), 1000 m., wooded grassland with dominance of *Combretum collinum,* 29.3.1984, *Sommerlatte* 39 (EA); Kinyeti Valley, Hiliu, 700 m., in compound, 26.11.1983, *Kielland-Lund* 52 (C, NLH); Kinyeti Valley, hills east of Hiliu (4° 17' N, 32° 39' E),

no alt., 8.1.1984, *Kielland-Lund* 608 (C, NLH); Hiliu, no alt., 19.1.1984, *Kielland-Lund* 1001 (C, NLH).

Imatong Mountains group, Uganda side: without further locality, 1830 m., on rocks, 12.1932, *Eggeling* 812 (MHU); 2 km. east of Lututuru, near a rivulet, 1400 m., grassland, 17.2.1969, *Lye* 2089 (EA, MHU, NLH); 2 km. east of Lututuru, near a rivulet, 1400 m., open woodland, 17.2.1969, *Lye* 2099 (EA, K, MHU, NLH).

Lafit, Dongotona and Nangeya Mountains: near Lafon, at the River Koss, no alt., wooded grassland on black cotton soil, 26.10.1938, *Myers* 9900 (K, WM); 800 m. south east of Lafon (5° 02' N, 32° 27-28' E), no alt., 28.12.1983, *Kielland-Lund* 498 (C, NLH); Murikuren (4° 15' N, 33° 07' E), 1350 m., woodland with *Vitex, Gardenia, Stereospermum, Erythrina,* etc., 20.1.1950, *Jackson* 1067 (FHO).

Didinga Mountains: Nagichot, 1950 m., "fire island" of shrubs in grassland, 11.4.1949, *Jackson* 685 (FHO, KHF); just above Duguru village, Nagichot (4° 16' N, 33° 35' E), 2000 m., 17.12.1983, *Kielland-Lund* 364 (C, NLH).

General habitat range: in lowland and medium-altitude deciduous woodland and bushland, on termite mounds and river banks. According to Jackson 1956 it occurs at the Imatong Mountains in moist woodland west and north of the mountains; according to Sommerlatte 1990 it occurs as a shrub or small tree in lowland woodland.

General distribution: Senegal to Eritrea, Ethiopia and Somalia, south to Namibia, Botswana and South Africa (Transvaal, Natal); also in Madagascar, Spain, Morocco, Algeria, Egypt, tropical Arabia, Saudi Arabia, Oman, and from Afghanistan to India and Bangladesh.

Maytenus undata (Thunb.) Blakelock

FWTA 1,2: 624 (1958); FCB 9: 118 (1960); FZ 2: 371 (1966); FC 19: 18 (1975); Sebsebe 1985: 47; FE 3: 338 (1989); El Amin 1990: 283 {Imatong Mountains, Mt. Kinyeti}; Sommerlatte 1990: 326; FTEA, Celastrac.: 18 (1994); KTSL: 342 (1994); HYF: 178 (1997).

Syn.: *Celastrus lancifolius* Thonn.: FTA 1: 364 (1868). *Gymnosporia fasciculata* (Tul.) Loes.: ITU: 81 (1952). *Gymnosporia lancifolia* (Thonn.) Loes.: ITU: 82 (1952). *Gymnosporia luteola* (Del.) Loes.: ITU: 82 (1952). *Maytenus lancifolia* (Thonn.) Loes.: FPNA 1: 496 (1948); FPS 2: 283 (1952) {Imatong Mountains, Mt. Kinyeti}. *Maytenus luteola* (Del.) F.W. Andrews: FPS 2: 283 (1952); El Amin 1990: 281.

Imatong Mountains group, Sudan side: without further locality, 2140 m., *Podocarpus latifolius-Olea* forest, 20.11.1976, *Howard* IM 53 (K, EA, KHF); without further locality, 2290 m., 21.1.1976, *Howard* IM 54 (K, EA, KHF); near Sahwa (4° 01' N, 32° 52' E), 2100 m., *Podocarpus latifolius* forest, 16.11.1949, *Jackson* 991 (FHO); Upper Talanga, 2000 m., mixed *Podocarpus latifolius* forest, 13.3.1984, *Sommerlatte* 22 (EA); Itibol, 1990 m., *Podocarpus latifolius-Olea* forest, 29.5.1947, *Jackson* 223 (FHO); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 9.11.1980, *Friis & Vollesen* 71 (BR, C, K, KHF); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 19.11.1980, *Friis & Vollesen* 330 (BR, C, EA, K, KHF); near Mt. Garia, 2200 m., forest with *Hypericum* and *Dombeya,* 1.4. 1948, *Jackson* 286 (FHO); slope of Mt. Kinyeti, no alt., 15.11.1949, *Jackson* 975 (FHO, KHF); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 58' N, 32° 53' E), 2400 m., 9.6.1984, *Kielland-Lund* 902 (C, NLH); Mt. Kinyeti, 2740 m., forest in ravine, 30.12.1935, *Thomas* 1872 (BM, K).

Imatong Mountains group, Uganda side: without further locality, 2290 m., rocky outcrop, 4.1938, *Eggeling* 3599 (K, MHU); without further locality, 2380 m., rock face in grassland, 4.1938, *Eggeling* 3595 (K, MHU); Aringa River headwaters, 2290 m., *Podocarpus latifolius-Syzygium* forest, 6.4.1945, *Greenway & Hummel* 7299

(EA, K, MHU); Aringa River, 2140 m., 6.4. 1945, *Hummel* 660 (FHO, MHU); Lomwaga, 5.4.1945, *Hummel* 664 (FHO, MHU); Lomwaga, 2440 m., 4.1945, *Hummel* 669 (MHU).
General habitat range: in lowland, medium-altitude and montane forest and bushland. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as an understorey tree in and at edges of mixed *Podocarpus latifolius* forest.
General distribution: Guinée to Cameroon and Angola, and from Rwanda to Ethiopia and Somalia, south to South Africa (Cape Prov.); also in tropical Arabia, Madagascar and the Comoro Islands.

Pristimera Miers

Pristimera graciliflora (Welw. ex Oliv.) N. Hallé
FG 29: 212 (1986); FC 32: 173 (1990); FTEA, Celastrac.: 61 (1994).
Syn.: *Hippocratea graciliflora* Welw. ex Oliv.: FTA 1: 371 (1868). *Simirestis graciliflora* (Oliv.) Wilczek: FCB 9: 168 (1960).
subsp. **graciliflora**
FTEA, Celastrac.: 61 (1994).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* with *Pouteria adolfi-friederici* and *Schefflera abyssinica* near the river, climbing at forest edge near river, 17.2.1982, *Friis & Vollesen* 933 (BR, C, EA, K, KHF).
General habitat range: in lowland and medium-altitude evergreen forest and at forest margins.
General distribution: Central African Republic to Sudan, Uganda and Tanzania, south to Angola. Another subspecies in Tanzania.
Note. A sterile specimen, *Andrews* 1432 (K), Mt. Baghanj, 14.6.1932. is probably this species.

Reissantia Hallé

Reissantia indica (Willd.) N. Hallé
FG 29: 189 (1986); FC 32: 152 (1990); FTEA, Celastrac.: 51 (1994).
Syn.: *Hippocratea indica* Willd.: FTA 1: 368 (1868); FWTA 1,2: 627 (1954); FZ 2,2: 413 (1966).
var. **loesneriana** (Hutch. & M.B. Moss) N. Hallé
FCB 9: 146 (1960); FG 29: 190 (1986); FC 32: 152 (1990); FTEA, Celastrac.: 52 (1994).
Syn.: *Hippocratea loesneriana* Hutch. & M.B. Moss: FPNA 1: 506 (1948).
Imatong Mountains group, Sudan side: Kinyeti Valley, 3 km. south of Hiliu along Katire road (4° 14' N, 32° 40' E), north face of rock, no alt., 26.5.1984, *Kielland-Lund* 743 (C, NLH).
General habitat range: in lowland and medium-altitude forest, riverine forest or humid places in woodland.
General distribution: Senegal to Ethiopia and Uganda, south to Angola and Congo [previously Zaire]. Species as a whole also south to South Africa (Transvaal), and in tropical Asia (var. *indica*) from India and Sri Lanka to Philippines.

Salacia L.

Salacia cerasifera Welw. ex Oliv.
FTA 1: 376 (1868); FCB 9: 204 (1960); FG 29: 109 (1986); FC 32: 86 (1990); FTEA, Celastrac.: 41 (1994); KTSL: 343 (1994).
Syn.: [*Salacia elegans* auct., non Welw. ex Oliv.: JACKSON 1956: 354 {Talanga}].
Imatong Mountains group, Sudan side: Talanga, 900 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 1.3.1982, *Friis & Vollesen* 1057 (BR, C, K, KHF); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Eryth-*

rophleum suaveolens, Alstonia boonei, Parinari excelsa and *Milicia excelsa,* 17.3.1982, *Friis & Vollesen* 1225 (BR, C, K, KHF); Talanga, 1100 m., edge of lowland rain forest, 7.3.1950, *Jackson* 1187 (K, KHF).
General habitat range: in lowland and medium-altitude moist, evergreen forest.
General distribution: Guinée to Sudan, Uganda, and Kenya, south to Angola and Tanzania.

Simirestis N. Hallé

Simirestis brianii H. Hallé
FTEA, Celastrac.: 62 (1994).
Imatong Mountains group, Sudan side: Itibol, 1860 m., *Podocarpus latifolius* forest, 19.12.1935, *Thomas* 1696 (K).
General habitat range: in medium-altitude evergreen forest.
General distribution: Congo [previously Zaire] to Sudan, Uganda and Kenya.

Fam. 95. **Icacinaceae** (Benth.) Miers

Apodytes Arn.

Apodytes dimidiata E. Mey. ex Arn.
FTA 1: 355 (1868); ITU: 161 (1952); FCB 9: 273 (1960); FTEA, Icacinac.: 4 (1968); FE 3: 348 (1989); EL AMIN 1990: 284 {Imatong Mountains}; KTSL: 345 (1994).
subsp. **acutifolia** (A. Rich.) Cufod.
Syn.: *Apodytes dimidiata* E. Mey. ex Arn. var. *acutifolia* (A. Rich.) Boutique: FTEA, Icacinac.: 6 (1968); FE 3: 348 (1989).
Imatong Mountains group, Sudan side: without further locality, 1990 m., open *Podocarpus latifolius-Syzygium* forest, 2.2.1976, *Howard* IM 26 (K, EA, KHF).
General habitat range: in medium-altitude and montane forest, in lowland evergreen bushland.
General distribution: Congo [previously Zaire] to Ethiopia, south to Angola and South Africa (Transvaal, Natal); also in India.

Leptaulus Benth.

Leptaulus daphnoides Benth.
FTA 1: 354 (1868), pro parte; ITU: 161 (1952); JACKSON 1956: 354 {Lotti}; FWTA 1,2: 637 (1958); FCB 9: 261 (1960); FTEA, Icacinac.: 2 (1968); FC 15: 59 (1973); FG 20: 59 (1973); EL AMIN 1990: 284 {Imatong Mountains}.
Imatong Mountains group, Sudan side: no specimen seen; reported by JACKSON 1956 from forest at Lotti and by EL AMIN 1990 from the Imatong Mountains.
General habitat range: in lowland and medium-altitude forest.
General distribution: Guinée to South Sudan, south to Uganda and Tanzania.

Pyrenacantha Hook. ex Wight

Pyrenacantha sylvestris S. Moore
FCB 9: 251 (1960); FTEA, Icacinac.: 14 (1968); FC 15: 82 (1973); FG 20: 82 (1973); FE 3: 351 (1989).
Imatong Mountains group, Sudan side: Lotti, no alt., in forest near rest house, 9.6.1939, *Andrews* 1758 (K); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber in forest, 27.11.1980, *Friis & Vollesen* 503 (C, K, KHF).
General habitat range: in lowland and medium-altitude forest.
General distribution: Congo [previously Zaire] to South Sudan and South West Ethiopia, south to Uganda.

Rhaphiostylis Planch. ex Benth.

Rhaphiostylis beninensis (Planch.) Benth.
FWTA 1,2: 638 (1958); FCB 9: 275 (1960); FTEA, Icacinac.: 8 (1968); FC 15: 32 (1973); FG 20: 32 (1973); FE 3: 350 (1989); KTSL: 347 (1994).
Syn.: *Apodytes beninensis* Planch.: FTA 1: 355 (1868), pro parte.
Imatong Mountains group, Sudan side: between Talanga and Upper Talanga, 1300 m., medium-altitude rain forest with *Diospyros abyssinica, Garcinia buchananii, Uvariopsis congoensis, Turraea floribunda, Manilkara butugi,* etc., climber in forest, 7.12.1980, *Friis & Vollesen* 739 (BR, C, K, KHF); Gilo, at bridge on Ngairigi River, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* at forest edge, 17.2.1982, *Friis & Vollesen* 932 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude forest and evergreen bushland.
General distribution: Senegal and Guinée to South Sudan and South West Ethiopia, south to Angola, Zimbabwe and Mozambique. First record from the Sudan.

Order 50. **Olacales** Benth.

Fam. 96. **Olacaceae** Mirb. ex DC.

Olax L.

Olax gambecola Baill.
FTA 1: 349 (1868); FCB 1: 258 (1948); FWTA 1,2: 647 (1958); FTEA, Olacac.: 7 (1968); FC 15: 111 (1973); FG 20: 111 (1973).
Syn.: *Olax viridis* Oliv.: FTA 1: 349 (1868); FCB 1: 258 (1948).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 26.11.1980, *Friis & Vollesen* 470 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude forest, especially at streams.
General distribution: Guinée to South Sudan and Uganda, south to Angola and Zambia. First record from the Sudan.

Strombosia Blume

Strombosia grandifolia Hook. f.
FTA 1: 350 (1868); FCB 1: 268 (1948); JACKSON 1956: 353 {Talanga, Lotti, Laboni}; FWTA 1,2: 648 (1958); FC 15: 134 (1973); FG 20: 134 (1973).
Imatong Mountains group, Sudan side: Lotti, 1000 m., tree in forest, 2.1.1950, *Jackson* 1024 (FHO, KHF); Talanga, 1050 m., forest with *Chrysophyllum,* near stream, 18.3.1950, *Jackson* 1229 (FHO).
General habitat range: in lowland and medium-altitude forest.
General distribution: Benin to South Sudan, south to Congo [previously Zaire].

Strombosia scheffleri Engl.
FCB 1: 270 (1948); FPNA 1: 94 (1948); ITU: 282 (1952); FWTA 1,2: 648 (1958); FTEA, Olacac.: 11 (1968); FC 15: 139 (1973); FG 20: 139 (1973); EL AMIN 1990: 287 {Lotti, Talanga}; SOMMERLATTE 1990: 180; KTSL: 350 (1994).
Imatong Mountains group, Sudan side: Talanga to Upper Talanga, 1100 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* lower canopy tree, 7.12.1980, *Friis & Vollesen* 746 (BR, C, KHF); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 15.11.1980, *Friis & Vollesen* 249 (C, KHF); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 20.11.1980, *Friis & Vollesen* 363 (BR, C, KHF).

Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).
General habitat range: in medium-altitude and montane forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as an understorey tree in lowland and medium-altitude forest.
General distribution: Nigeria to South Sudan, Uganda and Kenya, south to Angola, Malawi and Tanzania.

Ximenia L.

Ximenia americana L.
FTA 1: 346 (1868); FS: 220 (1929); FCB 1: 256 (1948); ITU: 283 (1952); FPS 2: 290 (1952); FWTA 1,2: 646 (1958); FTEA, Olacac.: 3 (1968); FC 15: 106 (1973); WICKENS 1976: 120; FE 3: 356 (1989); EL AMIN 1990: 287; KTSL: 350 (1994).
var. **americana**
KTSL: 351 (1994)
Imatong Mountains group, Sudan side: Abara between Loa and Magwe (4° 05' N, 32° 13' E), no alt., 6.6.1984, *Kielland-Lund* 869 (C, NLH); south of Torit, 3.1948, *Jackson* 205 (KHF).
General habitat range: in dry lowland and medium-altitude woodland.
General distribution: Senegal to Ethiopia, south to South Africa (Cape Prov.).
var. **caffra** (Sond.) Engl.
KTSL: 351 (1994).
Syn.: *Ximenia caffra* Sond.: FCB 1: 257 (1948); ITU: 283 (1952); FTEA, Olacac.: 5 (1968); FE 3: 356 (1989). *Ximenia caffra* Sond. var. *caffra*: FTEA, Olacac.: 5 (1968); FE 3: 356 (1989).
Imatong Mountains group, Sudan side: Kinyeti Valley, village about 500 m. south west of Hiliu, no alt., in savannah, 7.6.1984, *Kielland-Lund* 876 (C, NLH).
Imatong Mountains group, Uganda side: near Agoro, 3.1935, *Eggeling* 1702 (MHU).
Didinga Mountains: near Kapoeta Regional District Centre (4° 47' N, 33° 35' E), 650-670 m., in bush steppe, 13.6.1984, *Kielland-Lund* 942 (C, NLH).
General habitat range: in dry lowland and medium-altitude woodland.
General distribution: Senegal to Ethiopia and Kenya, south to South Africa.

Fam. 97. **Opiliaceae** (Benth.) Valeton

Opilia Roxb.

Opilia amentacea Roxb.
FS: 220 (1920); FE 3: 358 (1989); KTSL: 351 (1994).
Syn.: *Opilia celtidifolia* (Guill. & Perr.) Walp. ex Engl.: FCB 1: 282 (1948); FPNA 1: 92 (1948); FPS 2: 290 (1952); FWTA 1,2: 651 (1958); FTEA, Opiliac.: 2 (1968); FC 15: 169 (1973); FG 20: 169 (1973); EL AMIN 1990: 288.
Imatong Mountains group, Sudan side: South of Torit (4° 25' N, 32° 34' E), 630 m., in tangle on termite mound, 21.4.1949, *Jackson* 700 (FHO); Kinyeti Valley, 3 km. east of Hiliu, 2 km. along Imatong River, 700 m., climber in *Tamarindus*, 3.12.1983, *Kielland-Lund* 192 (C, NLH); 6 km. south of Hiliu on the road to Imeila, 750 m., riparian scrub along small temporary stream, 27.2.1982, *Friis & Vollesen* 1044 (BR, C, K, KHF).
General habitat range: in a wide range of lowland and medium-altitude habitats, but often riverine.
General distribution: Senegal to Ethiopia, south to Angola, Zambia, Zimbabwe and Mozambique.

Order 51. **Santalales** Dumort.

Fam. 98. **Loranthaceae** Juss.

Agelanthus Van Tiegh.

Agelanthus oehleri (Engl.) Polhill & Wiens
UKWF: 156 (1994).
Syn.: *Loranthus oehleri* Engl.: FTA 6,1: 366 (1910).
Imatong Mountains group, Sudan side: lower southern slope of Mt. Konoro, 2100 m., *Loudetia arundinacea* grassland with scattered trees, parasitic on *Maytenus sp.*, 2.3.1982, *Friis & Vollesen* 1077 (BR, C, K, KHF).
General habitat range: in medium-altitude woodland, bushland and wooded grassland.
General distribution: South Sudan, Kenya and North Tanzania. First record from the Sudan.

Globimetula Tiegh.

Globimetula braunii (Engl.) Tiegh.
FWTA 1,2: 660 (1958); FC 23: 15 (1982); FE 3: 362 (1989); UKWF: 157 (1994).
Syn.: *Loranthus braunii* Engl.: FTA 6,1: 303 (1910); FCB 1: 369 (1948).
Imatong Mountains group, Sudan side: Gilo, 1900 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, in disturbed place on edge, parasitic on *Jacaranda*, 12.11.1980, *Friis & Vollesen* 183 (BR, C, EA, K, KHF).
General habitat range: in lowland and medium-altitude forest, but also in plantations of *Coffea, Hevea* and *Theobroma.*
General distribution: Ghana to South Sudan, south to Angola, Zimbabwe and Tanzania. First record from the Sudan.

Oncocalyx Tiegh.

Oncocalyx fischeri (Engl.) M.G. Gilbert
FE 3: 369 (1989); UKWF: 155 (1994).
Syn.: *Loranthus fischeri* Engl.: FTA 6,1: 331 (1910).
Didinga Mountains, Uganda side: Agoro, no alt., parasitic on *Balanites aegyptiaca*, 3.1935, *Eggeling* 1745 (K) & 1746 (MHU).
Didinga Mountains: Nagichot, 1980 m., 25.4.1939, *Myers* 11,145 (K, WM); just above Duguru village, Nagichot (4° 16' N, 33° 35' E), parasite on *Maytenus*, 2000 m., 17.12.1983, *Kielland-Lund* 363 (C, NLH).
General habitat range: in lowland and medium-altitude dry woodland and bushland.
General distribution: Sudan and Ethiopia to Tanzania.

Phragmanthera Tiegh.

Phragmanthera polycrypta (F. Didr.) Balle
FC 23: 40 (1982).
Syn.: *Loranthus polycrypta* F. Didr.: FTA 6,1: 284 (1910); FCB 1: 360 (1948); FWTA 1,2: 664 (1958).
subsp. **subglabriiflora** Bally
Imatong Mountains group, Sudan side: at path from Gilo to Mt. Garia, 1800 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, parasitic on *Ilex mitis* in natural forest clearing, 19.3.1982, *Friis & Vollesen* 1255 (BR, C, K, KHF); Sahue Ridge, 2300 m., on isolated specimen of *Olea capensis* subsp. *hochstetteri* in grassland, parasite, 26.2.1982, *Friis & Vollesen* 1036 (C, K, KHF).
General habitat range: in montane forest.
General distribution: East Congo [previously Zaire], South Sudan Uganda, and Angola. First record from the Sudan.

Phragmanthera usuiensis (Oliv.) M.G. Gilbert
FE 3: 368 (1989); UKWF: 157 (1994).

Syn.: *Loranthus usuiensis* Oliv.: FTA 6,1: 288 (1910); FPS 2: 292 (1952) {Imatong Mountains, Mt. Baghanj}.
Imatong Mountains group, Sudan side: Mt. Baghanj, 1830-2130 m., on *Acacia*, 14.6.1939, *Andrews* 1938 (K).
Didinga Mountains: Iwowa, 1700 m., open forest with *Olea, Vepris* and *Rhus*, 8.4.1949, *Jackson* 667 (FHO).
General habitat range: in medium-altitude and montane forest.
General distribution: South Sudan and South West Ethiopia through eastern Africa to Malawi and North Mozambique.

Plicosepalus Tiegh.

Plicosepalus curviflorus (Oliv.) Tiegh.
FE 3: 364 (1989); UKWF: 154 (1994); HYF: 176 (1997).
Syn.: *Loranthus curviflorus* Oliv.: FTA 6,1: 279 (1910); FS: 220 (1929); FCB 1: 318 (1948); FPS 2: 292 (1952).
Imatong Mountains group, Sudan side: Gilo, 1900 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, parasitic on *Albizia*, 12.11. 1980, *Friis & Vollesen* 182 (C, K, KHF).
Imatong Mountains group, Uganda side: above Lututuru, 1830 m., 2.1938, *Eggeling* 3494 (K, MHU).
General habitat range: in lowland and medium-altitude dry woodland and bushland, or (Imatong collections) medium-altitude montane forest.
General distribution: South Egypt through Ethiopia to East Congo [previously Zaire] and Tanzania; also in tropical Arabia and the Middle East.
Note. This is the third record of the species from the Sudan; the first two records are from the Red Sea Hills. The records from the Imatong Mountains are unusual with regard to the rather moist habitats (especially at Gilo) and the host, a species of *Albizia*; normally, the host is a species of *Acacia*.

Tapinanthus (Blume) Reichb.

Tapinanthus constrictiflorus (Engl.) Danser
UKWF: 157 (1994).
Syn.: *Loranthus constrictiflorus* Engl.: FTA 6,1: 351 (1910); FCB 1: 344 (1948); FPNA 1: 98 (1948).
Imatong Mountains group, Sudan side: Mt. Garia, 1830-2140 m., 13.6.1939, *Andrews* 1880 (K, WM); Kinyeti River, no alt., 1939, *Andrews* 2032 (K).
General habitat range: in montane forest.
General distribution: South Sudan, East Congo [previously Zaire], Uganda, Rwanda, West Kenya, North West Tanzania. First record from the Sudan.

Tapinanthus globiferus (A. Rich.) Tiegh.
FWTA 1,2: 662 (1958); WICKENS 1976: 120; FC 23: 54 (1982); FE 3: 373 (1989); HYF: 177 (1997).
Syn.: *Loranthus globiferus* A. Rich.: FTA 6,1: 352 (1910); FS: 221 (1929); FCB 1: 346 (1948); FPS 2: 293 (1952).
Imatong Mountains group, Sudan side: North east side of mountains, just North of Molongori, 750 m., almost bare rocky slope with *Boswellia papyrifera, Terminalia brownii, Lannea fulva, Euphorbia magnicapsula, Xerophyta simulans*, etc., parasitic on *Lannea fulva*, 10.3.1982, *Friis & Vollesen* 1153 (C, K); near Logoforok, 900 m., parasitic on *Combretum*, 6.1949, *Jackson* 786 (FHO).
Didinga Mountains: north of Naperatang Valley (4° 19' N, 33° 30' E), 2000 m., 18.12.1983, *Kielland-Lund* 382 (C, NLH).
General habitat range: in lowland and medium-altitude woodland and wooded grassland.
General distribution: Mali to Ethiopia; also in tropical Arabia.

Fam. 99. **Viscaceae** Batsch

Viscum L.

Viscum triflorum DC.
FE 3: 376 (1989); UKWF: 158 (1994).
subsp. **nervosum** (A. Rich.) M.G. Gilbert
FE 3: 376 (1989).
Syn.: *Viscum nervosum* A. Rich.: FTA 6,1: 397 (1911); FCB 1: 376 (1948); FPNA 1: 104 (1948).
Imatong Mountains group, Uganda side: without further locality, 2230 m., riparian forest, 4.1938, *Eggeling* 3573 (K).
General habitat range: in montane forest and riverine forest.
General distribution: Ethiopia through eastern Africa to South Africa; west to Congo [previously Zaire].

Viscum tuberculatum A. Rich.
FTA 6,1: 396 (1911); FCB 1: 379 (1948); FE 3: 375 (1989); UKWF: 158 (1994).
Imatong Mountains group, Sudan side: Observation Hill, 2000 m., mountain wooded grassland, parasitic on *Nuxia congesta*, 26.2.1982, *Friis & Vollesen* 1037 (BR, C, EA, K, KHF).
Didinga Mountains: Nagichot, 1900 m., 7.4. 1949, *Jackson* 651 (KHF); north of Duguru village, Nagichot (4° 17' N, 33° 35' E), parasite on *Maytenus*, 2000 m., 18.12.1983, *Kielland-Lund* 369 (C, NLH).
General habitat range: in medium-altitude and montane woodland and bushland.
General distribution: Ethiopia and Somalia south to Tanzania, west to Burundi and East Congo [previously Zaire].

Fam. 100. **Santalaceae** R. Br.

Osyris L.

Osyris quadripartita Decne.
FE 3: 382 (1989).
Syn.: *Osyris abyssinica* A. Rich.: FTA 6,1: 433 (1911); ITU: 373 (1952); HYF: 175 (1997). *Osyris lanceolata* Hochst. & Steud.: KTSL: 353 (1994). *Osyris arborea* Wall. in DC.: FCB 1: 295 (1948). *Osyris compressa* (Berg.) A. DC.: FPS 2: 295 (1952); El Amin 1990: 288 {Didinga Mountains, Nagichot}.
Didinga Mountains: between Naligede and Iwowa, 1710 m., wooded grassland, 22.4.1939, *Myers* 11,017 (K); Iwowa, 1620 m., 23.4.1939, *Myers* 11,079 (K); Nagichot, 1950 m., in "fire island" in grassland, 11.4.1949, *Jackson* 684 (KHF); north of Duguru village, Nagichot (4° 17' N, 33° 35' E), 2000 m., 18.12.1983, *Kielland-Lund* 377 (C, NLH); slope of Mt. Lotuke, no alt. [c. 1800 m.], in *Protea* grassland, 29.3.1950, *Jackson* 1320 (BM, WM).
General habitat range: in lowland, medium-altitude and montane dry forest, evergreen bushland and woodland, and on degraded rocky slopes.
General distribution: East Congo [previously Zaire] to Ethiopia and Somalia, south to South Africa; also in tropical Arabia and in Asia from India to South China.

Thesium L.

Thesium schweinfurthii Engl.
FTA 6,1: 416 (1913); FS: 222 (1929); FPS 2: 295 (1952); FE 3: 380 (1989); UKWF: 159 (1994).
Imatong Mountains group, Sudan side: at path from Gilo to Mt. Garia, 2000 m., *Loudetia arundinacea* grassland on very shallow soil, 19.3. 1982, *Friis & Vollesen* 1264 (BR, C, EA, FT, K, KHF).
Imatong Mountains group, Uganda side: Langia, 1520 m., montane grassland, 4.1943, *Purseglove* 1384 (EA, K); 2 km. north-east of Lututuru, near end of road, 1800 m., grassland, 17.2. 1969, *Lye* 2057 (MHU).
General habitat range: in medium-altitude and

montane woodland and grassland, evergreen bushland, and in forest clearings.
General distribution: Sudan to Ethiopia, south to Malawi.

Thesium stuhlmannii Engl.
FTA 6,1: 422 (1913); FE 3: 380 (1989); UKWF: 159 (1994); HYF: 175 (1997).
Imatong Mountains group, Sudan side: near Gilo, 1980 m., on road bank, 15.6.1953, *Prowse* 309 (KHU).
General habitat range: in montane grassland.
General distribution: South Sudan to Ethiopia, south to Tanzania and Malawi; also in tropical Arabia.

Thesium ussanguense Engl.
FTA 6,1: 425 (1913); UKWF: 159 (1994).
Imatong Mountains group, Uganda side: without further locality, 2440 m., grassland, 4.1938, *Eggeling* 3551 (K).
General habitat range: in medium-altitude and montane grassland.
General distribution: South Sudan south to Mozambique.

Thesium sp. cf. T. leucanthum Gilg
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 21.11.1980, *Friis & Vollesen* 376 (C, K, KHF).
Note. *Thesium leucanthum* Gilg (FTA 6,1: 420 (1913); FWTA 1,2: 666 (1958)) is known from woodlands in North Nigeria to Angola

Thesium sp.
Imatong Mountains group, Uganda side: north of Okako, south of Mingaro, no alt., sloping montane grassland, 10.6.1973, *Katende* 1874 (MHU); north of Okako, south of Mingaro, no alt., montane grassland, 10.6.1973, *Katende* 1886 (MHU).
Note. Both specimens represent a branched plant, up to c. 25 cm high, with linear leaves c. 1 cm long, that seems to be much more branched than *T. schweinfurthii*; the specimens might perhaps represent aberrant material of the species here referred to as *Thesium cf. leucanthum* Gilg.

Fam. 101. **Balanophoraceae** Rich.

Thonningia Vahl

Thonningia sanguinea Vahl
FTA 6,1: 438 (1911); FCB 1: 395 (1948); FPNA 1: 108 (1948); FPS 2: 298 (1952); FWTA 1,2: 667 (1958); FE 3: 384 (1990); FC 33: 48 (1991); FTEA, Balanophorac.: 3 (1993); UKWF: 160 (1994).
Syn.: *Thonningia ugandensis* Hemsl.: FTA 6,1: 439 (1911); JACKSON 1956: 355 {Lotti}.
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* parasitic herb near forest edge in shade, 7.12.1980, *Friis & Vollesen* 762 (K).
General habitat range: in lowland and medium-altitude rain forest and adjacent woodland.
General distribution: Senegal and Sierra Leone to South West Ethiopia, south to North Angola, Zambia and West Tanzania.

Order 52. **Rhamnales** Dumort.

Fam. 102. **Rhamnaceae** Juss.

Berchemia DC.

Berchemia discolor (Klotzsch) Hemsl.
FTA 1: 381 (1868); ITU: 323 (1952); FPS 2: 298 (1952); FZ 2: 425 (1966); FTEA, Rhamnac.: 32 (1972); FE 3: 393 (1989); EL AMIN 1990: 289; KTSL: 354 (1994); HYF: 192 (1997).

Didinga Mountains: foothills, at Nathilani, 1200 m., on small hills, 9.4.1949, *Jackson* 676 (KHF); Boya Hill, Kimatong, 640 m., open woodland, 14.1.1983, *Fukui* 82-46 (EA); Boya Hill, Kimatong, 700 m., open woodland near mountain, 17.11.1983, *Fukui* 83-7 (EA).
General habitat range: in lowland and medium-altitude wooded grassland, deciduous bushland and riverine forest, often associated with rocky outcrops.
General distribution: South Sudan to Ethiopia and Somalia, south to Angola, Namibia and South Africa; also in tropical Arabia and Madagascar.

Gouania Jacq.

Gouania longispicata Engl.
FPNA 1: 548 (1948); FPS 2: 299 (1952) {Imatong Mountains, Ibahin}; FWTA 1,2: 670 (1958); FCB 9: 449 (1960); FZ 2: 434 (1966); FTEA, Rhamnac.: 12 (1972); FE 3: 386 (1989); El Amin 1990: 289 {Imatong Mountains}; FC 33: 14 (1991); KTSL: 355 (1994).
Imatong Mountains group, Sudan side: between Katire and Gilo, 1700 m., 26.12.1983, *Kielland-Lund* 467 (C, NLH); Ibahin, 1980 m., climbing among rocks and *Acacia* trees, 18.12.1935, *Thomas* 1669 (BM, K); Itibol to Issore, near bridge on Kinyeti River, 1850 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea,* forest edge, 11.11.1980, *Friis & Vollesen* 148 (C).
Imatong Mountains group, Uganda side: without further locality, 2230 m., no date, *Eggeling* 2399 (K).
General habitat range: in lowland, medium-altitude and montane forest, often at margins and in disturbed places.
General distribution: Nigeria to Ethiopia, south to Zimbabwe, Malawi and Mozambique.

Lasiodiscus Hook. f.

Lasiodiscus mildbraedii Engl.
FPNA 1: 546 (1948); ITU: 323 (1952); FPS 2: 299 (1952) {Imatong Mountains}; Jackson 1956: 354 {Talanga, Lotti}; FWTA 1,2: 671 (1958); FCB 9: 438 (1960); FZ 2: 438 (1966); FTEA, Rhamnac.: 5 (1972); El Amin 1990: 289 {Imatong Mountains, Lotti}; Sommerlatte 1990: 218; KTSL: 356 (1994).
Imatong Mountains group, Sudan side: Lotti, no alt., forest, 2.1.1933, *Trought* s.n. (KHF); Lotti, near rest house, no alt., forest, 9.6.1939, *Andrews* 1729 (K); Lotti, 1000 m., understorey in closed forest, 17.5.1948, *Jackson* 300 (FHO, KHF); Lotti, 1000 m., in forest, 26.3.1950, *Jackson* 1276 (K, WM); Talanga to Upper Talanga, 1100 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 7.12.1980, *Friis & Vollesen* 754 (BR, C, K, KHF), & 10.12.1980, *Friis & Vollesen* 788 (C, K, KHF).
General habitat range: in lowland and medium-altitude forest. According to Sommerlatte 1990 it occurs at the Imatong Mountains as an understorey tree in lowland forest.
General distribution: Ivory Coast to South Sudan and Uganda, south to Tanzania and Mozambique.

Maesopsis Engl.

Maesopsis eminii Engl.
ITU: 323 (1952); FPS 2: 299 (1952) {Talanga}; FCB 9: 444 (1960); FG 4: 51 (1962); FTEA, Rhamnac.: 38 (1972); El Amin 1990: 290 {Imatong Mountains}; Sommerlatte 1990: 170; FC 33: 38 (1991); KTSL: 357 (1994).
Syn.: *Maesopsis sp.* sensu FS: FS: 223 (1929).
subsp. **eminii**
FTEA, Rhamnac.: 38 (1972); KTSL: 357 (1994).

Imatong Mountains group, Sudan side: Katire, 1000 m., plantation, 5.1984, *Sommerlatte* 80 (EA).
Additional sight records of this very prominent tree has been made at Talanga by *Sommerlatte* and also by *Friis & Vollesen.*
General habitat range: in lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as an important pioneer species in lowland forest.
General distribution: South Sudan, Uganda and Kenya, south to Angola and Tanzania. Species as a whole also in West Africa from Liberia to Gabon and Congo [previously Zaire]. The species is extremely invasive.

Rhamnus L.

Rhamnus prinoides L'Hér.
FTA 1: 382 (1868); FPNA 1: 545 (1948); ITU: 325 (1952); FPS 2: 299 (1952) {Imatong Mountains}; JACKSON 1956: 362; FWTA 1,2: 670 (1958); FCB 9: 433 (1960); FZ 2: 427 (1966); FTEA, Rhamnac.: 18 (1972); FE 3: 390 (1989); EL AMIN 1990: 290 {Imatong Mountains, Gilo}; SOMMERLATTE 1990: 256; FC 33: 20 (1991); KTSL: 357 (1994); HYF: 192 (1997).
Imatong Mountains group, Sudan side: Gilo, no alt., forest, 2.11.1947, *Jackson* 231 (FHO); Gilo, at forest edge, 7.5.1954, *Jackson* 3145 (KHF); Mt. Garia, 1830-2140 m., 13.6.1939, *Andrews* 1881 (K); Mt. Itibol, 1960 m., 14.6.1939, *Andrews* 1979 (K, WM); Bushbuck Hill, east of Itibol, 2100 m., *Hagenia abyssinica-Gnidia glauca* woodland in ecotone between upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum* and *Loudetia arundinacea* grassland, 21.11.1980, *Friis & Vollesen* 395 (C).
Didinga Mountains: Mt. Lotuke, 2750 m., in *Podocarpus latifolius* forest, 30.3.1950, *Jackson* 1330 (BM, K, WM).
General habitat range: in medium-altitude and montane forest, often along margins, and in evergreen bushland. According to JACKSON 1956 and SOMMERLATTE 1990 it occurs at the Imatong Mountains in colonising thickets in *Loudetia* grassland, *Acacia abyssinica* woodland and *Hagenia* woodland.
General distribution: Cameroon to Ethiopia, south to Angola and South Africa (Cape Prov.); also in tropical Arabia.

Scutia (DC.) Comm. ex Brongn.

Scutia myrtina (Burm. f.) Kurz
ITU: 326 (1952); JACKSON 1956: 354 {Talanga}; FCB 9: 431 (1960); FZ 2: 428 (1966); FTEA, Rhamnac.: 21 (1972); FE 3: 390 (1989); EL AMIN 1990: 290 {Didinga Mountains}; KTSL: 358 (1994).
Imatong Mountains group, Sudan side: no specimen seen; recorded by JACKSON 1956 from forest at Talanga.
Didinga Mountains: Nagichot, 1900 m., in "fire island" in grassland, 7.4.1949, *Jackson* 654 (FHO, KHF).
General habitat range: in lowland, medium-altitude and montane habitats, especially forest and evergreen bushland.
General distribution: Congo [previously Zaire] to South Sudan, Ethiopia, Uganda and Kenya, south to South Africa; also in Madagascar, Mascarene Islands and tropical Asia.

Ziziphus Mill.

Ziziphus abyssinica Hochst. ex A. Rich.
FS: 222 (1929); ITU: 326 (1952); FPS 2: 300 (1952); JACKSON 1956: 350; FWTA 1,2: 669 (1958); FCB 9: 440 (1960); FZ 2: 420 (1966); FTEA, Rhamnac.: 27 (1972); WICKENS 1976: 121; FE 3: 396 (1989); EL AMIN 1990: 291; SOMMERLATTE 1990: 130; FC 33: 28 (1991); KTSL: 359 (1994).

Imatong Mountains group, Sudan side: without further locality, no alt., 1947, *Maxwell Forbes* 97 (K); Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees of *Terminalia laxiflora, T. brownii, Pterocarpus lucens, Combretum collinum* and *Vitex doniana* on rocky outcrop, 5.12.1980, *Friis & Vollesen* 704 (C, KHF); Kinyeti Valley, Hiliu, c. 100 m from the river, 700 m., 21.11.1983, *Kielland-Lund* 19 (C, NLH); Katire, near Kinyeti River, 900 m., edge of *Albizia zygia* woodland, 10.1948, *Jackson* 377 (FHO, KHF); Khor Antin, 1080 m., rocky outcrop, 12.6.1939, *Andrews* 1813 (K, WM).
Didinga Mountains: between Kiduru and Longumu north of Chukudum (4° 20' N, 33° 23' E), 1000 m., 20.12.1983, *Kielland-Lund* 415 (C, NLH); Boya Hill, Kimatong, 640 m., open bushland, 29.12.1982, *Fukui* 82-41 (EA); Boya Hill, Kimatong, 700 m., open bushland near mountain, 17.11.1983, *Fukui* 83-2 (EA).
General habitat range: in lowland, intimidate and montane wooded grassland and deciduous bushland. According to JACKSON 1956 it occurs at the Imatong Mountains in moist woodland west and north of the mountains; according to SOMMERLATTE 1990 it occurs in lowland woodland.
General distribution: Senegal to Ethiopia, south to Angola, Zambia, Zimbabwe and Mozambique.

Ziziphus mauritiana Lam.
ITU: 326 (1952); FPS 2: 300 (1952); FWTA 1,2: 668 (1958); FCB 9: 440 (1960); FZ 2: 420 (1966); FTEA, Rhamnac.: 29 (1972); WICKENS 1976: 121; FE 3: 396 (1989); EL AMIN 1990: 291; FC 33: 29 (1991); KTSL: 359 (1994).
Imatong Mountains group, Sudan side: between Magwe and Torit, near road builders camp (4° 18' N, 32° 25' E), no alt., 6.6.1984, *Kielland-Lund* 873 (C, NLH).
Imatong Mountains group, Uganda side: Agoro, no alt., 12.1932, *Eggeling* 828 (MHU); Agoro, no alt., 3.1935, *Eggeling* 1749 (K, MHU); Agoro, no alt., 1.1937, *Sangster* 224 (K); Agoro, 910 m., savannah, 4.1943, *Purseglove* 1501 (EA, K).
Didinga Mountains: Boya Hill, 700 m., on rocks, 8.1.1985, *Fukui* 84-133 (EA).
General habitat range: in lowland and medium-altitude dry woodland and deciduous bushland.
General distribution: Senegal to Ethiopia, south to Tanzania. Cultivated and escaped further south in Africa and also in all tropical and subtropical parts of the world.

Ziziphus pubescens Oliv.
ITU: 329 (1952); FPS 2: 302 (1952); FCB 9: 442 (1960); FZ 2: 424 (1966); FTEA, Rhamnac.: 24 (1972); FE 3: 393 (1989); EL AMIN 1990: 293; FC 33: 24 (1991); KTSL: 360 (1994).
Imatong Mountains group, Sudan side: Near Torit, east of airstrip (4° 25' N, 32° 35' E), 650 m., 9.12.1983, *Kielland-Lund* 278 (C, NLH); south of Torit town (4° 20' N, 32° 34' E), 610 m., woodland with *Sclerocarya, Tamarindus*, etc., 5.2.1947, *Jackson* 178 (FHO); Kinyeti Valley, junction between roads to Ngarama and Katire north of Hiliu, 700 m., 3.12.1983, *Kielland-Lund* 183 (C, NLH); Kinyeti Valley, Hiliu, south of compound (4° 16' N, 32° 48' E), no alt., 25.5.1984, *Kielland-Lund* 738 (C, NLH).
Didinga Mountains: Boya Hill, Kimatong, 700 m., on rocks, 7.1.1985, *Fukui* 84-90 (EA).
General habitat range: in lowland dry forest and riverine forest and woodland.
General distribution: South West Ethiopia and South Sudan through eastern Africa to Zimbabwe and west to Angola.

Fam. 103. **Vitaceae** Juss.
(Syn.: *Ampelidaceae* Kunth)

Ampelocissus Planch.

Ampelocissus abyssinica (A. Rich.) Planch.
FS: 223 (1929); FPS 2: 304 (1952); FE 3: 401 (1989); FTEA, Vitac.: 3 (1993).

Syn.: *Vitis abyssinica* A. Rich.: FTA 1: 397 (1868). *Ampelocissus cavicaulis* (Bak.) Planch.: FS: 223 (1929); FPS 2: 304 (1952); FWTA 1,2: 682 (1958); FCB 9: 556 (1060); FG 14: 72 (1968); FC 13: 14 (1972). *Vitis cavicaulis* Bak.: FTA 1: 400 (1868).
Imatong Mountains group, Sudan side: spur of Mt. Bira near Laboni, climber in bamboo forest, 14.10.1938, *Myers* 9721 (K).
General habitat range: in lowland and medium-altitude woodland and forest.
General distribution: Nigeria, Cameroon and Gabon to Ethiopia, south to Angola and West Tanzania.

Ampelocissus africana (Lour.) Merr.
FZ 2: 442 (1966); FC 13: 10 (1972); WICKENS 1976: 121; FTEA, Vitac.: 5 (1993).
Syn.: *Vitis grantii* Bak.: FTA 1: 400 (1868). *Ampelocissus grantii* (Bak.) Planch.: FWTA 1,2: 682 (1958); FCB 9: 560 (1960). *Vitis asarifolia* Bak.: FTA 1: 396 (1868). *Ampelocissus asarifolia* (Bak.) Planch.: FPS 2: 303 (1952).
Imatong Mountains group, Sudan side: Loa, Moliandro village west of Kerepi (3° 54' N, 31° 54' E), 5.6.1984, no alt., *Kielland-Lund* 843 (C, NLH); Torit distr., Okaru, Lokwa Forest Camp (4° 25' N, 32° 11' E), 600-700 m., along seasonal river, 18.6.1946, *Jackson* 4247 (K); Palotaka, 1200 m., edge of forest, 1.2.1979, *Shigeta* 167 (EA).
General habitat range: in lowland and medium-altitude grassland, deciduous bushland, woodland and riverine forest, often climbing over rocks or termite mounds.
General distribution: Senegal and Guinée to Sudan and Kenya, south to Botswana, Zimbabwe and Mozambique.

Ampelocissus bombycina (Bak.) Planch.
FS: 223 (1929); FPS 2: 304 (1952); FWTA 1,2: 682 (1958); FC 13: 8 (1972); FE 3: 399 (1989).
Syn.: *Vitis bombycina* Bak.: FTA 1: 399 (1898).
Imatong Mountains group, Sudan side: Kinyeti Valley, 8 km. south of Hiliu along Katire road, no alt., in savannah, 30.5.1984, *Kielland-Lund* 789 (C, NLH); 18 km. north of Katire, 750 m., woodland with *Combretum collinum, C. molle, Annona senegalensis,* etc., 18.3.1982, *Friis & Vollesen* 1251 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude deciduous bushland and woodland, often on rocky outcrops.
General distribution: Guinée to Ethiopia.

Ampelocissus sp. cf. A. sarcocephala Planch.
Imatong Mountains group, Sudan side: hill between Mt. Konoro and Mt. Garia, 1800 m., *Loudetia arundinacea* grassland with scattered trees on shallow soil, 12.2.1982, *Friis & Vollesen* 1179 (BR, C, K).
Note. Material insufficient for exact determination. Most material of the rare *A. sarcocephala* comes from much lower altitudes in South Sudan. The species seems related to *A. obtusata* Bak. subsp. *kirkiana* (Planch.) Wild & Drummond (FTEA, Vitac.: 8 (1993)), a taxon distributed from Transvaal to Congo [previously Zaire], Uganda, Kenya and Tanzania.

Cayratia Juss.

Cayratia debilis (Bak.) Suess.
FG 14: 75 (1968); FC 13: 22 (1972); FTEA, Vitac.: 139 (1993).
Syn.: *Vitis debilis* Bak.: FTA 1: 403 (1868). *Cissus debilis* (Bak.) Planch.: FPNA 1: 558 (1948); FWTA 1,2: 679 (1958); FCB 9: 550 (1960). [*Cissus gracilis* auct., non Guill. & Perr.: JACKSON 1956: 354 {Talanga, Lotti}].
Imatong Mountains group, Sudan side: Lotti, 1000 m., in closed forest, 31.10.1949, *Jackson* 881 (BM, KHF).
General habitat range: in medium-altitude forest.
General distribution: Liberia to South Sudan,

south to Angola, Congo [previously Zaire], Uganda and West Tanzania.

Cayratia gracilis (Guill. & Perr.) Suess.
FZ 2: 491 (1966); FC 13: 21 (1972); WICKENS 1976: 121; FE 3: 403 (1989); FTEA, Vitac.: 138 (1993); UKWF: 160 (1994); HYF: 193 (1997).
Syn.: *Cissus gracilis* Guill. & Perr.: FS: 226 (1929); FPS 2: 312 (1952); FCB 9: 552 (1960). *Vitis gracilis* (Guill. & Perr.) Bak.: FTA 1: 404 (1868).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 9.11.1980, *Friis & Vollesen* 88 (C, K, KHF); Mt. Kinyeti, 1830-2130 m., 15.6.1939, *Andrews* 2016 (K).
General habitat range: in lowland and medium-altitude grassland and woodland, riverine forest, often at forest edges.
General distribution: Senegal to Ethiopia, south to Namibia and South Africa (Transvaal); also in tropical Arabia.

Cissus L.

Cissus cornifolia (Bak.) Planch.
FS: 224 (1929); FPS 2: 308 (1952); FWTA 1,2: 679 (1958); FCB 9: 518 (1960); FZ 2: 456 (1966); FC 13: 130 (1972); WICKENS 1976: 121; FE 3: 405 (1989); FTEA, Vitac.: 36 (1993).
Syn.: *Vitis cornifolia* Bak.: FTA 1: 390 (1868).
Imatong Mountains group, Sudan side: Kinyeti Valley, 16 km. north of Katire, 900 m., woodland with *Combretum collinum, C. molle,* and *Annona senegalensis,* 22.2.1982, *Friis & Vollesen* 988 (C, K).
Imatong Mountains group, Uganda side: 3 km. south-west of Lututuru, near Patika, 1600 m., in scrub, 17.2.1969, *Lye* 2050 (MHU).
General habitat range: in lowland and medium-altitude grassland, wooded grassland and woodland, often associated with rocky outcrops or on black cotton soil.
General distribution: Ghana to Ethiopia, south to Botswana and South Africa.

Cissus integrifolia (Bak.) Planch.
FCB 9: 513 (1960); FZ 2: 449 (1966); FTEA, Vitac.: 15 (1993); KTSL: 362 (1994).
Syn.: *Vitis integrifolia* Bak.: FTA 1: 391 (1868).
Didinga Mountains: Boya Hill, Kimatong, 700 m., on rocky outcrop, 7.1.1985, *Fukui* 84-73 (EA).
General habitat range: in lowland grassland, bushland, woodland and forest, often on rocky outcrops.
General distribution: Congo [previously Zaire] to Kenya, south through eastern Africa to Zimbabwe and Mozambique.

Cissus petiolata Hook. f.
FPNA 1: 554 (1948); FPS 2: 306 (1952); FWTA 1,2: 678 (1958); FCB 9: 515 (1960); FZ 2: 450 (1966); FG 14: 92 (1968); FC 13: 96 (1972); FE 3: 406 (1989); FTEA, Vitac.: 16 (1993); UKWF: 161 (1994); KTSL: 362 (1994).
Imatong Mountains group, Sudan side: Kinyeti River, 8 km. downstream from Katire, 500 m., gallery forest, 23.8.1957, *Jackson* 3801 (K); Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees of *Terminalia laxiflora, T. brownii, Pterocarpus lucens, Combretum collinum* and *Vitex doniana,* trailing over bare rock, 3.12.1980, *Friis & Vollesen* 661 (C, K); Talanga, 950 m., wooded grassland with *Combretum molle, C. collinum, Stereospermum kunthianum* and *Acacia hockii,* tall grass cover of *Cymbopogon giganteum* and *Hyparrhenia spp.,* trailing over rocky outcrop, 4.12.1980, *Friis & Vollesen* 677 (C, K, KHF).
Imatong Mountains group, Uganda side: Mt. Madi [Opei], no alt., 3.1935, *Eggeling* 1741 (MHU).
General habitat range: in lowland and medium-altitude deciduous bushland, woodland and along forest edges, often associated with rocky outcrops.

General distribution: Guinée to Ethiopia, south to Angola, Zambia and Mozambique.

Cissus populnea Guill. & Perr.
FS: 224 (1929); FPS 2: 306 (1952); FWTA 1,2: 678 (1958); FCB 9: 530 (1960); FC 13: 98 (1972); FE 3: 407 (1989); FTEA, Vitac.: 18 (1993).
Syn.: [*Vitis pallida* auct., non Wight & Arn., sensu str.: FTA 1: 393 (1868). *Cissus pallida* auct., non (Wight & Arn.) Steud.: FS: 226 (1929).]
Imatong Mountains group, Sudan side: Kinyeti Valley, 3 km. south of Hiliu along Katire road, no alt., north face of rocks, 26.5.1984, *Kielland-Lund* 745 (C, NLH).
General habitat range: in lowland and medium-altitude grassland and woodland, often on rocky outcrops.
General distribution: Senegal to Ethiopia, south to Congo [previously Zaire], Uganda and Tanzania.

Cissus quadrangularis L.
FS: 224 (1929); FPNA 1: 556 (1948); FPS 2: 308 (1952); JACKSON 1956: 359; FWTA 1,2: 676 (1958); FCB 9: 512 (1960); FZ 2: 456 (1956); FC 13: 86 (1972); WICKENS 1976: 121; FE 3: 407 (1989); EL AMIN 1990: 295; FTEA, Vitac.: 41 (1993); UKWF: 161 (1994); KTSL: 362 (1994); HYF: 193 (1997).
Syn.: *Vitis quadrangularis* (L.) Wight & Arn.: FTA 399 (1868).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, c. 200 m. south of compound, 700 m., on rocks, 2.12.1983, *Kielland-Lund* 147 (C, NLH); also recorded by JACKSON 1956 from bare rocks on the dry lower north-east slopes of the mountains, but no specimen seen from there.
Didinga Mountains: Boya Hill, 640 m., rocky outcrop, 31.12.1984, *Fukui* 84-45 (EA).
General habitat range: in lowland and medium-altitude dry grassland, deciduous bushland and woodland, often associated with termite mounds.
General distribution: Senegal to Ethiopia and Somalia, south to Angola and South Africa; also in India, Sri Lanka and South East Asia, extending to the Philippines.

Cissus rotundifolia (Forssk.) Vahl
FCB 9: 513 (1960); FZ 2,2: 451 (1966); FE 3: 408 (1989); FTEA, Vitac.: 21 (1993); KTSL: 363 (1994); UKWF: 161 (1994); HYF: 193 (1997).
Didinga Mountains: 1 km. south of Keiala, near Chukudum (4° 15' N, 33° 27' E), 1100 m., 22.12.1983, *Kielland-Lund* 442 (C, NLH).
General habitat range: in lowland and medium-altitude deciduous bushland, often on rocky outcrops, rocky slopes and termite mounds; often dominant where it occurs.
General distribution: East Congo [previously Zaire] and South Sudan to Ethiopia and Somalia, south to South Africa (Transvaal, Natal); also in tropical Arabia and the Seychelles Islands (introduced).

Cyphostemma (Planch.) Alston

Cyphostemma adenocaule (A. Rich.) Descoings ex Wild & Drummond
FZ 2,2: 473 (1966); FG 14: 110 (1968); FC 13: 78 (1972); WICKENS 1976: 121; FE 3: 412 (1989); FTEA, Vitac.: 89 (1993); UKWF: 162 (1994).
subsp. **adenocaule**
Syn.: *Cissus adenocaulis* A. Rich.: FS: 225 (1929); FPNA 1: 558 (1948); FPS 2: 312 (1952); FWTA 1,2: 679 (1958); FCB 9: 468 (1960). *Vitis adenocaulis* A. Rich.: FTA 1: 404 (1868).
Imatong Mountains group, Sudan side: without further locality, 1947, *Maxwell Forbes* 57 (K); Loa, Molitokoro village north of Kerepi (3° 55' N, 31° 55' E), no alt., 5.6.1984, *Kielland-Lund* 859 (C, NLH); Palotaka, 1200 m., open woodland, 6.1.1979, *Shigeta* 44 (EA), & 25.2.1979, *Shigeta* 218 (EA); Kinyeti Valley, 5 km. south of Hiliu along Katire road, no alt., in savannah,

30.5.1984, *Kielland-Lund* 800 (C, NLH); 16 km. north of Katire, 900 m., woodland with *Combretum collinum, C. molle* and *Annona senegalensis*, 22.2.1982, *Friis & Vollesen* 1001 (C, K); just east of Hiliu, 700 m., growing on a fence, 21.11. 1983, *Kielland-Lund* 14 (C, NLH).

General habitat range: in lowland or medium-altitude grassland, bushland or forest.

General distribution: Senegal and Mali to Ethiopia and Somalia, south to Angola, Zimbabwe and Mozambique. In Central Tanzania subsp. *pulverulentum* Verdc.

Cyphostemma bambuseti (Gilg & Brandt) Descoings ex Wild & Drummond

FZ 2,2: 478 (1966), pro parte; FTEA, Vitac.: 119 (1993); UKWF: 163 (1994).

Syn.: *Cissus bambuseti* Gilg & Brandt: FPNA 1: 560 (1948); FCB 9: 508 (1960).

Imatong Mountains group, Sudan side: Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, forest edge, 16.11.1980, *Friis & Vollesen* 272 (C, K, KHF).

General habitat range: in medium-altitude and montane moist forest, bamboo forest and secondary bushland.

General distribution: South Sudan, Rwanda and Congo [previously Zaire] to Kenya. First record from the Sudan.

Note. The single specimen recorded in FZ from Zambia represents according to FTEA an undescribed species.

Cyphostemma crotalarioides (Planch.) Wild & Drummond

FZ 2,2: 466 (1966); FC 13: 36 (1972); FTEA, Vitac.: 81 (1993).

Syn.: *Cissus crotalarioides* Planch.: FPS 2: 309 (1952); FWTA 1,2: 680 (1958); FCB 9: 512 (1960).

Imatong Mountains group, Sudan side: Kinyeti Valley, plain between Torit and Ngarama, Iyedo (4° 22' N, 32° 37' E), no alt., 29.5.1984, *Kielland-Lund* 779 (C, NLH).

General habitat range: in lowland and medium-altitude woodland and wooded grassland, often on rocky outcrops.

General distribution: Benin and Nigeria to Sudan, south to Zimbabwe, Malawi and Mozambique.

Cyphostemma cyphopetalum (Fresen.) Descoings ex Wild & Drummond

FZ 2: 491 (1966); FC 13: 42 (1972); FE 3: 417 (1989); FTEA, Vitac.: 121 (1993); UKWF: 163 (1994).

subsp. **cyphopetalum**

Syn.: *Cissus cyphopetala* Fresen.: FS: 226 (1929); FPNA 1: 560 (1948); FPS 2: 311 (1952); FCB 9: 484 (1960). *Vitis cyphopetala* (Fresen.) Bak.: FTA 1: 407 (1868).

Imatong Mountains group, Sudan side: Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 8.12.1980, *Friis & Vollesen* 779 (C, K); Kinyeti Valley, above Katire, along road to Gilo, near turn off towards Itibol, 1650 m., wooded grassland with *Combretum molle, Cussonia arborea, Stereospermum kunthianum, Erythrina abyssinica, Entada abyssinica*, etc., 7.3.1982, *Friis & Vollesen* 1116 (BR, C, K, KHF) & 1117 (C, K, KHF).

Imatong Mountains group, Uganda side: South east of Lomwaga, 1800 m., at rock in wooded grassland, 18.7.1974, *Katende* 2153 (MHU) & 2177 (MHU).

Didinga Mountains: Iwowa, 1620 m., 22.4.1939, *Myers* 11,040 (?K, not traced).

General habitat range: in lowland, medium-altitude and montane grassland, bushland, woodland and forest.

General distribution: Cameroon to Ethiopia and Somalia, south to Congo [previously Zaire], Zambia and Tanzania. In Tanzania subsp. *craterum* Verdc.

Cyphostemma junceum (Webb) Descoings ex Wild & Drummond
FZ 2: 465 (1966); FC 13: 38 (1972); FE 3: 410 (1989); FTEA, Vitac.: 62 (1993); UKWF: 162 (1994).
subsp. **junceum**
Syn.: *Cissus juncea* Webb: FS: 225 (1929); FPS 2: 310 (1952); FWTA 1,2: 680 (1958); FCB 9: 472 (1960). *Vitis juncea* (Webb.) Bak.: FTA 1: 404 (1868).
Imatong Mountains group, Sudan side: Loa, between Moliandro village and Kerepi (3° 54' N, 31° 54' E), no alt., 5.6.1984, *Kielland-Lund* 849 (C, NLH).
Imatong Mountains group, Uganda side: near Madi Opei, no alt., no date, *Purseglove* 1373 (EA, K); 2 km. north-east of Lututuru, near end of road, 1800 m., grassland, 17.2.1969, *Lye* 2077 (MHU).
Didinga Mountains: Nagichot, 1980 m., 28.4.1939, *Myers* 11,208 (?K, not traced).
General habitat range: in lowland, medium-altitude and montane grassland, bushland and woodland, often in temporary damp places.
General distribution: Nigeria to Ethiopia, south to Congo [previously Zaire], Uganda and Kenya. The disjunct subsp. *jatrophoides* (Bak.) Verdc. (syn.: *Cissus jatrophoides* (Welw. ex Bak.) Planch.) occurs from Guinea to Nigeria and in Tanzania, see note in FTEA, Vitac.: 62 (1993).

Cyphostemma kilimandscharicum (Gilg) Descoings ex Wild & Drummond
FZ 2,2: 489 (1966); FE 3: 416 (1989); FTEA, Vitac.: 108 (1993); UKWF: 163 (1994); KTSL: 364 (1994).
Syn.: *Cissus kilimandscharica* Gilg: FCB 9: 479 (1960).
Imatong Mountains group, Sudan side: south-west of Itibol, 2040 m., *Podocarpus latifolius* forest, 2.8.1939, *Myers* 11,760 (K).
General habitat range: in medium-altitude and montane forest, especially along edges and in clearings, also in evergreen bushland and montane bamboo thickets.
General distribution: Congo [previously Zaire] to Ethiopia, south to Malawi and Zimbabwe.

Cyphostemma serpens (A. Rich.) Descoings
FE 3: 417 (1989); FTEA, Vitac.: 86 (1993).
subsp. **serpens**
FTEA, Vitac.: 87 (1993).
Syn.: *Cissus serpens* A. Rich.: FS: 225 (1929); FPS 2: 310 (1952). *Vitis serpens* (A. Rich.) Bak.: FTA 1: 412 (1868). *Cissus schweinfurthii* Planch.: FS: 225 (1929); FPS 2: 310 (1952); FCB 9: 509 (1960).
Imatong Mountains group, Sudan side: Kinyeti Valley, village about 500 m. south west of Hiliu (4° 15' N, 32° 40' E), no alt., in savannah, 7.6.1984, *Kielland-Lund* 882 (C, NLH).
General habitat range: in lowland, medium-altitude and montane grassland, especially on black, seasonally waterlogged soil, wooded grassland, riverine woodland and in cultivated places.
General distribution: Northeast Congo [previously Zaire] and Burundi to Ethiopia, south to Tanzania. Species as a whole in the same area.

Cyphostemma ukerewense (Gilg) Descoings
FG 14: 113 (1968); FTEA, Vitac.: 100 (1993); UKWF: 163 (1994).
Syn.: *Cissus ukerewensis* Gilg: FPNA 1: 559 (1948); FCB 9: 490 (1960).
Imatong Mountains group, Sudan side: Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 8.11.1980, *Friis & Vollesen* 49 (C, K, KHF).
General habitat range: in medium-altitude and montane seasonally wet grassland, swamps and forest.
General distribution: Sudan, Uganda, Kenya and Tanzania.
Note. Verdcourt in FTEA, Vitac.: 101 (1993) suggests that the Imatong material cited here

may represent a distinct subspecies because of the small bracts.

Cyphostemma sp. cf. C. dembianense (Chiov.) Vollesen
Imatong Mountains group, Sudan side: without further locality, 1939, *Andrews* 1937 (?K, not traced).
Note. *Cyphostemma dembianense* (Syn.: *C. adenocephalum* (Gilg & Brandt) Descoings) occurs at the edge of medium-altitude and montane forest and bushland in West Ethiopia and East Sudan.

Fam. 104. **Leeaceae** (DC.) Dumort.

Leea L.

Leea guineensis G. Don
FPNA 1: 561 (1948); FPS 2: 312 (1952); FWTA 1,2: 683 (1958); FCB 9: 569 (1960); FZ 2: 494 (1966); FG 14: 116 (1968); FC 13: 134 (1972); EL AMIN 1990: 295; FTEA, Vitac.: 141 (1993); UKWF: 163 (1994); KTSL: 364 (1994).
Imatong Mountains group, Sudan side: Lotti, at rest House, no alt,. 10.6.1939, *Andrews* 1782 (K); Palotaka, 1200 m., forest, 23.1.1979, *Shigeta* 86 (EA); Issore, 1200 m., in gallery forest, 5.3.1951, *Jackson* 1788 (WM); Katire to Gilo, at road to Itibol, 1500 m., secondary transitional forest with *Harungana madagascariensis*, forest edge, 12.11.1980, *Friis & Vollesen* 178 (C, K, KHF).
General habitat range: in lowland and medium-altitude forest and swamp forest.
General distribution: Senegal, Mali and Guinea Bissau to Sudan, south to Angola, Congo [previously Zaire], Zambia, Malawi and Tanzania; also in Madagascar, the Mascarene Islands, India, and throughout tropical South East Asia and Indonesia to New Guinea.

Order 53. **Rutales** Perleb

Fam. 105. **Rutaceae** Juss.

Clausena Burm. f.

Clausena anisata (Willd.) Hook. f.
FTA 1: 308 (1868); FS: 227 (1929); FPNA 1: 412 (1948); ITU: 361 (1952); FPS 2: 314 (1952); FCB 7: 94 (1958); FWTA 1,2: 686 (1958); FC 1: 127 (1963); FG 6: 87 (1963); FTEA, Rutac.: 49 (1982); FE 3: 429 (1989); EL AMIN 1990: 296 {Imatong Mountains, Gilo}; SOMMERLATTE 1990: 292; KTSL: 366 (1994).
Imatong Mountains group, Sudan side: without further locality [possibly Gilo], 1990 m., open *Croton-Macaranga* forest, 27.1.1976, *Howard* IM 7 (K); Gilo, 1850 m., common in forest undergrowth, 11.2.1951, *Jackson* 1682 (FHO, KHF); Gilo, 1900 m., 20.1.1949, *Jackson* 597 (FHO, KHF); Gilo to Mt. Konoro, 1850 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, 24.11.1980, *Friis & Vollesen* 441 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: Aringa River, upper reaches, no alt., 6.4.1945, *Hummel* 680 (FHO).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1800 m., shrub in old high forest, 16.5.1972, *Synnott* 1017 (EA, MHU).
General habitat range: in lowland, medium-altitude and montane forest, often in clearings and at margins, and in evergreen bushland. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains in and at edges of *Albizia* forest.
General distribution: Guinée to Ethiopia, south to South Africa (Cape Prov.); also in tropical Asia.

Fagaropsis Mildbr. ex Siebenl.

Fagaropsis angolensis (Engl.) Gardner
ITU: 363 (1952); FPS 2: 315 (1952) {Imatong Mountains}; JACKSON 1956: 353 {Lotti}; FCB 7: 71 (1958); FTEA, Rutac.: 45 (1982); FE 3: 422 (1989); EL AMIN 1990: 297 {Imatong Mountains}; KTSL: 367 (1994).
Imatong Mountains group, Sudan side: without further locality, no alt., 7.1946, *Sangster* 839 (MHU); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 15.11. 1980, *Friis & Vollesen* 215 (C, K).
General habitat range: in medium-altitude and montane forest.
General distribution: Congo [previously Zaire] to Ethiopia, south to Angola, Zambia, Zimbabwe, Malawi and Mozambique.

Toddalia Juss.

Toddalia asiatica (L.) Lam.
FPNA 1: 409 (1948); FPS 2: 317 (1952); FCB 7: 99 (1958); FG 6: 75 (1963); FZ 2: 199 (1963); FTEA, Rutac.: 3 (1982); FE 3: 424 (1989); EL AMIN 1990: 299; KTSL: 370 (1994).
Syn.: *Toddalia aculeata* Pers.: FS: 227 (1929).
Imatong Mountains group, Sudan side: without further locality, no alt., 1939, *Andrews* 1941 (K); without further locality, 2130 m., 7.2.1976, *Howard* IM 51 (KHF); Gilo to Itibol, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 11.11.1980, *Friis & Vollesen* 158 (C).
General habitat range: in lowland, medium-altitude and montane bushland, woodland and at forest edges.
General distribution: Congo [previously Zaire] to Ethiopia, south to South Africa; also in Madagascar, Mascarene Islands, Sri Lanka and India.

Vepris Comm. ex A. Juss.
Syn.: *Teclea* Del.

Vepris glomerata (F. Hoffm.) Engl.
FTEA, Rutac.: 22 (1982); FE 3: 426 (1989); KTSL: 371 (1994).
var. **glabra** Kokwaro
FTEA, Rutac.: 23 (1982); FE 3: 426 (1989).
Imatong Mountains group, Sudan side: near Torit town, 630 m., in tangle on termite mound, 21.4.1949, *Jackson* 697 (FHO); southern edge of Torit along Katire road (4° 23' N, 32° 35' E), no alt., in overgrazed bush along road, 8.6.1984, *Kielland-Lund* 883 (C, NLH); Ngarama (Himodengi) (4° 21' N, 32° 37' E), 700 m., *Combretum* savannah, 27.5.1949, *Jackson* 767 (FHO); Kinyeti Valley, between Hiliu and Ngarama, on the Torit-Katire road, 700 m., thornbush with *Acacia nilotica, Commiphora africana,* etc., 12.6.1961, *Jackson* 4230 (K); 2 km. from junction of Katire and Ngarama roads along Imatong road and 500 m. east of road (4° 21' N, 32° 39' E), no alt., 26.5.1984, *Kielland-Lund* 762 (C, NLH).
Didinga Mountains: Boya Hill, Kimatong, 700 m., on rocky outcrop, 7.1.1985, *Fukui* 84-63 (EA).
General habitat range: in lowland and medium-altitude deciduous bushland and woodland.
General distribution: South Sudan, Ethiopia, Kenya and Uganda. Species as a whole also in Tanzania and Somalia.

Vepris grandifolia (Engl.) Mziray
MZIRAY 1992: 69.
Syn.: *Teclea grandifolia* Engl.: ITU: 367 (1952); JACKSON 1956: 353 {Talanga, Lotti}; FG 6: 84 (1963); FZ 2: 206 (1963); FTEA, Rutac.: 27 (1982); KTSL: 368 (1994).
Imatong Mountains group, Sudan side: no specimen seen; recorded by JACKSON 1956 from the forests at Talanga and Lotti.

General habitat range: in lowland and medium-altitude forest.
General distribution: Cameroon to South Sudan, south to Angola, Zambia and Tanzania.

Vepris nobilis (Del.) Mziray
MZIRAY 1992: 74.
Syn.: *Teclea nobilis* Del.: FS: 226 (1929); FPNA 1: 411 (1948); ITU: 367 (1952); FPS 2: 317 (1952); JACKSON 1956: 353 {Talanga, Lotti}; FCB 7: 100 (1958); WICKENS 1976: 122; FTEA, Rutac.: 26 (1982); FE 3: 427 (1989); EL AMIN 1990: 297; SOMMERLATTE 1990: 324; KTSL: 369 (1994); HYF: 201 (1997). *Toddalia nobilis* (Del.) Hook. f.: FTA 1: 306 (1868).
Imatong Mountains group, Sudan side: without further locality, 2140 m., *Podocarpus latifolius-Olea* forest, 10.3.1976, *Howard* IM 83 (K, EA, KHF); without further locality, 2290 m., 17.2.1976, *Howard* IM 52 (K, KHF); at the northernmost point of the continuous mountain chain, just south-east of Ngarama on the track to Molongori, 700 m., on rocky outcrop with *Sterculia setigera, Cordyla richardii, Ficus arbutilifolia,* etc., 13.3.1982, *Friis & Vollesen* 1184 (BR, C, EA, K, KHF); Kinyeti Valley, south west of Hiliu, in ravine (4° 16' N, 32° 48' E), no alt., 25.5.1984, *Kielland-Lund* 726 (C, NLH); Itibol to Issore, 1950 m., in forest, 20.12.1935, *Thomas* 1713 (BM, K); Bushbuck Hill, 2150 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum,* 10.11.1980, *Friis & Vollesen* 118 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: Agoro, 1530 m., slope with *Polyscias-Syzygium-Albizia* forest in dry riverbed, 8.4.1945, *Greenway & Hummel* 7322 (EA, K); Lututuru, 1460 m., understorey with *Sapium ellipticum* and *Ficus vallis-choudae,* 28.4.1947, *Dawkins* 262 (FHO, MHU).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., peak of Mt. Lonyili, 1800 m., forest, 4.12.1971, *Katende* 1397 (MHU); Mt. Lonyili, 1800 m., old high forest, 15.5.1972, *Synnott* 1005 (EA, MHU); Mt. Lonyili, 1800 m., old high forest, 16.5.1972, *Synnott* 1018 (MHU).
Didinga Mountains: near Kiduru north of Chukudum (4° 17' N, 33° 26' E), 1100 m., 20.12.1983, *Kielland-Lund* 410 (C, NLH); Longumu Valley north of Chukudum (4° 20' N, 33° 23' E), 900 m., 20.12.1983, *Kielland-Lund* 396 (C, NLH); Naligede, 1770 m., 21.4.1939, *Myers* 10,989 (?K, not traced); near Nagichot, 1830 m., in khor forest, 28.4.1939, *Myers* 11,211 (K).
General habitat range: in medium-altitude and montane forest and adjacent woodland. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as an understorey tree in forest between 1000 and 2700 m.
General distribution: East Congo [previously Zaire] to Ethiopia and Somalia, south to Zimbabwe, Malawi and Tanzania; also in tropical Arabia.

Zanthoxylum L.
Syn.: *Fagara L.*

Zanthoxylum chalybeum Engl.
FTEA, Rutac.: 37 (1982); FE 3: 420 (1989); KTSL: 373 (1994).
Syn.: *Fagara chalybea* (Engl.) Engl.: FCB 7: 79 (1958).
var. **molle** Kokwaro
FTEA, Rutac.: 38 (1982).
Imatong Mountains group, Sudan side: between Hiliu and Ngarama, on the Torit-Katire road, 700 m., in bushland with *Acacia nilotica, Commiphora africana, Dalbergia melanoxylon,* etc., 12.6.1961, *Jackson* 4231 (K); hill 3 km. south of Hiliu, 700 m., stony hillside, c. 700 m., 6.12.1983, *Kielland-Lund* 214 (C, NLH).
Didinga Mountains: Nathilani, 1220 m., on dry rocky slope, 10.9.1940, *Myers* 13,471 (WM); Mt. Lotuke, near rest house, 1300 m., bush with *Grewia sp.* and *Commiphora africana,* 31.3.1950, *Jackson* 1358 (K); Boya Hill, Kimatong, 700 m.,

bushland between rocks, 9.1.1985, *Fukui* 84-196 (EA).
General habitat range: in medium-altitude deciduous bushland or woodland.
General distribution: South Sudan, Uganda and Tanzania. Species as a whole also from Congo [previously Zaire] to Ethiopia and Somalia, south to Zambia and Zimbabwe.

Zanthoxylum gilletii (De Wild.) Waterm.
FTEA, Rutac.: 38 (1982); SOMMERLATTE 1990: 278; KTSL: 373 (1994).
Syn.: *Fagara gilletii* De Wild.: FCB 7: 87 (1958). *Fagara macrophylla* (Oliv.) Engl.: ITU: 364 (1952); FPS 2: 315 (1952); FCB 7: 87 (1958); FWTA 1,2: 685 (1958); FC 1: 49 (1963); FG 6: 19 (1963); EL AMIN 1990: 297 {Imatong Mountains, Gilo, Juba-Yambio road}. *Zanthoxylum ? macrophyllum* Oliv., non Miq.: FTA 1: 304 (1868).
Imatong Mountains group, Sudan side: Mt. Baghanj, 1830-2130 m., 14.6.1939, *Andrews* 1940 (K); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 9.11.1980, *Friis & Vollesen* 73 (C, KHF); Gilo, 1900 m., in forest, 6.1953, *Jackson* 3000 (FHO, KHF); Gilo, 2000 m., growth between road and plantation of exotics, 5.1984, *Sommerlatte* 73 (EA); Mt. Itibol, 1950 m., 15.6.1939, *Andrews* 2000 (K, WM); at Itibol, 2070 m., *Podocarpus latifolius-Olea* forest, 19.8. 1940, *Myers* 13,420 (K) & 13,421 (K).
General habitat range: in lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains in *Albizia* forest.
General distribution: Sierra Leone to Uganda and Kenya, south to Angola, Zambia, Tanzania and Zimbabwe.

Zanthoxylum leprieurii Guill. & Perr.
FTA 1: 306 (1868); FWTA 1,2: 686 (1958); FTEA, Rutac.: 39 (1982); FE 3: 420 (1989).
Syn.: *Fagara leprieurii* (Guill. & Perr.) Engl.: FCB 7: 80 (1958); FC 1: 66 (1963); FG 6: 35 (1963); EL AMIN 1990: 296.
Imatong Mountains group, Sudan side: without further locality, 13.4.1933, *Smith* 27 (K); Torit District, 10.6.1939, *Andrews* 1774 (K).
General habitat range: in lowland forest and moist woodland.
General distribution: Senegal to South West Ethiopia, south to Angola, and South Africa (Natal).

Zanthoxylum sp.
Syn.: *Fagara sp. aff. F. melanacantha* (Planch.) Engl.: JACKSON 1956: 353 {Talanga, Lotti}.
Identity uncertain.

Fam. 106. **Simaroubaceae** DC.

Brucea J.F. Mill.

Brucea antidysenterica Lam.
FTA 1: 309 (1868); FPNA 1: 415 (1948); ITU: 408 (1952); FPS 2: 319 (1952) {Didinga Mountains, *Podocarpus latifolius* forest on top of Mt. Lotuke}; FCB 7: 129 (1958); FWTA 1,2: 692 (1958); FE 3: 440 (1989); KTSL: 374 (1994); HYF: 200 (1997).
Syn.: *Brucea* [as *"Brucia"*] *ferruginea* L'Hér.: EL AMIN 1990: 301 {Didinga Mountains, summit of Mt. Lotuke in *Podocarpus* forest}.
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 9.11.1980, *Friis & Vollesen* 81 (C).
Didinga Mountains: summit of Mt. Lotuke, 2590 m., *Podocarpus latifolius* forest, 18.4.1939, *Myers* 10,892 (K, WM).
General habitat range: in medium-altitude and montane forest and evergreen bushland.
General distribution: Guinée to Ethiopia, south to Angola, Zambia and Malawi; also in tropical Arabia.

Harrisonia A. Juss.

Harrisonia abyssinica Oliv.
FTA 1: 311 (1868); FS: 228 (1929); FPNA 1: 414 (1948); ITU: 409 (1952); FCB 7: 120 (1958); FWTA 1,2: 690 (1958); FE 3: 437 (1989); EL AMIN 1990: 303; KTSL: 375 (1994).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, in compound, no alt., 28.5.1984, *Kielland-Lund* 774 (C, NLH).
Imatong Mountains group, Uganda side: Agoro, no alt., 12.1932, *Eggeling* 787 (FHO, MHU).
Didinga Mountains: Boya Hill, Kimatong, 700 m., bushland between rocks, 9.1.1985, *Fukui* 84-183 (EA).
General habitat range: in lowland and medium-altitude woodland and forest, often associated with the forest-woodland transition.
General distribution: Guinée to Ethiopia, south to Angola, Zambia and Malawi.

Fam. 107. **Irvingiaceae** (Engl.) Exell & Mendonça
(Syn.: *Ixonanthaceae* (Benth. & Hook. f.) Exell & Mendonça, pro parte)

Irvingia Hook. f.

Irvingia gabonensis Baill.
ITU: 409 (1952); JACKSON 1956: 353 {Talanga, Lotti}; FCB 7: 115 (1958); FWTA 1,2: 693 (1958); FG 3: 22 (1962); FTEA, Ixonanthace.: 7 (1984); EL AMIN 1990: 303 {Lotti}; SOMMERLATTE 1990: 188; HARRIS 1996: 172.
Syn.: *Irvingia barteri* Hook. f.: FTA 1: 314 (1868); FPS 2: 320 (1952).
Imatong Mountains group, Sudan side: Lotti, no alt., forest, 28.2.1939, *Myers* 10,567 (K, WM); Lotti, 1000 m., in forest, 24.6.1953, *Jackson* 3028 (KHF).
General habitat range: in lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as an understorey tree in lowland forest.
General distribution: Senegal to South Sudan south to Uganda and Congo [previously Zaire].

Irvingia wombolu Vermoesen
FCB 7: 116 (1958) ; HARRIS 1996: 191.
Imatong Mountains group, Sudan side: Talanga, 900 m., forest, 28.1.1949, *Jackson* 610 (FHO).
General habitat range: in lowland forest.
General distribution: Congo [previously Zaire] to South Sudan.

Klainedoxa Pierre ex Engl.

Klainedoxa gabonensis Pierre ex Engl.
ITU: 411 (1952); FPS 2: 321 (1952); JACKSON 1956: 353 {Talanga, Lotti}; FCB 7: 110 (1958); FWTA 1,2: 693 (1958); FG 3: 16 (1962); FTEA, Ixonanthace.: 4 (1984); EL AMIN 1990: 305; SOMMERLATTE 1990: 152; HARRIS 1996: 153.
Imatong Mountains group, Sudan side: Lotti, 1000 m., large tree in forest, 26.2.1951, *Jackson* 1746 (FHO, WM); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* in forest understorey, 1.12.1980, *Friis & Vollesen* 589 (BR, C, also material in wood collection, K, KHF).
General habitat range: in lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in lowland and medium-altitude forest.
General distribution: Guinea Bissau to South Sudan, south to Congo [previously Zaire], Zambia and Tanzania.

Fam. 108. **Burseraceae** Kunth

Boswellia Roxb. ex Colebr.

Boswellia papyrifera (Del.) Hochst.
FTA 1: 323 (1868); FS: 229 (1929); FPS 2: 321 (1952); ITU: 51 (1952); WICKENS 1976: 122; FE 3: 443 (1989); EL AMIN 1990: 305; FTEA, Burserac.: 5 (1991); KTSL: 381 (1994).
Imatong Mountains group, Sudan side: Kinyeti Valley, east of Hiliu, no alt., on rocky hillslopes, 29.1.1984, *Kielland-Lund* 1005 (C, NLH); north east side of Imatong mountains, at Molongori, 750 m., almost bare rocky slope with *Boswellia papyrifera, Terminalia brownii, Lannea fulva, Euphorbia magnicapsula, Xerophyta simulans,* etc., 10.3.1982, *Friis & Vollesen* 1154 (BR, C, EA, K, KHF); at Khor Antin, 1080 m., on rocky outcrops, 12.6.1939, *Andrews* 1814 (K, WM).
Imatong Mountains group, Uganda side: Agoro, no alt., dry hills, 3.1935, *Eggeling* 1716 (MHU); north-west of Agoro, on the steep eastern slope of Logitol Hill, 1530 m., among boulders, 5.12.1945, *Dawkins* 127 (EA, MHU).
General habitat range: in lowland wooded grassland.
General distribution: North East Nigeria to Ethiopia.

Canarium L.

Canarium schweinfurthii Engl.
FS: 230 (1929); FPS 2: 323 (1952); ITU: 51 (1952); JACKSON 1956: 353 {Talanga, Lotti}; FCB 7: 144 (1958); FWTA 1,2: 697 (1958); FG 3: 90 (1962); FZ 2: 283 (1963); EL AMIN 1990: 305; FE 3: 442 (1990); FTEA, Burserac.: 2 (1991).
Imatong Mountains group: no specimen seen; recorded by JACKSON 1956 from the closed lowland forests of Lotti and Laboni.
General habitat range: in lowland and medium-altitude forest, often along edges in clearings and at lake shores, in drier areas often along rivers, and often left as an isolated tree in cleared areas.
General distribution: Senegal to South Sudan, south to Angola, Zambia, Malawi and Tanzania.

Commiphora Jacq.

Commiphora africana (A. Rich.) Engl.
FS: 229 (1929); ITU: 53 (1952); FPS 2: 323 (1952); FCB 7: 134 (1958); FWTA 1,2: 696 (1958); FZ 2,1: (1963); WICKENS 1976: 122; FE 3: 454 (1989); EL AMIN 1990: 307; FTEA, Burserac.: 44 (1991); KTSL: 394 (1994).
var. **africana**
FTEA, Burserac.: 46 (1991); KTSL: 394 (1994).
Syn.: *Balsamodendrum africanum* (A. Rich.) Arn.: FTA 1: 325 (1868).
Imatong Mountains group, Sudan side: North east side of mountains, at Molongori, 750 m., almost bare rocky slope with *Boswellia papyrifera, Terminalia brownii, Lannea fulva, Euphorbia magnicapsula, Xerophyta simulans,* etc., 10.3.1982, *Friis & Vollesen* 1144 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: Lututuru, 1530 m., woodland with *Acacia seyal, Terminalia brownii,* etc., 3.7.1946, *Dawkins* 205 (FHO, MHU); Lututuru, 1590 m., wooded grassland, 1963, *Morrison* s.n. (MHU); north of Okako, south of Mingaro (3° 44' N, 32° 55' E), no alt., grassland, 10.6.1973, *Katende* 1875 (EA, MHU).
Didinga Mountains: Boya Hill, Karauili, 1200 m., rocky outcrop, 22.12.1982, *Fukui* 82-25 (EA).
General habitat range: in lowland deciduous bushland.
General distribution: Senegal eastwards to Ethiopia and Somalia, south to Botswana and South Africa (Transvaal, Natal).
var. **rubriflora** (Engl.) Wild
FTEA, Burserac.: 47 (1991); KTSL: 394 (1994).
Imatong Mountains group, Uganda side: Agoro, arid hills, no date, *Eggeling* 841 (K).

General habitat range: in lowland deciduous woodland.
General distribution: Sudan and South Ethiopia through eastern Africa to Zimbabwe. Species as a whole restricted within the joint distribution area of the two varieties represented here.

Commiphora habessinica (Berg) Engl.
FPS 2: 323 (1952); FCB 7: 136 (1958); FE 3: 471 (1989); FTEA, Burserac.: 24 (1991); EL AMIN 1990: 307 [as "*abyssinica*"]; KTSL: 388 (1994); HYF: 197 (1997).
subsp. **habessinica**
FTEA, Burserac.: 26 (1991).
Syn.: *Balsamodendrum africanum* (A. Rich.) Arn. var. *habessinicum* (Berg) Oliv.: FTA 1: 325 (1868). [*Commiphora lindensis* auct., non Engl.: ITU: 54 (1952)].
Imatong Mountains group, Uganda side: Agoro, no alt., 3.1935, *Eggeling* 1706 (K, MHU).
General habitat range: in lowland and medium-altitude dry grassland and deciduous bushland, especially in rocky places.
General distribution: Sudan to Ethiopia, Djibouti and Somalia, south to Zambia and Malawi; also in tropical Arabia. Species as a whole also in Congo [previously Zaire].

Order 54. **Meliales** Lindl.

Fam. 109. **Meliaceae** Juss.

Cedrela P. Browne

Cedrela odorata L.
EL AMIN 1990: 311 {Kagalo}; FTEA, Meliac.: 45 (1991).
Imatong Mountains group, Sudan side: Talanga, 950 m., in neglected *Cedrela* plantation with regrowth of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata*, 29.11.1980, *Friis & Vollesen* (sight record).
General habitat range: indigenous in lowland forest of tropical America; widely cultivated in plantations throughout the tropics.
General distribution: Mexico and the West Indies to North Argentina; now cultivated throughout the tropics.

Ekebergia Sparrm.

Ekebergia capensis Sparrm.
FE 3: 489 (1989); SOMMERLATTE 1990: 306; FTEA, Meliac.: 38 (1991); KTSL: 404 (1994).
Syn.: *Ekebergia rueppelliana* (Fresen.) A. Rich.: FTA 1: 333 (1868); FS: 230 (1929); FPNA 1: 422 (1948); FPS 2: 326 (1952). *Ekebergia senegalensis* Juss.: FTA 1: 333 (1868); ITU: 174 (1952); FPS 2: 327 (1952); JACKSON 1956: 64 {Talanga, Lotti}; FCB 7: 208 (1958); FWTA 1,2: 705 (1958); EL AMIN 1990: 311 {Imatong Mountains}.
Imatong Mountains group, Sudan side: without further locality, 2290 m., 15.2.1976, *Howard* IM 42 (EA, K, KHF); Upper Talanga, 2000 m., *Podocarpus latifolius* mixed forest and *Albizia* forest, 9.3.1984, *Sommerlatte* 20 (EA); Bushbuck Hill, 2200 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, at forest edge towards *Loudetia* grassland and *Hagenia abyssinica* woodland, 16.2.1982, *Friis & Vollesen* 904 (C, K).
Imatong Mountains group, Uganda side: without further locality, no alt., no date, *Eggeling* 3524 (?K, not traced); Lomwaga Mts., 2590 m., *Podocarpus latifolius* forest, 5.4.1945, *Greenway & Hummel* 7293 (FHO, K, MHU).
Didinga Mountains: Nagichot, 1980 m., 25.4.1939, *Myers* 11,125 (?K, not traced).
General habitat range: in medium-altitude and montane forest, moist woodland and bushland. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in *Albizia* forest and in mixed *Podocarpus latifolius* forest.
General distribution: Senegal to Ethiopia, south

to Botswana and South Africa (Eastern Cape); only very local in areas of Guineo-Congolian rain forest.

Entandophragma C.E. Fisch.

Entandophragma angolense (Welw.) C. DC.
ITU: 176 (1952); FPS 2: 327 (1952) {Imatong Mountains, forest near Issore}; JACKSON 1956: 353 {Talanga, Lotti, Laboni} & 356; FCB 7: 190 (1958); EL AMIN 1990: 313 {Talanga}; SOMMERLATTE 1990: 162; FTEA, Meliac.: 56 (1991); KTSL: 405 (1994).
Syn.: *Entandophragma macrophyllum* A. Chev.: CHIPP 1929: 190.
Imatong Mountains group, Sudan side: Lotti, 1220 m., in the closed fringing forest; a tall, slightly buttressed tree up to 30 m., 5.2.1929, *Chipp* 15 (K); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 1.12.1980, *Friis & Vollesen* 597 (C, carpological collection only, accession no. 15948, K, carpological collection only); near Issore, 1340 m., in gallery forest, 3.8.1939, *Myers* 11,771 (K, WM).
General habitat range: in lowland and medium-altitude forest, sometimes in riverine forest. According to JACKSON 1956 and SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in lowland and medium-altitude forest, where it according to SOMMERLATTE is most common.
General distribution: Guinée to Uganda, south to Angola and Kenya.

Entandophragma sp.
Imatong Mountains group, Sudan side: at Issore, 1390 m., 2.8.1939, *Myers* 11,768 (?K, fruit only, not traced); Lotti, no alt., forest, 5.8.1939, *Myers* 11,817 (?K, fruit only, not traced).

Khaya A. Juss.

Khaya grandifoliola C. DC.
CHIPP 1929: 190; ITU: 187 (1952); FPS 2: 329 (1952); JACKSON 1956: 351, 353, 355-356 {Talanga, Lotti, Laboni}; FCB 7: 177 (1958); FWTA 1,2: 699 (1958); EL AMIN 1990: 315; SOMMERLATTE 1990: 136; FTEA, Meliac.: 49 (1991).
Imatong Mountains group, Sudan side: Payito, no alt., a tall tree in the fringing forest, 6.2.1929, *Chipp* 24 (K, KHF, WM); at Lerua mission, 15 km. from Palotaka (3° 59' N, 32° 34' E), 1200 m., common in the forest at Lotti, planted at the mission, 7.4.1984, *Sommerlatte* 54 (EA); Lomariti Range, Acholi Hills, Upper Talanga Tea project, 1800 m., 11.1981, *Loehr* in EA 16483 (K); Kinyeti Valley, 10 km. north of Katire, 700 m., riverine forest along small temporary stream, with *Khaya grandifoliola, Ficus sur, F. vallis-choudae, Syzygium guineense* subsp. *guineense* and *Cola,* 11.3.1982, *Friis & Vollesen* 1170 (C, carpological collection only, accession no. 15947).
General habitat range: in lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in lowland forest and particularly in gallery forest; it is a pioneering species and grows rapidly.
General distribution: Guinea Bissau to South Sudan and Uganda (especially along northern fringe of the Guineo-Congolian ran forest), south to Congo [previously Zaire].

Lepidotrichilia (Harms) Leroy

Lepidotrichilia volkensii (Guerke) Leroy
FE 3: 485 (1989); FTEA, Meliac.: 37 (1991); KTSL: 405 (1994).
Syn.: *Trichilia volkensii* Guerke: FPNA 1: 423 (1948); ITU: 198 (1952); FPS 2: 333 (1956) {Imatong Mountains, Mt. Baghanj}; FCB 7: 160

(1958); El Amin 1990: 321 {Imatong Mountains, Mt. Baghanj}.
Imatong Mountains group, Sudan side: without further locality, 1980 m., *Podocarpus latifolius-Olea* forest, no date, *Howard* IM 27 (EA, KHF); Iyedo Valley, 1700 m., understorey in montane forest, 11.2.1951, *Jackson* 1681 (FHO); Upper Talanga Tea project, 1800 m., 11.1981, *Howard* UTT 4 (C, K); Gilo, at Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 9.11.1980, *Friis & Vollesen* 67 (C, K, KHF); Mt. Baghanj, 1830-2140 m., in gully, 14.6.1939, *Andrews* 1926 (K).
Imatong Mountains group, Uganda side: Aringa River, headwaters, 2450 m., *Podocarpus latifolius-Syzygium* forest, 6.4.1945, *Greenway & Hummel* 7301 (EA, K, MHU).
Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., Mt. Emogadung, 2200 m., understorey in montane forest, 26.2.1948, *Jackson* 272 (FHO).
General habitat range: in montane forest.
General distribution: Ethiopia and South Sudan, through eastern Africa, south to Malawi.

Pseudocedrela Harms

Pseudocedrela kotschyi Harms
FS: 231 (1929); ITU: 193 (1952); FPS 2: 331 (1952); FCB 7: 192 (1958); FWTA 1,2: 702 (1958); Wickens 1976: 123; FE 3: 479 (1989); El Amin 1990: 317; FTEA, Meliac.: 56 (1991).
Imatong Mountains group, Sudan side: without further locality, 1947, *Maxwell Forbes* 70 (K); Hiliu, near farm houses, 700 m., 29.11.1983, *Kielland-Lund* 89 (C, NLH); Hiliu, 700 m., small hills with woodland in extensive cultivation, 28.2.1986, *Bodoegaard & Francis* 17 (EA).
Imatong Mountains group, Uganda side: north of Madi Opei, 1040 m., on black cotton soil with *Combretum adenogonium, Dombeya quinqueseta, Maytenus senegalensis, Grewia mollis,* and *Dichrostachys cinerea* on ground with rocky outcrops, 10.10.1947, *Dawkins* (sight record; recorded on a specimen of *Acacia drepanolobium* at MHU, *Dawkins* 283).
General habitat range: in deciduous woodland.
General distribution: Senegal to Ethiopia.

Trichilia P. Browne

Trichilia dregeana Sond.
FE 3: 483 (1989); El Amin 1990: 319; FTEA, Meliac.: 34 (1991); KTSL: 407 (1994).
Syn.: *Trichilia splendida* A. Chev.: ITU: 198 (1952); Jackson 1956: 353 {Talanga, Lotti}; FCB 7: 165 (1958); FWTA 1,1: 705 (1958); FCB 7: 165 (1958).
Imatong Mountains group, Sudan side: no specimen seen; recorded by Jackson 1956 as a rare tree from the forests at Talanga and Lotti.
General habitat range: in lowland and medium-altitude forest, and riverine forest.
General distribution: Guinée to Ethiopia, south to South Africa (Cape Prov.).

Trichilia emetica Vahl
FTA 1: 335 (1868); FS: 231 (1929); ITU: 195 (1952); FPS 2: 331 (1952); Wickens 1976: 123; FE 3: 483 (1989); El Amin 1990: 319; FTEA, Meliac.: 34 (1991); KTSL: 407 (1994); HYF: 201 (1997).
Syn.: *Trichilia roka* Chiov.: FCB 7: 163 (1958); FWTA 1,2: 705 (1958).
subsp. **emetica**
Imatong Mountains group, Sudan side: without further locality, no alt., 1947, *Maxwell Forbes* 63 (K); Torit, in suburb west of the town (4° 24' N, 32° 34' E), no alt., 12.1.1984, *Kielland-Lund* 612 (C, NLH).
Imatong Mountains group, Uganda side: near Agoro, no alt., 12.1932, *Eggeling* 831 (K, MHU); Agoro, no alt., stream-bank, 19.1.1946, *Dawkins* 159 (EA, FHO, MHU); Agoro, no alt., 1.1957, *Sangster* 230 (EA).
Lafit, Dongotona and Nangeya Mountains: Ikotos

(4° 08' N, 33° 05' E), 880 m., dry woodland with *Acacia tortilis*, 28.2.1948, *Jackson* 274 (FHO).
General habitat range: in lowland, medium-altitude and montane forest, especially riverine forest.
General distribution: Ethiopia and Somalia, and south to Botswana and South Africa (Natal), but absent from areas with Guineo-Congolian rain forest; also in tropical Arabia. Species as a whole also from Senegal to Sudan.

Trichilia prieuriana A. Juss.
FTA 1: 334 (1868); ITU: 197 (1952); FPS 2: 331 (1952) {Imatong Mountains}; JACKSON 1956: 353 {Talanga}; FCB 7: 164 (1958); FWTA 1,2: 704 (1958); FE 3: 483 (1989); EL AMIN 1990: 319; FTEA, Meliac.: 30 (1991).
Imatong Mountains group, Sudan side: Imeila forest, 750 m., in understorey of *Khaya grandifoliola* forest, 27.5.1949, *Jackson* 762 (FHO, KHF); Imeila forest, 850 m., edge of *Khaya grandifoliola* forest, 4.2.1947, *Jackson* 177 (FHO).
General habitat range: in lowland forest and riverine forest.
General distribution: Senegal to Ethiopia, south to Zambia.

Turraea L.

Turraea floribunda Hochst.
ITU: 200 (1952); FCB 7: 154 (1958); EL AMIN 1990: 321 {Didinga Mountains, Iwowa}; FTEA, Meliac.: 21 (1991); KTSL: 408 (1994).
Imatong Mountains group, Sudan side: between Talanga and Upper Talanga, 1300 m., medium-altitude rain forest with *Diospyros abyssinica, Garcinia buchananii, Uvariopsis congoensis, Turraea floribunda, Manilkara butugi*, etc., 7.12. 1980, *Friis & Vollesen* 736 (BR, C, also carpological collection, accession no. 15945, K, KHF).
Didinga Mountains: Iwowa, 1620 m., in deep khor, 22.4.1939, *Myers* 11,032 (K, WM).
General habitat range: in lowland and transitional forest.
General distribution: Sudan through eastern Africa to South Africa (Natal).

Turraea holstii Guerke
ITU: 200 (1952); FPS 2: 333 (1952) {Imatong Mountains, near Mt. Garia}; FCB 7: 155 (1958); FE 3: 481 (1989); EL AMIN 1990: 323 {Imatong Mountains, Mt. Garia}; SOMMERLATTE 1990: 332; FTEA, Meliac.: 13 (1991); KTSL: 409 (1994); HYF: 200 (1997).
Imatong Mountains group, Sudan side: without further locality, 1980 m., in *Croton-Macaranga* forest, 30.1.1976, *Howard* IM 18 (K, KHF); Gilo, 1830 m., common understorey shrub, 6.1946, *Sangster* 827 (MHU); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, 8.11.1980, *Sommerlatte* 26 (EA); Upper Talanga, 2000 m., mixed *Podocarpus latifolius-Olea-Syzygium* forest, 15.3.1984, *Friis & Vollesen* 51 (BR, C, K, KHF); Gilo, 1890 m., edge of forest, 24.6.1947, *MacLeay* 34 (KHU); near Mt. Garia, 1830-2130 m., 13.6.1939, *Andrews* 1864 (K, WM); Itibol, slope of Longeitu (4° 01' N, 32° 50' E), no alt., in open forest with *Olea, Albizia gummifera*, etc., 31.1.1947, *Jackson* 174 (FHO).
Imatong Mountains group, Uganda side: Aringa River headwaters, 2440 m., *Podocarpus latifolius-Syzygium* forest with *Pouteria adolfi-friederici*, 7.4.1945, *Greenway & Hummel* 7306 (EA, K, MHU).
General habitat range: in transitional and montane forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as an understorey tree in mixed *Podocarpus latifolius* forest.
General distribution: Ethiopia and Somalia through eastern Africa, south to Malawi; also in tropical Arabia.

Order 55. **Sapindales** Dumort.

Fam. 110. **Sapindaceae** Juss.

Allophylus L.

Allophylus abyssinicus (Hochst.) Radlk.
FPNA 1: 517 (1948); ITU: 375 (1952); FCB 9: 303 (1960); FZ 2,2: 498 (1966); FE 3: 499 (1989); EL AMIN 1990: 325 {Imatong Mountains, Yei}; SOMMERLATTE 1990: 318; KTSL: 412 (1994).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 20.2.1982, *Friis & Vollesen* 973 (C, K, KHF); Gilo, 1900 m., in forest understorey, 16.6.1953, *Jackson* 3010 (KHF); Lowiliwili, 2500 m., montane forest with *Dombeya* and *Acanthus* understorey, 6.11.1949, *Jackson* 981 (FHO, KHF).
Imatong Mountains group, Uganda side: without further locality, 2290 m., *Podocarpus latifolius* forest, 4.1938, *Eggeling* 3555 (K, MHU); near Aringa River, 2140 m., 7.4.1945, *Hummel* 666 (FHO, MHU).
General habitat range: in montane forest and riverine forest, often in clearings and along edges, often persisting after clearing. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in mixed *Podocarpus latifolius* forest.
General distribution: South Sudan and Ethiopia through eastern Africa to Zimbabwe.

Allophylus macrobotrys Gilg
FPNA 1: 517 (1948); ITU. 376 (1952); FCB 9: 305 (1960); FE 3: 499 (1989); EL AMIN 1990: 325 {Lotti}.
Imatong Mountains group, Sudan side: Lotti, near rest house, no alt., 8.6.1939, *Andrews* 1713 (K); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* at small brook in forest, deep shade, 4.12.1980, *Friis & Vollesen* 682 (BR, C, K, KHF); Imeila Forest, 750 m., lowland forest with *Khaya* and *Cola,* 27.5.1949, *Jackson* 768 (FHO).
General habitat range: in lowland and intermediate forest, riverine forest.
General distribution: South Sudan and Ethiopia to East Congo [previously Zaire], Burundi and Tanzania.

Allophylus rubifolius (A. Rich.) Engl.
FPS 2: 335 (1952); FCB 9: 305 (1960); FZ 2,2: 502 (1966); FE 3: 502 (1989); EL AMIN 1990: 326; KTSL: 413 (1994); HYF: 196 (1997).
Syn.: *Schmidelia rubifolia* A. Rich.: FS: 232 (1929).
Imatong Mountains group, Sudan side: Molongori, 750 m., 11.6.1939, *Andrews* 1804 (K).
Imatong Mountains group, Uganda side: Ngoro [=? Agoro], 1220 m., dry rocky hillside, 14.6. 1944, *Maxwell Forbes* 141 (K).
General habitat range: in lowland and montane woodland, bushland and grassland, riverine forest.
General distribution: Sudan and Ethiopia through eastern Africa to South Africa (Transvaal, Natal); also in tropical Arabia.

Blighia Koenig

Blighia unijugata Bak.
FTA 1: 427 (1868); FPS 2: 336 (1952); JACKSON 1956: 353 {Talanga, Lotti, Laboni}; FWTA 1,2: 723 (1958); FCB 9: 316 (1960); FZ 2,2: 516 (1966); FC 16: 186 (1973); FG 23: 186 (1973); FE 3: 508 (1989); EL AMIN 1990: 327 {Imatong Mountains, Laboni}; KTSL: 414 (1994).
Imatong Mountains group, Sudan side: Kinyeti Valley, 15 km. north of Katire, 800 m., riverine forest along small, temporary stream, 6.3.1982, *Friis & Vollesen* 1109 (C, K).
General habitat range: in lowland and medium-altitude forest.

General distribution: Sierra Leone to Ethiopia, south to South Africa (Natal).

Blighia welwitschii (Hiern) Radlk.
FWTA 1,2: 722 (1958); FCB 9: 315 (1960); FC 16: 183 (1973); FG 23: 183 (1973).
Syn.: *Blighia wildemanniana* Gilg & Radlk.: JACKSON 1956: 354 {Lotti}.
Imatong Mountains group, Sudan side: no specimen seen; recorded by JACKSON 1956 from forest at Lotti.
General habitat range: in lowland forest.
General distribution: Sierra Leone to Sudan and Uganda, south to Angola and Congo [previously Zaire].

Cardiospermum L.

Cardiospermum grandiflorum Sw.
FPNA 1: 515 (1948); FPS 2: 338 (1952); FWTA 1,2: 711 (1958); FCB 9: 285 (1960); FZ 2,2: 511 (1966); FC 16: 17 (1973); FG 23: 17 (1973); UKWF: 164 (1994).
Imatong Mountains group, Sudan side: Torit district, no alt., 9.6.1939, *Andrews* 1724 (K); Katire, 900 m., in tangle under *Albizia zygia*, 4.11.1948, *Jackson* 472 (KHF); Talanga to Upper Talanga, 1100 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber along trail, 7.12.1980, *Friis & Vollesen* 750 (C, K).
General habitat range: in lowland and medium-altitude forest, often along edges.
General distribution: Guinée to South Sudan and Uganda, south to Angola and Congo [previously Zaire]; also in tropical America.

Cardiospermum halicacabum L.
FTA 1: 417 (1868); FS: 232 (1929); FPNA 1: 515 (1948); FPS 2: 339 (1952); JACKSON 1956: 351; FWTA 1,2: 711 (1958); FCB 9: 286 (1960); FZ 2,2: 509 (1966); FC 16: 18 (1973); FG 23: 18 (1973); FE 3: 498 (1989); UKWF: 164 (1994); HYF: 196 (1997).
Imatong Mountains group, Sudan side: no specimen seen; recorded by JACKSON 1956 from vegetation which is transitional between lowland woodland and forest.
General habitat range: in lowland, medium-altitude and montane woodland, evergreen bushland and along forest edges.
General distribution: Senegal to Ethiopia, north to Egypt, south to South Africa, also in tropical Asia, including tropical Arabia, and tropical America.

Glenniea Hook. f.
Syn.: *Crossonephelis* Baill.

Glenniea africana (Radlk.) Leenh.
SOMMERLATTE 1990: 178; KTSL: 418 (1994).
Syn.: *Crossonephelis africanus* (Radlk.) Leenh.: FWTA 1,2: 720 (1958); FC 16: 138 (1973); FG 23: 138 (1973). "*Melanodiscus sp. nov.* sensu ITU": ITU: 381 (1951); FPS 2: 342 (1952) {Lotti}; JACKSON 1956: 353 {Talanga, Lotti, Laboni}. *Melanodiscus oblongus* Taub.: FZ 2,2: 528 (1966).
Imatong Mountains group, Sudan side: Lotti, no alt., forest, 2.1.1933, *Trought* s.n. (K); Lotti, no alt., forest, 5.8.1939, *Myers* 11,813 (K); Lotti, 1000 m., closed forest, no date, *Jackson* 1743 (FHO); Talanga, 900 m., in closed forest, 27.4.1949, *Jackson* 747 (FHO, K, KHF); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 1.12.1980, *Friis & Vollesen* 590 (C, K, KHF); Talanga, 1000 m., forest, no date, *Jackson* 1231 (K); above Katire, 1300 m., in gallery forest with *Cola gigantea,* 9.2.1950, *Jackson* 1145 (FHO, KHF).
General habitat range: in lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a

tree in the understorey of lowland forest and occasionally also in medium-altitude forest.
General distribution: Nigeria to South Sudan and Kenya, south to Zimbabwe.

Lepisanthes Blume
Syn.: *Aphania* Blume

Lepisanthes senegalensis (Juss.) Leenh.
FE 3: 504 (1989); SOMMERLATTE 1990: 204; KTSL: 420 (1994).
Syn.: *Aphania senegalensis* (Juss.) Radlk.: FPNA 1: 522 (1948); ITU: 377 (1952); FPS 2: 336 (1952); JACKSON 1956: 353 {Talanga, Lotti, Laboni}; FWTA 1,2: 716 (1958); FCB 9: 343 (1960); FZ 2,2: 525 (1966); FC 16: 75 (1973); FG 23: 75 (1973); EL AMIN 1990: 326 {Imatong Mountains, Imeila, Laboni}.
Imatong Mountains group, Sudan side: Laboni, no alt., forest, 15.10.1938, *Myers* 9750 (FHO, K); Laboni, 1100 m., in gallery forest, 30.1.1949, *Jackson* 616 (FHO, KHF); Torit district, 10.6.1939, *Andrews* 1772 (K); Imeila, 700 m., in gallery forest with *Khaya grandifoliola* and *Cola gigantea*, 27.1.1949, *Jackson* 580 (FHO, KHF).
Imatong Mountains group, Uganda side: Lututuru, edge of stream, 2.1938, *Eggeling* 3513 (K, MHU).
Didinga Mountains: at rocks north of Chukudum (4° 15' N, 33° 27' E), 1100 m., 21.12.1983, *Kielland-Lund* 425 (C, NLH).
General habitat range: in lowland and medium-altitude forest, especially in moist places and in riverine forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as an understorey tree in lowland forest.
General distribution: Senegal to Ethiopia, south to Angola and Mozambique, also widespread in tropical Asia.

Lychnodiscus Radlk.

Lychnodiscus cerospermus Radlk.
ITU: 380 (1952); JACKSON 1956: 353 {Talanga, Lotti}; FCB 9: 326 (1960); FC 16: 168 (1973); FG 23: 168 (1973); SOMMERLATTE 1990: 210.
Imatong Mountains group, Sudan side: near Lotti rest house, no alt., 9.6.1939, *Andrews* 1753 (K); Talanga, no alt., immature *Pouteria* forest, 17.3.1950, *Jackson* 1226 (K); Talanga, 1000 m., forest, 5.4.1950, *Jackson* 1380 (K); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, 27.11.1980, *Friis & Vollesen* 492 (C, K).
General habitat range: in lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as an understorey tree in lowland forest.
General distribution: Congo [previously Zaire], South Sudan and Uganda.

Majidea Kirk ex Oliv.

Majidea fosteri (Sprague) Radlk.
ITU: 380 (1952); FPS 2: 341 (1952) {Lotti}; JACKSON 1956: 353 {Talanga, Lotti, Laboni}; FWTA 1,2: 725 (1958); FCB 9: 365 (1960); FC 16: 195 (1973); FG 23: 195 (1973); EL AMIN 1990: 330 {Laboni}.
Imatong Mountains group, Sudan side: Lotti, no alt., forest, 27.2.1939, *Myers* 10,551 (K, WM). Recorded by JACKSON 1956 also from Laboni and Talanga, but no specimens seen.
General habitat range: in lowland and medium-altitude forest.
General distribution: Ivory Coast to South Sudan and Uganda, south to Congo [previously Zaire].

Paullinia L.

Paullinia pinnata L.
FTA 1: 419 (1868); FS: 232 (1929); FPNA 1: 514 (1948); FPS 2: 343 (1952); JACKSON 1956: 351; FWTA 1,2: 710 (1958); FCB 9: 283 (1960); FZ 2,2; 512 (1966); FC 16: 13 (1973); FG 23: 13 (1973); WICKENS 1976: 123; FE 3: 493 (1989); EL AMIN 1990: 331 {Kapoeta, North Dongotona Hills}; KTSL: 422 (1994).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber at forest edge, 17.3.1982, *Friis & Vollesen* 1231 (C, K, KHF).
Lafit, Dongotona and Nangeya Mountains: north side of Dongotona Mts., 1300 m., in *Euclea* evergreen bushland, no date, *Jackson* 1070 (KHF).
General habitat range: in lowland, medium-altitude and montane forest, especially along edges and in regrowth, in riverine forest and in evergreen bushland. According to JACKSON 1956 it occurs at the Imatong Mountains as a liana in transitional regrowth from woodland to forest.
General distribution: Senegal to Ethiopia, south to South Africa; also in Madagascar and widespread in tropical America.

Zanha Hiern

Zanha golungensis Hiern
ITU: 384 (1952); FPS 2: 343 (1952); JACKSON 1956: 353 {Talanga}; FCB 9: 361 (1960); FZ 2,2: 539 (1966); FC 16: 189 (1973); FG 23: 189 (1973); FE 3: 493 (1989); EL AMIN 1990: 333 {Talanga}; KTSL: 424 (1994).
Imatong Mountains group, Sudan side: Talanga, 1100 m., edge of lowland rain forest, 7.3.1950, *Jackson* 1189 (K); Kinyeti Valley, 15 km. north of Katire, 800 m., riverine forest along small stream, 6.3.1982, *Friis & Vollesen* 1108 (C, K); Katire, at Kinyeti River, 900 m., gallery forest, 8.2.1950, *Jackson* 1127 (FHO); Katire, no alt., in riparian vegetation at rocky stream, 1.5.1954, *Jackson* 3190 B (FHO).
Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).
General habitat range: in lowland and medium-altitude forest.
General distribution: Senegal to South West Ethiopia, south to Angola and Zimbabwe.

Fam. 111. **Melianthaceae** Link

Bersama Fresen.

Bersama abyssinica Fresen.
ITU: 202 (1952); FPS 2: 344 (1952); JACKSON 1956: 353 {Talanga, Laboni}; FWTA 1,2: 726 (1958); FTEA, Melianthac.: 2 (1958); FCB 9: 388 (1960); FE 3: 511 (1989); EL AMIN 1990: 333 {Yei, Yambio, Imatong Mountains}; SOMMERLATTE 1990: 314; KTSL: 424 (1994); HYF: 196 (1997).
Imatong Mountains group, Sudan side: without further locality [possibly Gilo], 1980 m., *Podocarpus latifolius-Syzygium guineense* subsp. *afromontanum* forest, 2.2.1976, *Howard* IM 29 (EA, K); without further locality [possibly Gilo], 1980 m., 10.2.1976, *Howard* IM 87 (K, KHF); without further locality [possibly Gilo], 2130 m., no date, *Howard* IM 80 (K, KHF); Laboni, 1100 m., edge of forest, 22.12.1935, *Thomas* 1747 (BM, K); Talanga, 900 m., forest on steep valley slope with *Khaya* and *Chrysophyllum,* no date, *Jackson* 1254 (K); Talanga, 1000 m., in savannah colonised by *Khaya grandifoliola,* 4.3. 1950, *Jackson* 1186 (K); Issore Valley, 1200 m., gallery forest, 14.2.1951, *Jackson* 1721 (FHO); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* edge of clearing in forest, 4.12.

1980, *Friis & Vollesen* 692 (C, also carpological collection, accession no. 15941, KHF); Upper Talanga, 2000 m., mixed *Podocarpus latifolius* forest, 3.1984, *Sommerlatte* 21 (EA).
Imatong Mountains group, Uganda side: Lututuru, no alt., stream edge, 2.1938, *Eggeling* 3516 (K, MHU); Lututuru, 1530 m., 3.4.1945, *Greenway & Hummel* 7265 (EA, K, MHU).
General habitat range: in medium-altitude and montane forest and evergreen bushland. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in forest between 1000 and 2400 m.
General distribution: Sierra Leone to Ethiopia, south to Malawi, Zambia and Zimbabwe; also in tropical Arabia.

Fam. 112. **Anacardiaceae** Link

Lannea A. Rich.

Lannea barteri (Oliv.) Engl.
CHIPP 1929: 190; FCB 9: 54 (1960); FTEA, Anacardiac.: 21 (1986); FE 3: 518 (1989); EL AMIN 1990: 336; SOMMERLATTE 1990: 86.
Syn.: *Odina barteri* Oliv.: FTA 1: 446 (1868); FS: 235 (1929). *Lannea kerstingii* Engl. & Krause: FPS 2: 348 (1952); ITU: 8 (1952); JACKSON 1956: 349; FWTA 1,2: 732 (1958).
Imatong Mountains group, Sudan side: Payito, 1400 m., in fire-swept woodland of the mountain side, a tall tree, 6.2.1929, *Chipp* 25 (K, KHF, WM); Talanga, 900 m., woodland with *Albizia zygia, Lannea barteri,* etc., 1.3.1982, *Friis & Vollesen* 1066 (BR, C, EA, K, KHF); above Katire, 950 m., rocky ground in stream valley, 10.1. 1947, *Jackson* 161 (KHF) & 165 (FHO); between Palwar and Talanga, 1000 m., wooded grassland with *Combretum collinum,* 28.3.1984, *Sommerlatte* 34 (EA).
Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).
General habitat range: in lowland and medium-altitude woodlands. According to JACKSON 1956 it occurs at the Imatong Mountains in moist woodland west and north of the mountains; according to SOMMERLATTE 1990 it occurs as a tall tree in lowland woodland.
General distribution: Mali and Guinée to South West Ethiopia, south to Uganda.

Lannea fruticosa (A. Rich.) Engl.
ITU: 7 (1952); FPS 2: 346 (1952); FWTA 1,2: 732 (1958); FCB 9: 51 (1960); WICKENS 1976: 123; FTEA, Anacardiac.: 23 (1986); FE 3: 518 (1989); EL AMIN 1990: 336 {Imatong Mountains}; HYF: 200 (1997).
Syn.: *Odina fruticosa* A. Rich.: FTA 1: 446 (1868); FS: 234 (1929).
Imatong Mountains group, Sudan side: Kinyeti Valley, hills near junction on road to Ngarama and Kinyeti north of Hiliu, 650 m., 10.12.1983, *Kielland-Lund* 287 (C, NLH); Jebel Antin, 750 m., 11.6.1939, *Andrews* 1800 (K, WM).
Imatong Mountains group, Uganda side: Lututuru, 1160 m., in woodland with *Terminalia brownii, Combretum adenogonium, Acacia seyal,* etc., 8.10.1947, *Dawkins* 278 (EA, FHO, MHU); Agoro, 1680 m., 12.1932, *Eggeling* 783 (K, MHU).
General habitat range: in lowland and medium-altitude woodlands.
General distribution: Niger and Nigeria to Ethiopia, south to Uganda; also in tropical Arabia.

Lannea fulva (Engl.) Engl.
ITU: 8 (1952); FCB 9: 55 (1960); FTEA, Anacardiac.: 15 (1986); EL AMIN 1990: 336 {Imatong Mountains}; KTSL: 427 (1994).
Imatong Mountains group, Sudan side: Kinyeti Valley, 3 km. south of Hiliu along Katire road, north face of rocks, no alt., 26.5.1984, *Kielland-Lund* 746 (C, NLH); Logire (4° 01' N, 33° 01' E), on the north-eastern slope of Imatong Mts., 900 m., hillside woodland with *Acacia senegal* and *Grewia mollis,* 6.6.1949, *Jackson* 798 (FHO); north-eastern side of mountains, at Molongori,

750 m., almost bare rocky slope with *Boswellia papyrifera, Terminalia brownii, Lannea fulva, Euphorbia magnicapsula, Xerophyta simulans,* etc., 10.3.1982, *Friis & Vollesen* 1152 (BR, C, EA, K, KHF).

Didinga Mountains: Kiduri north of Chukudum (4° 17' N, 33° 26' E), 1100 m., 20.12.1983, *Kielland-Lund* 388 (C, NLH).

General habitat range: in lowland and medium-altitude woodland.

General distribution: Sudan, Congo [previously Zaire], Rwanda, Burundi, Uganda Kenya and Tanzania.

Lannea humilis (Oliv.) Engl.

FPS 2: 348 (1952); ITU: 8 (1952); FWTA 1,2: 732 (1958); FCB 9: 56 (1960); FZ 2,2: 559 (1966); WICKENS 1976: 124; FTEA, Anacardiac.: 18 (1986); FE 3: 516 (1989); EL AMIN 1990: 337; KTSL: 427 (1994).

Syn.: *Odina humilis* Oliv.: FTA 1: 447 (1868); FS: 235 (1929).

Imatong Mountains group, Sudan side: near the northernmost point of the continuous mountain chain, 8 km. south-east of Ngarama on the trail to Molongori, 700 m., *Acacia seyal-Combretum* deciduous bushland, 10.3.1982, *Friis & Vollesen* 1160 (BR, C, K, KHF).

Imatong Mountains group, Uganda side: Agoro, 1380 m., *Acacia* bushland with *Balanites*, 9.4. 1945, *Greenway & Hummel* 7331 (EA, K).

Lafit, Dongotona and Nangeya Mountains: Kidepo Plain south of Ileri, 1050 m., in dry savannah, 28.3.1950, *Jackson* 1289 (BM, K, WM).

General habitat range: in lowland and medium-altitude woodlands.

General distribution: Senegal to Sudan, south to Zambia and Zimbabwe.

Lannea schimperi (A. Rich.) Engl.

ITU: 10 (1952); FPS 2: 346 (1952); FWTA 1,2: 732 (1958); FCB 9: 57 (1960); FZ 2,2: 560 (1966); WICKENS 1976: 124; FTEA, Anacardiac.: 19 (1986); FE 3: 516 (1989); EL AMIN 1990: 337; KTSL: 427 (1994).

Syn.: *Odina schimperi* A. Rich.: FTA 1: 445 (1868); FS: 235 (1929).

Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 47' N, 31° 59' E), 800 m., 5.1.1984, *Kielland-Lund* 586 (NLH); Kinyeti Valley, 15 km. north of Katire, 900 m., open woodland with *Combretum collinum, Combretum molle, Steganotaenia araliacea,* etc., on rocky outcrop, 6.3.1982, *Friis & Vollesen* 1111 (BR, C, K, KHF); Kinyeti Valley, above Katire, 1200 m., woodland with *Combretum molle, Cussonia arborea, Stereospermum kunthianum, Erythrina abyssinica, Entada abyssinica,* etc., 24.3.1982, *Friis & Vollesen* 1303 (C, KHF).

General habitat range: in lowland and medium-altitude woodlands.

General distribution: Nigeria to Ethiopia, south to Zambia, Malawi and Mozambique.

Lannea schweinfurthii (Engl.) Engl.

FPS 2: 348 (1952); FTEA, Anacardiac.: 23 (1986); FE 3: 518 (1989); EL AMIN 1990: 337; KTSL: 428 (1994).

var. **schweinfurthii**

JACKSON 1956: 360.

Imatong Mountains group, Sudan side: without further locality, no alt., no date, *Trought* s.n. (according to Aylmer [unpublished], specimen not traced); south of Torit, cleared land, 19.10.1938, *Myers* 9817 (K, WM); Kinyeti Vally, village about 500 m. south west of Hiliu, no alt., in savannah, 7.6.1984, *Kielland-Lund* 875 (C, NLH); 2 km. from junction of Katire and Ngarama roads along Imatong road and 500 m. east of road (4° 21' N, 32° 39' E), no alt., 26.5.1984, *Kielland-Lund* 765 (C, NLH).

General habitat range: in lowland and medium-altitude deciduous woodland. Recorded by JACKSON 1956 from the northeast-facing slopes of the Imatong Mountains below 1200 m.

General distribution: Sudan, Uganda and Ethiopia. Species as a whole also in Congo [previ-

ously Zaire], Somalia, Tanzania, and south to South Africa (Transvaal).

Ozoroa Del.

Syn.: *Heeria* Meissn., pro parte.

Ozoroa insignis Del.

WICKENS 1976: 124; FTEA, Anacardiac.: 5 (1986); FE 3: 521 (1989); EL AMIN 1990: 337; KTSL: 429 (1994); HYF: 199 (1997).

Syn.: *Rhus insignis* (Del.) Oliv.: FTA 1: 437 (1868); FS: 234 (1929). *Heeria insignis* (Del.) Kuntze: FPS 2: 345 (1952); FWTA 1,2: 739 (1958); FCB 9: 11 (1962).

subsp. **reticulata** (Bak. f.) Gillett

FTEA, Anacardiac.: 5 (1986); KTSL: 429 (1994).

Syn.: *Heeria reticulata* (Bak. f.) Engl.: FPS 2: 346 (1952); ITU: 5 (1952). *Heeria insignis* (Del.) Kuntze var. *reticulata* Bak. f.: FCB 9: 11 (1962). *Ozoroa reticulata* (Bak. f.) R. & A. Fernandes subsp. *grandifolia* R. & A. Fernandes: FZ 2,2: 578 (1966). *Ozoroa reticulata* (Bak. f.) R. & A. Fernandes subsp. *foveolata* R. & A. Fernandes: FZ 2,2: 578 (1966).

Imatong Mountains group, Sudan side: Jebel Kakowk, 1080 m., 12.6.1939, *Andrews* 1818 (K, WM); Kinyeti Valley, hill 3 km. south of Hiliu along Katire road, north east face of rocks, no alt., 26.5.1984, *Kielland-Lund* 749 (C, NLH); 15 km. north of Katire, 900 m., open woodland with *Combretum collinum, C. molle, Steganotaenia araliacea,* etc., on rocky outcrop, 6.3.1982, *Friis & Vollesen* 1114 (BR, C, K, KHF); Logoforok, 980 m., east-facing rocky hillside with woodland of *Euphorbia venenifica, Albizia anthelmintica, Combretum adenogonium,* etc., 6.2.1947, *Jackson* 164 (FHO).

Imatong Mountains group, Uganda side: Agoro, no alt., 3.1935, *Eggeling* 1701 (MHU); Lututuru, 1530 m., glen, 8.6.1963, *Kertland* s.n. (MHU).

General habitat range: in lowland and medium-altitude woodland.

General distribution: Congo [previously Zaire] to Ethiopia, south to Angola, Zambia, Zimbabwe and South Africa (Transvaal). Species as a whole also from West Africa to Somalia, and in tropical Arabia.

Pseudospondias Engl.

Pseudospondias microcarpa (A. Rich.) Engl.

FS: 236 (1929); FPNA 1: 486 (1948); FPS 2: 348 (1952); ITU: 12 (1952); JACKSON 1956: 355 & 357; FCB 9: 44 (1960); FZ 2,2: 555 (1966); FTEA, Anacardiac.: 53 (1986); EL AMIN 1990: 338 {Imatong Mountains}; SOMMERLATTE 1990: 186; KTSL: 430 (1994).

Syn.: *Spondias microcarpa* A. Rich.: FTA 1: 448 (1868).

Imatong Mountains group, Sudan side: without further locality, no alt., 11.4.1933, *Smith* 29 (K, KHF); at the River Ludibo, in riverine forest, dominant, 1935, *Thomas* 1750 (K); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 29.11.1980, *Friis & Vollesen* 549 (C); Talanga, 1000 m., stream bank in closed forest, with *Marantochloa,* etc., 27.2.1950, *Jackson* 1158 (FHO); Lower Talanga, at Ngnolobot River, 1200 m., on river banks, 26.4.1984, *Sommerlatte* 68 (EA); Issore Valley, no alt. gallery forest, 14.2.1951, *Jackson* 1722 (FHO); Lomariti, Upper Talanga, 1520 m., in forest, 4.1980, *Loehr* in EA 16480 (K).

Imatong Mountains group, Uganda side: Lututuru, no alt., on stream bank, 2.1938, *Eggeling* 3517 (FHO, MHU).

General habitat range: in lowland forest, especially in riverine and lake shore-forest. According to JACKSON 1956 it occurs at the Imatong Mountains in lowland riverine and swamp forest and in forest transitional between lowland and montane vegetation; according to SOMMERLATTE 1990 it occurs as a tree in lowland and

medium-altitude forest, especially common in gallery forest.
General distribution: Senegal to Sudan, south to Angola and Zambia.

Rhus L.

Rhus natalensis Krauss
ITU: 13 (1952); FPS 2: 349 (1952); FWTA 1,2: 739 (1958); FCB 9: 40 (1960); FZ 2,2: 597 (1966); FTEA, Anacardiac.: 28 (1986); FE 3: 523 (1989); El Amin 1990: 339; KTSL: 431 (1994); HYF: 199 (1997).
Imatong Mountains group, Sudan side: Near Torit, east of airstrip (4° 25' N, 32° 35' E), 650 m., 9.12.1983, *Kielland-Lund* 279 (C, NLH); Kinyeti Valley, Hiliu, between compound and river, 700 m., 29.11.1983, *Kielland-Lund* 93 (C, NLH); Logoforok, 700 m., in *Combretum* woodland, on termite mounds, 2.2.1949, *Jackson* 621 (FHO, KHF).
Didinga Mountains: Kiduri north of Chukudum (4° 17' N, 33° 26' E), 1100 m., 20.12.1983, *Kielland-Lund* 390 (C, NLH).
General habitat range: in lowland, medium-altitude and montane woodland and bushland.
General distribution: Guinée to Ethiopia and Somalia, south to South Africa (Natal); also in tropical Arabia.

Rhus ruspolii Engl.
FCB 9: 34 (1960); FTEA, Anacardiac.: 29 (1986); FE 3: 528 (1989); KTSL: 431 (1994).
Imatong Mountains group, Sudan side: Gilo, 1800 m., secondary forest growth, no date, *Jackson* 422 (FHO, KHF); Dumuso Ridge, 2350 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, rocky area at forest edge towards *Hagenia abyssinica* woodland, 8.3.1982, *Friis & Vollesen* 1134 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: Agoro, 1520 m., no date, *Eggeling* 804 (K, MHU).
General habitat range: in montane evergreen bushland and at forest edges.
General distribution: South Sudan, Ethiopia, East Congo [previously Zaire], Uganda and Kenya.

Rhus vulgaris Meikle
ITU: 13 (1952); FPS 2: 349 (1952); FCB 9: 32 (1960); FZ 2,2: 604 (1966); Wickens 1976: 124; FTEA, Anacardiac.: 31 (1986); FE 3: 529 (1989); El Amin 1990: 341; KTSL: 432 (1994).
Imatong Mountains group, Sudan side: without further locality, 1410 m., 12.6.1939, *Andrews* 1823 (K); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered *Combretum molle, Erythrina abyssinica, Protea gaguedi*, etc., 17.2.1982, *Friis & Vollesen* 935 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: without further locality, 2380 m., forest, 4.1938, *Eggeling* 3569 (K, MHU).
Didinga Mountains: Naligede, 1770 m., frequent shrub, 21.4.1939, *Myers* 10,983 (K); Nagichot, no alt., forest regrowth with *Olea* and *Ochna*, 11.4.1949, *Jackson* 687 (FHO); Chukudum Regional District Centre (4° 24' N, 33° 29' E), no alt., open area near stream, 13.6.1984, *Kielland-Lund* 949 (C, NLH); slopes of Mt. Lotuke, 1900 m., *Protea gaguedi* grassland, 29.3.1950, *Jackson* 1319 (K, WM).
General habitat range: in montane evergreen bushland and woodland.
General distribution: Cameroon to Ethiopia, south to Zambia, Malawi, Zimbabwe and Mozambique.

Sclerocarya Hochst.

Sclerocarya birrea (A. Rich.) Hochst.
FTA 1: 449 (1868); FS: 236 (1929); ITU: 14 (1952); FPS 2: 351 (1952); FWTA 1,2: 729 (1958); FCB 9: 67 (1960); Wickens 1976: 124; FTEA, Anacardiac.: 42 (1986); FE 3: 519

(1989); EL AMIN 1990: 343 {Torit, Molongori}; KTSL: 432 (1994).

subsp. **birrea**

FTEA, Anacardiac.: 43 (1986); FE 3: 519 (1989); KTSL: 433 (1994).

Imatong Mountains group, Sudan side: without further locality, no alt., no date, *Trought* s.n. (according to Aylmer [unpublished], specimen not traced).

Torit district, Liria, 16.6.1939, *Andrews* 2038 (K); at the northernmost point of the continuous mountain chain, just south-east of Ngarama on the track to Molongori, 700 m., open woodland with *Acacia seyal, Albizia amara* subsp. *sericocephala, Lannea humilis*, etc., on sandy soil, 13.3.1982, *Friis & Vollesen* 1199 (C); Kinyeti Valley, Hiliu, east side of stream, 29.1.1984, *Kielland-Lund* 1003 (C, NLH); hill above Molongori, 820 m., on gneiss rocks, 17.1.1950, *Jackson* 1049 (KHF).

Imatong Mountains group, Uganda side: Agoro, no alt., 12.1932, *Eggeling* 792 (FHO); Lututuru, no alt., woodland with *Piliostigma thonningii, Combretum, Grewia mollis*, etc., 25.1.1946, *Dawkins* 165 (EA, FHO, MHU).

General habitat range: in lowland and medium-altitude woodlands.

General distribution: Senegal to Ethiopia, south to Tanzania. Species as a whole also further south, to Angola, Namibia and South Africa (Natal, Transvaal) and in Madagascar.

Fam. 113. **Connaraceae** R. Br.

Agelaea Solander ex Planch.

Agelaea pentagyna (Lam.) Baill.

JONGKIND IN BRETELER 1989: 144; FG 33: 34 (1992); KTSL: 434 (1994).

Syn.: *Agelaea lamarckii* Planch.: FTA 1: 453 (1868). *Agelaea heterophylla* Gilg: FTEA, Connarac.: 11 (1956). *Agelaea trifolia* (Lam.) Baill.: FWTA 1,2: 745 (1958). *Agelaea obliqua* (P. Beauv.) Baill.: FWTA 1,2: 745 (1958). *Agelaea obliqua* (P. Beauv.) Baill. var. *cordata* (Schellenb.) Exell: FWTA 1,2: 745 (1958). *Agelaea nitida* Planch.: FWTA 1,2: 745 (1958). *Agelaea thouarsii* Baill.: FM 97. Fam.: 10 (1958). *Agelaea dewevrei* De Wild. & T. Durand: FCB 3: 104 (1952); FWTA 1,2: 745 (1958). *Agelaea hirsuta* De Wild.: FCB 3: 100 (1952); FWTA 1,2: 745 (1958). *Agelaea ugandensis* Schellenb.: FPS 2: 353 (1952); FTEA, Connarac.: 12 (1956); EL AMIN 1990: 344.

Imatong Mountains group, Sudan side: Talanga, 900 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, 1.3.1982, *Friis & Vollesen* 1056 (C, K, KHF); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, under deep shade and at forest edge, climber, 15.11.1980, *Friis & Vollesen* 233 (C, K), & 20.11.1980, *Friis & Vollesen* 362 (C, K, KHF), & 17.2.1982, *Friis & Vollesen* 927 (C, K).

General habitat range: in lowland and medium-altitude forest.

General distribution: Senegal and Guinée to South Sudan, Uganda and Kenya, south to Zambia, Malawi and Mozambique; also in Madagascar.

Note. This taxon is here conceived in the broad sense of JONGKIND IN BRETELER 1989.

Agelaea sp.

JACKSON 1956: 354 {Talanga, Lotti}.

Identity uncertain, but most probably *Agelaea pentagyna* (Lam.) Baill.

Cnestis Juss.

Cnestis mildbraedii Gilg

FCB 3: 122 (1952).

Syn.: *Cnestis ugandensis* Schellenb.: JACKSON 1956: 354 {Lotti}; FTEA, Connarac.: 2 (1956); JONGKIND IN BRETELER 1989: 212; EL AMIN 1990:

344 {Lotti}; KTSL: 434 (1994). [*Cnestis ferruginea* auct., non DC.: EL AMIN 1990: 344 {Lotti}.]
Imatong Mountains group, Sudan side: Lotti, no alt., forest, 2.1.1933, *Trought* s.n. (KHF); Lotti, no alt., in closed forest, no date, *Thomas* 1759 (BM, neotype of *C. mildbraedii*; BR, K); Lotti, 900 m., in forest, 1.1950, *Jackson* 1020 (B); Palotaka (Lotti), no alt., 1979, *Shigeta* 139 (?EA, identified and listed by M.G. Gilbert, not traced).
General habitat range: in lowland and medium-altitude forests.
General distribution: Uganda, South Sudan and West Kenya.
Note. In the literature, the occurrence in the Sudan of the related, but distinct species *Cnestis ferruginea* DC. has been rather confused. EL AMIN recorded it from the study area, but we have found no specimens to confirm this. JONGKIND cited specimens from the Sudan only from localities west of the Nile, but on his distribution map of the species he only indicated an occurrence in the Imatong Mountains. We believe this to be a mistake.

Connarus L.

Connarus longistipitatus Gilg
FCB 3: 130 (1952); ITU: 100 (1952); JACKSON 1956: 354 {Talanga, Lotti}; FTEA, Connarac.: 24 (1956); JONGKIND IN BRETELER 1989: 257; FG 33: 80 (1992); KTSL: 435 (1994).
Imatong Mountains group, Sudan side: no specimen seen; recorded by JACKSON 1956 from forest at Talanga and Lotti.
General habitat range: in lowland and medium-altitude forest.
General distribution: Nigeria to South Sudan, Uganda and Kenya, south to Tanzania. Not recorded from the Sudan by *Jongkind*.

Rourea Aubl.
Syn.: *Jaundea* Gilg

Rourea thomsonii (Bak.) Jongkind
JONGKIND IN BRETELER 1989: 359; FG 33: 132 (1992); KTSL: 436 (1994).
Syn.: *Connarus thomsonii* Bak.: FTA 1: 458 (1868). *Jaundea pinnata* (P. Beauv.) Schellenb.: FCB 3: 87 (1952); FPS 2: 354 (1952); JACKSON 1956: 357; FTEA, Connarac.: 21 (1956); FWTA 1,2: 741 (1958); EL AMIN 1990: 345 {Laboni}. *Jaundea monticola* (Gilg) Schellenb.: FPNA 1: 258 (1948); FCB 3: 22 (1952); FPS 2: 354 (1952); JACKSON 1956: 354 {Lotti, Laboni}. *Jaundea baumannii* (Gilg) Schellenb.: FWTA 1,2: 741 (1958).
Imatong Mountains group, Sudan side: Laboni, 1100 m., woody climber in forest, 22.12.1935, *Thomas* 1745 (BM, K); at Issore, 1340 m., gallery forest, 3.8.1939, *Myers* 11,783 (BM, K, WM).
General habitat range: in lowland and medium-altitude forest.
General distribution: Guinée to South Sudan, Uganda and Kenya, south to Angola, Zambia and Malawi.

Order 56. **Apiales** Nakai (*Umbelliflorae* F.C.L. Spenner, nom. altern.)

Fam. 114. **Cornaceae** (Dumort.) Dumort.

Afrocrania (Harms) Hutch.

Afrocrania volkensii (Harms) Hutch.
FPNA 1: 719 (1948); ITU: 101 (1952); FTEA, Cornac.: 1 (1958); FAC, Cornac.: 2 (1971); SOMMERLATTE 1990: 320; KTSL: 437 (1994)
Imatong Mountains group, Sudan side: without further locality [probably above Gilo], 2290 m., in forest near stream, 12.2.1976, *Howard* IM 40 (EA, K, KHF); along path from Bushbuck Hill

to Mt. Konoro, 2400 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, at small stream in forest, 23.2.1982, *Friis & Vollesen* 1015 (C, KHF); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 58' N, 32° 53' E), 2600 m., in upper montane forest, 9.6.1984, *Kielland-Lund* 896 (C, NLH).

General habitat range: in montane forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in mixed *Podocarpus latifolius* forest, usually in wetter areas and beside streams, and usually at altitudes above 2400 m.

General distribution: East Congo [previously Zaire] and South Sudan to Uganda and Kenya, south to Malawi and Zimbabwe.

Fam. 115. **Alangiaceae** DC.

Alangium Lam.

Alangium chinense (Lour.) Harms

FPNA 1: 660 (1948); ITU: 4 (1952); FPS 2: 355 (1952) {Imatong Mountains}; FTEA, Alangiac.: 3 (1958); FWTA 1,2: 749 (1958); FE 3: 535 (1989); EL AMIN 1990: 346 {Imatong Mountains, Gilo}; KTSL: 437 (1994).

Imatong Mountains group, Sudan side: in dip between Mts. Lotti and Kerifi, 1900 m., second storey tree in dense forest, 8.10.1938, *Myers* 9602 (K); Gilo, 1800 m., in moist forest, 6.5.1954, *Jackson* 3142 (FHO, KHF); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, second storey tree together with *Dracaena* and *Ensete*, 20.11.1980, *Friis & Vollesen* 356 (BR, C, K, KHF).

General habitat range: in lowland and medium-altitude forest, especially in clearings, and along edges and trails.

General distribution: Cameroon to Ethiopia, south to Angola and Zambia; also widespread in tropical Asia to South China.

Fam. 116. **Araliaceae** Juss.

Cussonia Thunb.

Cussonia arborea Hochst. ex A. Rich.

FTA 3: 31 (1877); FPS 2: 356 (1952); ITU: 32 (1952); JACKSON 1956: 356; FTEA, Araliac.: 4 (1968); FAC, Araliac.: 8 (1974); WICKENS 1976: 124; FE 3: 538 (1989); EL AMIN 1990: 346; SOMMERLATTE 1990: 100; KTSL: 438 (1994).

Syn.: *Cussonia kirkii* Seem.: FTEA, Araliac.: 6 (1968). *Cussonia barteri* Seem.: FWTA 1,2: 750 (1958).

Imatong Mountains group, Sudan side: Lerua mission, 15 km. from Palotaka, 1200 m., on rocky steep hillside with *Combretum* and *Erythrina abyssinica* woodland, 7.4.1984, *Sommerlatte* 52 (EA); Kinyeti Valley, above Katire, 1200 m., woodland with *Combretum molle, Cussonia arborea, Stereospermum kunthianum, Erythrina abyssinica, Entada abyssinica*, etc., 24.3.1982, *Friis & Vollesen* 1300 (BR, C, K, KHF).

Imatong Mountains group, Uganda side: slope above Agoro, 1990 m., *Combretum-Terminalia-Faurea* grassland, 8.4.1945, *Greenway & Hummel* 7320 (EA, K, MHU).

General habitat range: in lowland, medium-altitude and montane woodlands. According to JACKSON 1956 it occurs at the Imatong mountains in transitional vegetation from moist lowland woodland to montane vegetation; according to SOMMERLATTE 1990 it occurs as a tree in lowland woodland, but is most common at slightly higher altitudes up to around 1500 m.

General distribution: Mali and Sierra Leone to Ethiopia, south to Zambia, Zimbabwe and Mozambique.

Cussonia spicata Thunb.

FTA 3: 32 (1877); ITU: 34 (1952); FTEA, Araliac.: 3 (1968); FAC, Araliac.: 8 (1974); EL AMIN 1990: 346 {Dongotona Mountains, Mt. Emogadung}; KTSL: 439 (1994).

Lafit, Dongotona and Nangeya Mountains: Don-

gotona Mts., slope of Mt. Emogadung, 2000 m., montane forest with *Podocarpus latifolius*, 21.1.1950, *Jackson* 1095 (FHO, KHF).
General habitat range: in montane forest and woodland.
General distribution: Sudan and Uganda to South Africa (Transvaal, Natal); also Comoro Islands.

Polyscias J.R. & G. Forster

Polyscias fulva (Hiern) Harms
FPNA 1: 692 (1948); FPS 2: 356 (1952) {Imatong Mountains}; ITU: 34 (1952); FWTA 1,2: 750 (1958); FTEA, Araliac.: 12 (1968); FAC, Araliac.: 2 (1974); WICKENS 1976: 124; FE 3: 537 (1989); EL AMIN 1990: 347 {Imatong Mountains, Gilo}; SOMMERLATTE 1990: 280; KTSL: 440 (1994).
Syn.: *Panax fulvum* Hiern: FTA 3: 28 (1877). *Panax ferrugineum* Hiern: FTA 3: 28 (1877). *Polyscias ferruginea* (Hiern) Harms: FPS 2: 357 (1956) {Imatong and Didinga Mountains}.
Imatong Mountains group, Sudan side: without further locality, 1890 m., 13.4.1933, *Smith* 22 (K, KHF) & 23 (K, KHF); Kinyeti Valley, between Katire and Gilo (4° 02' N, 32° 49' E), no alt., 15.1.1984, *Kielland-Lund* 641 (C, NLH); Mt. Nargi, 1830-2130 m., 14.6.1939, *Andrews* 1959 (K, WM); Gilo, 1860 m., in *Acacia abyssinica* woodland, 30.1.1947, *Jackson* 170 (FHO, KHF); near Ngairigi River north-east of Gilo, 2000 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 28.2.1982, *Friis & Vollesen* 1053 (C, K, KHF); Gilo, 2000 m., *Albizia-Croton-Macaranga* forest, 19.4.1984, *Sommerlatte* 60 (EA).
Imatong Mountains group, Uganda side: Aringa River, 2140 m., in montane forest along river, 7.4.1945, *Hummel* 759 (FHO).
Didinga Mountains: Nagichot, 1980 m., large forest tree, 25.4.1939, *Myers* 11,127 (K, WM).
General habitat range: in medium-altitude and montane forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in *Albizia* forest, but also at forest edges.
General distribution: Guinée to Ethiopia, south to Angola, Zambia, Zimbabwe and Mozambique.

Schefflera J. R . & G. Forster

Schefflera abyssinica (Hochst. ex A. Rich.) Harms
FPNA 1: 688 (1948); ITU: 35 (1952); FPS 2: 357 (1956) {Imatong and Didinga Mountains}; FWTA 1,2: 751 (1958); FTEA, Araliac.: 20 (1968); FAC, Araliac.: 22 (1974); FE 3: 539 (1989); EL AMIN 1990: 347 {Imatong and Didinga Mountains}; SOMMERLATTE 1990: 284; KTSL: 441 (1994).
Syn.: *Heptapleurum abyssinicum* (A. Rich.) Benth. & Hook. f.: FTA 3: 29 (1877).
Imatong Mountains group, Sudan side: without further locality [probably Gilo], 1980 m., forest tree left in *Cupressus lusitanica* plantation, 8.3.1976, *Howard* IM 90 (K); Upper Talanga, 1800 m., near stream in *Albizia-Croton-Macaranga* forest, 28.3.1984, *Sommerlatte* 31 (EA); Mt. Baghanj, 1830-2130 m., 14.6.1939, *Andrews* 1933 (K, WM); Mt. Nargi, 1830-2130 m., 14.6.1939, *Andrews* 1961 (K, WM); Gilo, 1700 m., on rock over river with *Aloe* and *Kigelia,* no date, *Jackson* 1175 (K); Gilo, 1800 m., near stream in *Podocarpus latifolius* forest, 29.3.1949, *Jackson* 649 (K, KHF); Ngairigi River, no alt., 8.4.1976, *Howard* s.n. (K); Gilo, along Ngairigi River, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 8.11.1980, *Friis & Vollesen* 56 (C, KHF); Itibol, 1860 m., in forest, 19.12.1935, *Thomas* 1689 (BM, K); at Issore, 1340 m., gallery forest, 3.8.1939, *Myers* 11,769 (K, WM).
Imatong Mountains group, Uganda side: without further locality, 1830 m., in ravines near water, 7.1946, *Sangster* 831 (MHU); without further locality, 2260-2380 m., forest, 7.4.1945, *Eggeling*

3596 (K, MHU); Aringa River, 2440 m., near stream in montane forest, 7.4.1945, *Greenway & Hummel* 7303 (EA, FHO, K, MHU).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1900 m., closed forest, 16.5.1972, *Synnott* 1070 (EA, MHU).
Didinga Mountains: Nagichot, 1980 m., in deep khor forest, 25.4.1939, *Myers* 11,144 (K).
General habitat range: in montane forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree along streams and rivers in *Albizia* forest, and in medium-altitude forest.
General distribution: Cameroon to Ethiopia, south to Malawi and Zambia.
Note. EL AMIN 1990: 347 has also recorded *Schefflera polysciada* Harms. from the Imatong Mountains group, indicating it as "rare in montane zone with *Podocarpus* ..., Imatong Mountains, Gilo." The occurrence of this species has neither been confirmed by specimens nor by observations made by other botanists. We assume that this record might represent a misidentification, possibly of *S. abyssinica.*

Fam. 117. **Apiaceae** Lindl.
(*Umbelliferae* Juss., nom. altern.)

Agrocharis Hochst.

Agrocharis incognita (Norm.) Heywood & Jury
FTEA, Umbelliferae: 30 (1989); UKWF: 166 (1994).
Syn.: *Caucalis incognita* Norm.: FPNA 1: 701 (1948); FPS 2: 359 (1952) {Imatong Mountains}.
Imatong Mountains group, Sudan side: along path from Bushbuck Hill to Mt. Konoro, 2300 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum,* at forest edge, 5.3.1982, *Friis & Vollesen* 1104 (C, K); Loyaru, 2320 m., edge of forest, 29.12.1935, *Thomas* 1783 (BM, K); Lomuleng, 2430 m., mountain meadow at edge of *Podocarpus latifolius* forest, 25.7.1939, *Myers* 11,575 (K, WM); slope of Mt. Kinyeti, 2900 m., in *Podocarpus latifolius-Dombeya torrida* forest, 15.11.1949, *Jackson* 970 (BM, WM).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1830 m., montane grassland, 4.1960, *Wilson* 888 (EA).
General habitat range: in medium-altitude and montane grassland, evergreen bushland, in forest clearings, and along forest edges and trails.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Malawi, Zimbabwe and Mozambique.

Agrocharis pedunculata (Bak. f.) Heywood & Jury
FTEA, Umbelliferae: 32 (1989); UKWF: 166 (1994).
Syn.: *Caucalis pedunculata* Bak. f.: FPS 2: 360 (1952) {Didinga Mountains, Char, Mt. Lotuke}.
Didinga Mountains: Char, Mt. Lotuke, 1830 m., wooded grassland, 19.4.1939, *Myers* 10,930 (K).
General habitat range: in medium-altitude and montane grassland, evergreen bushland and along forest edges and in clearings.
General distribution: East Congo [previously Zaire] to Uganda and Kenya, south to Malawi, Zimbabwe and Mozambique.

Alepidea Delar.

Alepidea peduncularis A. Rich.
FTA 3: 7 (1877); FTEA, Umbelliferae: 20 (1989); UKWF: 166 (1994).
Syn.: *Alepidea sp.*: FPS 2: 359 (1952) {Imatong Mountains, Mt. Kinyeti}; JACKSON 1956: 368 & 370.
Imatong Mountains group, Sudan side: above Lomuleng, 2500 m., 25.7.1939, *Myers* 11,583 (K); Kipia, 2900 m., grassland and among

rocks, 4.7.1947, *MacLeay* 167 (BM); Mt. Kinyeti, 2870 m., grassland, 1935, *Thomas* 1859 (K); summit of Mt. Kinyeti, 3170 m., montane grassland between rocks, 17.6.1953, *Prowse* 316 (KHU); Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 833 (C, K, KHF); summit of Mt. Kinyeti, 3180 m., rocky ground at summit, 1.1.1939, *MacDonald* 30 (BM); summit of Mt. Kinyeti, 3187 m., rocky ground at summit, 14.11.1949, *Jackson* 915 (BM); summit of Mt. Kinyeti, 3180 m., 27.7.1939, *Myers* 11,646 (K).

Imatong Mountains group, Uganda side: without further locality, 2440 m., grassland, 4.1938, *Eggeling* 3535 (K); ridge above Aringa Valley, 2290 m., 6.1942, *Eggeling* 5058 (EA, MHU).

General habitat range: in medium-altitude and montane grassland, evergreen bushland and forest clearings.

General distribution: East Congo [previously Zaire] to Ethiopia, south to South Africa (East Cape Prov.).

Centella L.

Centella asiatica (L.) Urb.

FPNA 1: 697 (1948); FPS 2: 360 (1952); FWTA 1,2: 753 (1958); FC 10: 38 (1970); WICKENS 1976: 125; FTEA, Umbelliferae: 15 (1989); UKWF: 165 (1994); HYF: 208 (1997).

Syn.: *Hydrocotyle asiatica* L.: FTA 3: 6 (1877); FS: 237 (1929).

Imatong Mountains group, Sudan side: Talanga, on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 4.12.1980, *Friis & Vollesen* 688 (C, KHF).

General habitat range: in lowland, medium-altitude and montane habitats, usually grasslands and forest clearings.

General distribution: Senegal to Ethiopia, south to South Africa; widespread in most parts of the tropics.

Diplolophium Turcz.

Diplolophium africanum Turcz.

FPS 2: 361 (1952); FWTA 1,2: 755 (1958); FC 10: 60 (1970); WICKENS 1976: 125; FTEA, Umbelliferae: 81 (1989); UKWF: 168 (1994).

Syn.: *Diplolophium abyssinicum* (A. Rich.) Benth.: FTA 3: 17 (1877); FS: 237 (1929).

Imatong Mountains group, Sudan side: Palotaka, 1200 m., edge of forest, 23.1.1979, *Shigeta* 95 (EA); Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 29.11.1980, *Friis & Vollesen* 538 (C, KHF); 30. km. south of Hiliu along Katire road, no alt., 26.12.1983, *Kielland-Lund* 458 (C, NLH); Loyaru, 2440 m., scrub, 31.12.1935, *Thomas* 1895 (BM, K).

Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., path from Moimoi to Isoke, 1200 m., in abandoned cultivations, 22.1.1950, *Jackson* 1104 (BM, KHF).

General habitat range: in medium-altitude and montane grassland and woodland, persisting in disturbed places.

General distribution: Guinée, Nigeria, Central African Republic and Cameroon to Ethiopia, south to Tanzania.

Heracleum L.

Heracleum elgonense (Wolff) Bullock

FPS 2: 362 (1952) {Imatong Mountains, Mt. Kinyeti}; HEDBERG 1957: 139; FTEA, Umbelliferae: 123 (1989); UKWF: 170 (1994).

Imatong Mountains group, Sudan side: between Mt. Kinyeti and Kipia (3° 57' N, 32° 55' E), c. 2700 m., Hypericum scrub near edge of

swamp, 1.6.1950, *Jackson* 1536 (K); slope of Mt. Kinyeti, 2900 m., open glades in *Podocarpus latifolius* forest, 15.11.1949, *Jackson* 964 (BM); Mt. Kinyeti, 3140 m., 27.7.1939, *Myers* 11,661 (K, WM).

General habitat range: in montane grassland, woodland and forest clearings.

General distribution: South Sudan, Uganda and Kenya (Mt. Elgon).

Heteromorpha Cham. & Schlecht.

Heteromorpha trifoliata (Wendl.) Eckl. & Zeyh.

FTEA, Umbelliferae: 38 (1989); KTSL: 442 (1994).

Syn.: [*Heteromorpha arborescens* auct., non (Spreng.) Cham. & Schlecht.: FTA 3: 10 (1877); FPS 2: 363 (1952) {Imatong Mountains, Lomaru}; El Amin 1990: 347 {Imatong Mountains, Lomaru, North West Dongotona Mountains, Didinga Mountains, Nathilani, Nagichot}; HYF: 208 (1997)].

Imatong Mountains group, Sudan side: Lomaru, 1920 m., rocky ground, 28.12.1935, *Thomas* 1769 (BM, K).

Imatong Mountains group, Uganda side: Agoro, 1830 m., 12.1932, *Eggeling* 823 (MHU).

Lafit, Dongotona and Nangeya Mountains: north slope of Dongotona Mts., 1300 m., in scrub, 20.1.1950, *Jackson* 1074 (KHF).

Didinga Mountains: path from Nathilani to Nagichot, 1900 m., secondary bushland, 10.4.1949, *Jackson* 682 (FHO, KHF).

General habitat range: in lowland, medium-altitude and montane grassland and woodland, evergreen bushland and at forest edges.

General distribution: Cameroon to Ethiopia, south to South Africa (Cape Prov.); also in tropical Arabia.

Hydrocotyle L.

Hydrocotyle sipthorpioides Lam.

FWTA 1,2: 753 (1958); FC 10: 33 (1970); FTEA, Umbelliferae: 14 (1989); UKWF: 165 (1994); HYF: 208 (1997).

Syn.: *Hydrocotyle americana* L. var. *monticola* (Hook. f.) Hiern: FTA 3: 4 (1877).

Imatong Mountains group, Sudan side: Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* on moist slope along trail, 21.11.1980, *Friis & Vollesen* 387 (BR, C, K, KHF) & *Friis & Vollesen* 388 (C, K); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* on wet bank in forest, 8.11.1980, *Friis & Vollesen* 44 (C, K, KHF); on path from Mt. Kinyeti to Lowiliwili, 3000 m., in stunted *Podocarpus latifolius* forest, 15.11.1949, *Jackson* 943 (BM, WM).

General habitat range: in medium-altitude and montane grassland or in forest clearings.

General distribution: Guinée and Cameroon to Ethiopia, south to South Africa; also widespread in tropical Asia, including tropical Arabia, and introduced to North and South America.

Note. These specimens are generally larger than the East African material of the species, but they do fall within the morphological range of the species as treated in the Flora Zambesiaca.

Lefebvrea A. Rich.

Lefebvrea abyssinica A. Rich.

FTEA, Umbelliferae: 109 (1989); UKWF: 169 (1994).

Imatong Mountains group, Sudan side: Gilo, at bridge across Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* on wet bank in forest, 9.11.1980, *Friis & Vollesen* 95 (BR, C, K, KHF).

Imatong Mountains group, Uganda side: 4 km.

south-east of Lomwaga, no alt., tall-grass grassland on deep soil and with scattered trees, 18.7.1974, *Katende* 2140 (MHU).
General habitat range: in medium-altitude and montane grassland and evergreen bushland.
General distribution: Cameroon to Ethiopia, south to Angola, Zambia, Malawi, Zimbabwe and Mozambique. First record from the Sudan.

Peucedanum L.

Peucedanum dispersum C.C. Townsend
TOWNSEND 1987: 596; FTEA, Umbelliferae: 101 (1989).
Imatong Mountains group, Sudan side: Kipia, 2590 m., swampy grassland, 30.12.1935, *Thomas* 1877 (BM, ?K).
General habitat range: in montane grassland.
General distribution: South Sudan and Tanzania.

Peucedanum linderi Norman
FPNA 1: 713 (1948); FTEA, Umbelliferae: 105 (1989); UKWF: 169 (1994).
Imatong Mountains group, Sudan side: Lomuleng, 2650 m., mountain meadow, edge of *Podocarpus latifolius* forest, 26.7.1939, *Myers* 11,597 (K); slope of Mt. Kinyeti, 2900 m., undergrowth of *Podocarpus latifolius-Rapanea* forest, 15.11.1949, *Jackson* 965 (BM, WM); slope of Mt. Kinyeti, 2900 m., moist places in undergrowth of *Podocarpus latifolius-Dombeya torrida* forest, 16.11.1949, *Jackson* 979 (BM); summit of Mt. Kinyeti, 3170 m., 21.9.1940, *Tothill* in *Myers* 13,523 (K); summit of Mt. Kinyeti, 3190 m., 27.7.1939, *Myers* 11,637 (K, WM).
Imatong Mountains group, Uganda side: 5 km. south-east of Lomwaga, 1900 m., tall-grass grassland with trees, 18.7.1974, *Katende* 2192 (MHU).
General habitat range: in montane evergreen bushland, grassland and forest, especially clearings.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Malawi, Zimbabwe and Mozambique.

Pimpinella L.

Pimpinella hirtella A. Rich.
FTEA, Umbelliferae: 67 (1989); UKWF: 167 (1994).
Syn.: [*Pimpinella peregrina* auct., non L.: FTA 3: 15 (1877); FPS 2: 364 (1952) {Imatong Mountains, spur of Mt. Bira near Laboni}].
Imatong Mountains group, Sudan side: spur of Mt. Bira near Laboni, no alt., bamboo forest, 14.10.1938, *Myers* 9720 (K, WM); Gilo to Itibol, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* on moist slope along trail, 11.11.1980, *Friis & Vollesen* 163 (BR, C, K, KHF).
General habitat range: in montane grassland and evergreen bushland.
General distribution: Uganda to Ethiopia, south to Tanzania.

Pimpinella oreophila Hook. f.
FTA 3: 14 (1877); FPS 2: 363 (1952) {Imatong Mountains, Mt. Kinyeti}; FC 10: 67 (1970); FTEA, Umbelliferae: 66 (1989); UKWF: 167 (1994).
Imatong Mountains group, Sudan side: Mt. Kinyeti, 3050 m. ("1000 ft."), rocky summit, 30.12.1935, *Thomas* 1849 (BM, K); Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 832 (C, K, KHF); summit of Mt. Kinyeti, 3170 m., 21.9.1940, *Tothill* in *Myers* 13,522 (K); summit of Mt. Kinyeti, 3180 m., 27.7.1939, *Myers* 11, 862 (K); near summit, 3050 m., 12.2.1936, *Johnston* 1507 (K); summit of Mt. Kinyeti, 3187 m., short grass between rocks, 14.11.1949, *Jackson* 916 (BM, WM).
General habitat range: in montane grassland and heath-land.

General distribution: Cameroon to Ethiopia, south to Kenya.

Sanicula L.

Sanicula elata Buch.-Ham. ex D. Don
FWTA 1,2: 753 (1958); FC 10: 42 (1970); FTEA, Umbelliferae: 17 (1989); UKWF: 166 (1994); HYF: 208 (1997).
Syn.: *Sanicula europaea* L. var. *elata* (Buch.-Ham. ex D. Don) Wolff: FPNA 1: 698 (1948). [*Sanicula europaea* auct., non L.: FTA 3: 8 (1877); FPS 2: 364 (1952) {Imatong Mountains, near Itibol; Dongotona Mountains, near Aripiwa}].
Imatong Mountains group, Sudan side: Gilo, 1800 m., *Albizia* forest, 11.11.1949, *Jackson* 900 (BM); Gilo, 1850 m., edge of upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 8.11. 1980, *Friis & Vollesen* 9 (C); south-west of Itibol, 2100 m., forest, 2.8.1939, *Myers* 11,761 (K); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 59' N, 32° 53' E), 2200 m., in montane forest, 9.6.1984, *Kielland-Lund* 888 (NLH).
Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., Aripiwa, 2100 m., *Podocarpus latifolius* forest, 24.1.1950, *Jackson* 1108 (BM).
Didinga Mountains: Mt. Lotuke, 2600 m., undergrowth of *Podocarpus latifolius* forest, 30.3.1950, *Jackson* 1347 (BM).
General habitat range: in medium-altitude and montane forest.
General distribution: Cameroon to Ethiopia, south to South Africa (Transvaal, Natal, Cape Prov.); also in tropical Arabia ans widespread in Asia from the western Himalayas to Japan and south to Sumatra.

Steganotaenia Hochst.

Steganotaenia araliacea Hochst.
ITU. 440 (1952); FPS 2: 364 (1952); FWTA 1,2: 755 (1958); FC 10: 38 (1970); WICKENS 1976: 125; FTEA, Umbelliferae: 115 (1989); EL AMIN 1990: 348; KTSL: 443 (1994).
Syn.: *Peucedanum araliaceum* (Hochst.) Benth.: FTA 3: 21 (1877). *Peucedanum fraxinifolium* Hiern: FTA 3: 22 (1877); FS: 238 (1929).
Imatong Mountains group, Sudan side: Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees of *Terminalia laxiflora, T. brownii, Pterocarpus lucens, Combretum collinum* and *Vitex doniana* on rocky outcrop, 5.12.1980, *Friis & Vollesen* 705 (C, KHF); 25 km. south of Hiliu along Katire road, no alt., 26.12.1983, *Kielland-Lund* 460 (C, NLH); Katire to Gilo, near road to Itibol, 1400 m., wooded grassland with *Combretum molle, C. collinum, Entada abyssinica* and *Erythrina abyssinica,* the grasses *Pennisetum purpureum* and *Hyparrhenia rufa* dominant, 12.11.1980, *Friis & Vollesen* 172 (C).
Lafit, Dongotona and Nangeya Mountains: north end of Dongotona massif, (4° 14' N, 33° 06' E), 1300 m., woodland with *Bridelia scleroneura, Vitex doniana,* etc., no date, *Jackson* 1075 (FHO).
Didinga Mountains: Boya Hill, Karauili, 1200 m., rocky outcrop, 22.12.1982, *Fukui* 82-17 (EA).
General habitat range: in dry lowland, medium-altitude and montane deciduous bushland and woodland, often associated with rocks.
General distribution: Guinée to Ethiopia, south to South Africa (Transvaal).

Torilis Adans.

Torilis arvensis (Huds.) Link
FPS 2: 366 (1952); FWTA 1,2: 754 (1958); FC 10: 55 (1970); WICKENS 1976: 126; FTEA, Umbelliferae: 27 (1989); UKWF: 166 (1994).
subsp. **heterophylla** (Guss.) Thell.
FTEA, Umbelliferae: 28 (1989).
Imatong Mountains group, Sudan side: Gilo to Itibol, 1900 m., upland rain forest with *Albizia,*

Macaranga, Croton, and *Ocotea,* edge of forest on Steep bank, 11.11.1980, *Friis & Vollesen* 157 (BR, C, K, KHF).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., below peak of Mt. Lonyili, no alt., edge of forest, 4.12.1971, *Katende* 1389 (MHU).
General habitat range: in medium-altitude and montane forest, especially along edges, evergreen bushland and grassland, sometimes a weed in cultivations.
General distribution: Cameroon to Ethiopia and Somalia, south to Angola and South Africa; also from Mediterranean Region to South West Asia. Species as a whole also in central Europe and warm temperate Asia, introduced in North America.

Subclass **Metachlamydeae** Engl.

Order 57. **Ericales** Dumort.

Fam. 118. **Ericaceae** Juss.

Agauria (DC.) Hook. f.

Agauria salicifolia (Lam.) Oliv.
FTA 3: 483 (1877); FPNA 2: 14 (1947); ITU: 109 (1952); FWTA 2: 2 (1963); FC 11: 188 (1970); FZ 7,1: 158 (1983); EL AMIN 1990: 348 {Dongotona Hills}; SOMMERLATTE 1990: 262; KTSL: 443 (1994).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 20.11.1980, *Friis & Vollesen* 352 (C, KHF).
Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., slope of Mt. Emogadung, 2400 m., edge of gneiss dome, on steep rock, 21.1.1950, *Jackson* 1093 (FHO).
General habitat range: in montane evergreen bushland, woodland and at forest edges. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in *Hagenia* woodland above 2500 m.
General distribution: Cameroon to Ethiopia, south to Mozambique, Malawi, Zambia and Angola; also in Madagascar.

Blaeria L.

Blaeria spicata Hochst. ex A. Rich.
FTA 3: 484 (1877); FS: 238 (1929); FPS 2: 366 (1952); FC 11: 191 (1970); WICKENS 1976: 126.
Syn.: *Blaeria breviflora* Engl.: FPS 2: 367 (1952) {Imatong Mountains, Mt. Kinyeti}.
Imatong Mountains group, Sudan side: summit of Mt. Kinyeti, 3170 m., 21.9.1940, *Tothill* in *Myers* 13,520 (K); summit of Mt. Kinyeti, 3180 m., ericaceous bushland, 15.11.1949, *Jackson* 937 (BM); Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 838 (BR, C, K, KHF).
General habitat range: in montane bushland and grassland.
General distribution: Guinée (Mt. Nimba), Nigeria and Cameroon, Bioko (Fernando Po), South Sudan and Ethiopia, south to Tanzania.

Erica L.

Erica arborea L.
FTA 3: 483 (1877); FPNA 2: 18 (1947); ITU: 109 (1952); FPS 2: 367 (1952) {Imatong Mountains, Mt. Kinyeti}; JACKSON 1956: 370; HEDBERG

1957: 140; EL AMIN 1990: 349 {Imatong Mountains, Mt. Kinyeti}; SOMMERLATTE 1990: 348; UKWF: 170 (1994); KTSL: 444 (1994); HYF: 129 (1997).

Imatong Mountains group, Sudan side: Mt. Kinyeti, 2650 m., in ravine forest, 30.12.1935, *Thomas* 1874 (BM, K); on the Itibol-Kipia track, 2590 m., 20.9.1940, *Myers* 13,483 (K); Mt. Kinyeti, 3050 m., rocky summit, 30.12.1935, *Thomas* 1842 (BM, K).

General habitat range: in montane forest, woodland and bushland. According to JACKSON 1956 and SOMMERLATTE 1990 it occurs at the Imatong Mountains as a dominant shrub in thicket above 3000 m.

General distribution: Sudan and Ethiopia through eastern Africa, East Congo [previously Zaire] and Rwanda, south to North Tanzania; also in tropical Arabia and in North Africa, the Middle East and Europe, especially widespread in the Mediterranean.

Order 58. **Ebenales** Engl.

Fam. 119. **Ebenaceae** Guerke

Diospyros L.

Diospyros abyssinica (Hiern) F. White
FWTA 2: 10 (1963); FC 11: 29 (1970); FG 18: 29 (1970); FZ 7,1: 263 (1983); FAC, Ebenac.: 19 (1987); EL AMIN 1990: 349; KTSL: 445 (1994); FTEA, Ebenac.: 21 (1996).
subsp. **abyssinica**
FZ 7,1: 264 (1983); FAC, Ebenac.: 20 (1987); ; KTSL: 445 (1994); FTEA, Ebenac.: 22 (1996).
Syn.: *Maba abyssinica* Hiern: FTA 3: 516 (1877); FS: 239 (1929); ITU: 107 (1952); FPS 2: 370 (1952).

Imatong Mountains group, Sudan side: above Lotti rest house, no alt., 8.6.1939, *Andrews* 1694 (K, WM); Torit district, no alt., 10.6.1939, *Andrews* 1770 (K); Talanga to Upper Talanga, 1300 m., medium-altitude rain forest with *Diospyros abyssinica, Garcinia buchananii, Uvariopsis congoensis, Turraea floribunda, Manilkara butugi,* etc., 10.12.1980, *Friis & Vollesen* 795 (C, K) & 796 (C, K, KHF); Upper Talanga, 1800 m., *Albizia-Croton-Macaranga* forest, 4.4.1984, *Sommerlatte* 48 (EA).

Imatong Mountains group, Uganda side: Lomwaga, 2440 m., *Syzygium-Olea-Croton* forest, 4.4.1945, *Greenway & Hummel* 7270 (EA, FHO, K, MHU).

Didinga Mountains: Nagichot, 1980 m., 25.4. 1939, *Myers* 11,122 (WM, ?K, not traced).

General habitat range: in lowland, intermediate and montane forest.

General distribution: Mali and Guinée to Ethiopia, south to Mozambique and Zimbabwe. The two other subspecies represent local forms within this general area of distribution.

Diospyros mespiliformis Hochst. ex A. Rich.
FTA 3: 518 (1877); FS: 239 (1929); ITU: 105 (1952); FPS 2: 367 (1952); FWTA 2: 12 (1963); FC 11: 110 (1970); FG 18: 110 (1970); WICKENS 1976: 126; FZ 7,1: 286 (1983); FAC, Ebenac.: 87 (1987); EL AMIN 1990: 351; KTSL: 447 (1994); FTEA, Ebenac.: 40 (1996); HYF: 130 (1997).

Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, compound, 700 m., in shallow soil near rocks, 2.12.1983, *Kielland-Lund* 166 (C, NLH); from Kinyeti Valley also recorded on labels by *Jackson.*

Didinga Mountains: Boya Hill, Kimatong, 700 m., rocky outcrop, 9.1.1985, *Fukui* 84-171 (EA).

General habitat range: in lowland and medium-altitude woodland and evergreen bushland, often among rocks and in riverine vegetation.

General distribution: Senegal to Ethiopia, south to Namibia and South Africa (Transvaal); also in tropical Arabia.

Diospyros scabra (Chiov.) Cufod.
KTSL: 447 (1994); FTEA, Ebenac.: 18 (1996).

Syn.: [*Maba buxifolia* auct., non (Rottb.) Juss.: ITU: 108 (1952)].
Didinga Mountains: near Kapoeta, on road towards Loelli, 610 m., in *Acacia senegal* bushland, 1.3.1947, *Jackson* 193 (FHO, KHF); near Kapoeta Regional District Centre (4° 47' N, 33° 35' E), 650-670 m., in open deciduous bushland, 13.6.1984, *Kielland-Lund* 940 (C, NLH).
General habitat range: in lowland and medium-altitude dry deciduous bushland and woodland on rocky slopes, and in riverine vegetation.
General distribution: South East Sudan, South West Ethiopia, North East Uganda and North West Kenya.

Euclea L.

Euclea divinorum Hiern
FTA 3: 513 (1877); FPS 2: 370 (1952) {Didinga Mountains, Nagichot}; ITU: 105 (1952); FSA 26: 94 (1963); FZ 7,1: 299 (1983); FAC, Ebenac.: 98 (1987); El Amin 1990: 351 {Didinga mountains, Nagichot}; KTSL: 448 (1994); FTEA, Ebenac.: 47 (1996).
Syn.: [*Euclea lanceolata* auct., E. Mey.: FPNA 2: 45 (1947).]
Didinga Mountains: Nagichot, 2010 m., little copses on basalt plateau, 28.10.41, *Myers* 14,198 (K).
General habitat range: in lowland, medium-altitude and montane evergreen bushland, forest edges, and as clumps in deciduous woodland and wooded grassland.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Namibia and South Africa; also in Socotra.

Euclea racemosa Murray
FSA 26: 97 (1963); FZ 7,1: 296 (1983); FAC, Ebenac.: 95 (1987); KTSL: 449 (1994); FTEA, Ebenac.: 46 (1996); HYF: 130 (1997).
subsp. **schimperi** (A. DC.) F. White
FZ 7,1: 297 (1983); FAC, Ebenac.: 95 (1987); KTSL: 449 (1994); FTEA, Ebenac.: 49 (1996); HYF: 130 (1997).
Syn.: *Euclea schimperi* (A. DC.) Dandy: FPS 2: 370 (1952). *Euclea kellau* A. Rich.: FTA 3: 514 (1877); FS: 238 (1929); FPNA 2: 45 (1947); El Amin 1990: 353 {Didinga Mountains}. *Euclea mildbraedii* Guerke: FPNA 2: 46 (1947). *Euclea latidens* Stapf: ITU: 107 (1952). *Euclea urijiensis* Hiern: ITU: 107 (1952).
Imatong Mountains group, Sudan side: Logoforok, 800 m., in woodland with scattered *Tamarindus*, 2.2.1949, *Jackson* 618 (FHO, KHF).
Didinga Mountains: Naligede, 1770 m., 24.4. 1939, *Myers* 10,980 (K); Longumu Valley north of Chukudum (4° 20' N, 33° 23' E), 900 m., 20.12.1983, *Kielland-Lund* 393 (C, NLH); Boya Hill, Karauili, 1200 m., woodland on rocky outcrop, 22.12.1982, *Fukui* 82-14 (EA).
General habitat range: in lowland, medium-altitude and montane habitats, most often semi-deciduous woodland or evergreen bushland.
General distribution: Egypt south through eastern Africa and East Congo [previously Zaire], south to Zimbabwe; also in Madagascar and tropical Arabia (Yemen and Oman). Species as a whole also widespread in South Africa.

Fam. 120. **Sapotaceae** Juss.

Chrysophyllum L.

Chrysophyllum albidum G. Don
FTA 3: 500 (1877); ITU: 391 (1952); FPS 2: 374 (1952); Jackson 1956: 353 {Talanga, Lotti, Laboni}; FWTA 2: 27 (1963); FTEA, Sapotac.: 9 (1968); El Amin 1990: 354; Sommerlatte 1990: 140; KTSL: 452 (1994).
Syn.: *Gambeya albida* (G. Don) Aubrév. & Pellegr.: FC 2: 112 (1964).
Imatong Mountains group, Sudan side: Laboni, no alt., forest, 17.2.1953, *Jackson* 1735 (KHF); Laboni, 1100 m., forest, 22.12.1935, *Thomas*

1739 (BM, K); near Lotti rest house, no alt., 8.6.1939, *Andrews* 1708 (K), & 9.6.1939, *Andrews* 1733 (K); Lotti, no alt., forest, 27.2.1939, *Myers* 10,554 (K); Talanga, 900 m., closed forest with *Celtis, Entandophragma*, etc., 8.7.1949, *Jackson* 836 (FHO, destroyed); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, 27.11.1980, *Friis & Vollesen* 504 (C, K, KHF); Talanga, 1000 m., closed forest close to stream, 17.3.1950, *Jackson* 1230 (FHO, WM).

General habitat range: in lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as one of the dominant species in the climax lowland forest, and in medium-altitude forest.

General distribution: Sierra Leone to South Sudan, Uganda and Kenya, south to Congo [previously Zaire].

Chrysophyllum gorungosanum Engl.

FWTA 2: 28 (1963); FTEA, Sapotac.: 10 (1968); FZ 7,1: 213 (1983); EL AMIN 1990: 354 {Laboni}; KTSL: 452 (1994)

Syn.: *Chrysophyllum fulvum* S. Moore: ITU: 392 (1952); FPS 2: 374 (1952) {Imatong Mountains}; JACKSON 1956: 365 {Imatong Mountains, *Podocarpus-Olea-Syzygium* forest}.

Imatong Mountains group, Sudan side: no specimen seen; recorded by FPS 2 (1952) and JACKSON 1956 from the Imatong Mountains, but these records might represent a misidentification of one of the two other species; however, *Chrysophyllum gorungosanum* is known from forests in North West Uganda, and the occurrence of this species in the study area cannot be excluded.

Chrysophyllum muerense Engl.

FTEA, Sapotac.: 15 (1968); SOMMERLATTE 1990: 144.

Syn.: *"Chrysophyllum sp. nov.* sensu ITU": ITU: 394 (1952); JACKSON 1956: 353 {Talanga, Lotti, Laboni}.

Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, 27.11.1980, *Friis & Vollesen* 498 (BR, C, K, KHF), & 9.12.1980, *Friis & Vollesen* 786 (BR, C, EA, FT, K, KHF).

General habitat range: in lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in the canopy of lowland forest, and in medium-altitude forest.

General distribution: South Sudan, Uganda and East Congo [previously Zaire].

Chrysophyllum natalense Sond.

ITU: 392 (1952); JACKSON 1956: 353 {Talanga, Lotti}.

Imatong Mountains group, Sudan side: Material from the study area has not been traced at the herbaria consulted (EA, FHO, K or MHU). The record of JACKSON 1956 could refer to *Englerophytum oblanceolatum* (S. Moore) Pennington (syn.: *Chrysophyllum natalense* auct., non Sond.: ITU: 392 (1952)), known from adjacent parts of Uganda, but could equally well represent a misidentification of the somewhat similar species *Chrysophyllum muerense.*

Manilkara Adans.

Manilkara butugi Chiov.

FTEA, Sapotac.: 67 (1968); EL AMIN 1990: 355 {Imatong Mountains, Talanga, Didinga Mountains}; SOMMERLATTE 1990: 176; KTSL: 454 (1994).

Syn.: *Manilkara sp.* (= *Myers* 11,745): JACKSON 1956: 356. *Manilkara sp.* (= *Eggeling* 1512): ITU: 399 (1952).

Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum*

albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa and *Milicia excelsa*, 27.11.1980, *Friis & Vollesen* 489 (C, K, KHF), & *Friis & Vollesen* 493 (C, KHF); Talanga, 1000 m., forest, 17.3.1950, *Jackson* 1228 (K); gallery forest above Lobeke, 1910 m., 1.8.1939, *Myers* 11,745 (K); between Talanga and Upper Talanga, 1300 m., medium-altitude rain forest with *Diospyros abyssinica, Garcinia buchananii, Uvariopsis congoensis, Turraea floribunda, Manilkara butugi*, etc., common canopy tree, 7.12.1980, *Friis & Vollesen* 740 (BR, C, K, KHF); Katire, at Kinyeti River, 1000 m., in gallery forest, 8.2. 1950, *Jackson* 1125 (KHF); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea*, 9.11. 1980, *Friis & Vollesen* 76 (C, K, KHF).

Didinga Mountains: Char, Mt. Lotuke, 1830 m., dominant in gallery forest, 19.4.1939, *Myers* 10,913 (K); head of Loghak River Valley, 1800 m., ravine forest with *Celtis africana* and *Albizia*, 11.4.1949, *Jackson* 689 (FHO).

General habitat range: in medium-altitude and montane forest, including riverine forest. According to JACKSON 1956 it occurs at the Imatong Mountains in medium-altitude forest; according to SOMMERLATTE 1990 it occurs as a tree in lowland forest, but is more common in medium-altitude forest.

General distribution: South Sudan, Ethiopia, Uganda and Kenya.

Manilkara multinervis (Bak.) Dubard
ITU: 399 (1952); FWTA 2: 20 (1963); FC 2: 28 (1964); FTEA, Sapotac.: 69 (1968); EL AMIN 1990: 355 {Imatong Mountains, Katire Hills}.
subsp. **schweinfurthii** (Engl.) Hemsl.
FTEA, Sapotac.: 70 (1968).
Syn.: *Manilkara schweinfurthii* (Engl.) Dubard: FPS 2: 374 (1952).

Imatong Mountains group, Sudan side: Kinyeti Valley, near Kinyieti River 8 km. south of Hiliu towards Katire, 700 m., 7.12.1983, *Kielland-Lund* 246 (C, NLH); 10 km. north of Katire, 850 m., rocky woodland with *Combretum collinum, C. molle* and *Annona senegalensis*, 3.3.1982, *Friis & Vollesen* 1088 (BR, C, EA, K); hills above Katire, 1300 m., edge of gallery forest, 9.2.1950, *Jackson* 1147 (KHF).

General habitat range: in lowland and medium-altitude deciduous woodland, often associated with rocky outcrops, and in riverine forest.

General distribution: Central African Republic, South Sudan, South West Ethiopia, Uganda and North East Congo [previously Zaire]. Species as a whole west to Guinée.

Mimusops L.

Mimusops bagshawei S. Moore
ITU: 400 (1952); JACKSON 1956: 353 {Talanga}; FTEA, Sapotac.: 57 (1968); EL AMIN 1990: 356; SOMMERLATTE 1990: 174; KTSL: 455 (1994).
Syn.: *Mimusops sp.*: JACKSON 1956: 353 {Lotti}.

Imatong Mountains group, Sudan side: Lotti, 940-1220 m., in forest, 2.1.1933, *Trought* s.n. (K); Lotti, 1000 m., in closed forest, 24.6.1953, *Jackson* 3037 (FHO).

Didinga Mountains: Nagichot, 1920 m., in closed forest, 13.9.1940, *Myers* 13,475 (K, WM).

General habitat range: in medium-altitude and montane forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in lowland forest, but is more common in medium-altitude forest.

General distribution: South Sudan, Uganda, West Kenya and Tanzania.

Mimusops kummel A. DC.
FTA 3: 508 (1877); FS: 240 (1929); ITU: 400 (1952); FWTA 2: 20 (1963); FTEA, Sapotac.: 54 (1968); FZ 7,1: 237 (1983); EL AMIN 1990: 356 {Imatong Mountains, Katire, Talanga, Didinga mountains, Char, Mt. Lotuke}; KTSL: 456 (1994).
Syn.: *Mimusops djurensis* Engl.: FS: 240 (1929); FPS 2: 375 (1952); *Mimusops fragrans* (Bak.)

Engl.: FPS 2: 375 (1952) {Didinga Mountains, Char, Mt. Lotuke}.
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, 27.11.1980, *Friis & Vollesen* 499 (C, K, KHF), & 4.12.1980, *Friis & Vollesen* 675 (C, K, KHF); Talanga, 1000 m., second storey of closed forest, 8.3.1950, *Jackson* 1195 (FHO, KHF); Kinyeti Valley, 6 km. south of Hiliu on the road to Imeila, 750 m., riparian scrub along small temporary stream, 27.2.1982, *Friis & Vollesen* 1046 (BR, C, K, KHF); Katire, 1300 m., in gallery forest, 9.2.1950, *Jackson* 1141 (FHO, KHF).
Imatong Mountains group, Uganda side: Lututuru, no alt., common at stream-sides, 2.1938, *Eggeling* 3515 (FHO, MHU); Lututuru, 1520 m., in narrow riverine fringe, 3.4.1945, *Greenway & Hummel* 7266 (EA, K, MHU).
Didinga Mountains: Char, Mt. Lotuke, 1830 m., valley forest, 19.4.1939, *Myers* 10,917 (K, WM); Mt. Lotuke, along the River Kurumo, 1600 m., in relic gallery forest, 29.3.1950, *Jackson* 1298 (BM, K, WM).
General habitat range: in lowland, medium-altitude and montane riverine forest and ground water forest, occasionally in closed forest.
General distribution: Ghana to Ethiopia, south to Malawi and Tanzania.

Mimusops sp.
Imatong Mountains group, Sudan side: Talanga to Upper Talanga, 1300 m., medium-altitude rain forest with *Diospyros abyssinica, Garcinia buchananii, Uvariopsis congoensis, Turraea floribunda, Manilkara butugi*, etc., 10.12.1980, *Friis & Vollesen* 793 (C, K, KHF).

Pouteria Aubl.
Syn.: *Aningeria* Aubrév. & Pellegr.

Pouteria adolfi-friederici (Engl.) A. Meeuse
KTSL: 649 (1994)
Syn.: *Aningeria adolfi-friederici* (Engl.) Robyns & Gilbert: FPNA 2: 43 (1947); ITU: 385 (1952); JACKSON 1956: 357; FTEA, Sapotac.: 28 (1968); FZ 7,1: 218 (1983); SOMMERLATTE 1990: 302; KTSL: 450 (1994).
subsp. **adolfi-friederici**
Syn.: *Aningeria adolfi-friederici* (Engl.) Robyns & Gilbert subsp. *adolfi-friederici:* FTEA, Sapotac.: 30 (1968); KTSL: 451 (1994).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1700 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* restricted to the slopes along the river, 11.3.1982, *Friis & Vollesen* 1172 (C).
Imatong Mountains group, Uganda side: without further locality, 2290 m., *Podocarpus latifolius* forest, 4.1938, *Eggeling* 3554 (K, MHU); above Lututuru, 1830 m., montane forest, 2.1938, *Eggeling* 3499 (K, MHU); at the head-waters of Aringa River, 2440 m., near river in *Syzygium-Podocarpus latifolius* forest, 7.4.1945, *Greenway & Hummel* 7308 (EA, K, MHU).
General habitat range: in medium-altitude and montane forest. According to both JACKSON 1956 and SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in medium-altitude forest, *Albizia* forest and mixed *Podocarpus latifolius* forest below 2400 m., especially in valleys and near rivers.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Uganda and Kenya. Species as a whole also in Tanzania, Zambia and Malawi.

Pouteria altissima (A. Chev.) Baehni
KTSL: 649 (1994)
Syn.: *Aningeria altissima* (A. Chev.) Aubrév. & Pellegr.: ITU: 386 (1952); FPS 2: 371 (1952) {Laboni}; JACKSON 1956: 353, 357 {Talanga, Lot-

ti, Laboni}, 357 {transitional forest}; FG 1: 149 (1961); FWTA 2: 24 (1963); FC 2: 134 (1964); FTEA, Sapotac.: 27 (1968); FZ 7,1: 218 (1983); EL AMIN 1990: 353; SOMMERLATTE 1990: 154; KTSL: 451 (1994). *Hormogyne altissima* A. Chev.: CHIPP 1929: 190.

Imatong Mountains group, Sudan side: Laboni, 1220 m., in closed forest in association with *Coffea canephora*, 8.2.1929, *Chipp* 37 (K); Lotti, no alt., 28.2.1939, *Myers* 10,565 (K); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, 3.12.1980, *Friis & Vollesen* 648 (C, K); Talanga, 1100 m., in deep ravine in forest, 28.2.1950, *Jackson* 1167 (FHO, KHF); gallery forest near Issore, 1340 m., 3.8.1939, *Myers* 11,784 (K); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea*, 15.11.1980, *Friis & Vollesen* 240 (C, K, KHF).

General habitat range: in lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in lowland and medium-altitude forest.

General distribution: Guinée to Ethiopia, south to Zambia and Tanzania.

Synsepalum (A.DC.) Daniel
Syn.: *Pachystela* Pierre ex Engl.,

Synsepalum brevipes (Bak.) Pennington
PENNINGTON 1991: 248; KTSL: 649 (1994).
Syn.: *Pachystela brevipes* (Bak.) Engl.: ITU: 402 (1952); FPS 2: 375 (1952); JACKSON 1956: 353 {Talanga, Lotti}; FG 1: 110 (1961); FWTA 2: 28 (1963); FC 2: 83 (1964); FTEA, Sapotac.: 36 (1968); FZ 7,1: 225 (1983); EL AMIN 1990: 356 {Imatong Mountains, near Katire}; SOMMERLATTE 1990: 182; KTSL: 457 (1994). *Sideroxylon brevipes* Bak.: FTA 3: 503 (1877).

Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, 26.11.1980, *Friis & Vollesen* 485 (BR, C, K, KHF), & 29.11.1980, *Friis & Vollesen* 544 (C, K, KHF); Talanga, 1000 m., in forest with *Khaya grandifoliola* and *Pouteria altissima*, 7.3.1950, *Jackson* 1193 (FHO, WM); Talanga to Upper Talanga, 1100 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* lower canopy tree, 7.12.1980, *Friis & Vollesen* 745 (BR, C, K, KHF).

General habitat range: in lowland and medium-altitude forest, especially frequent in riverine forest and in moist places in closed forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in lowland forest, especially in damp places.

General distribution: Guinea Bissau to Sudan, Uganda and Kenya, south to Angola, Zambia, Zimbabwe, Malawi and Mozambique.

Vitellaria C.F. Gaertn.
Syn.: *Butyrospermum* Kotschy

Vitellaria paradoxa C.F. Gaertn.
Syn.: *Butyrospermum paradoxum* (C.F. Gaertn.) Hepper: FWTA 2: 21 (1963); FTEA, Sapotac.: 49 (1968); EL AMIN 1990: 353; SOMMERLATTE 1990: 90. *Butyrospermum parkii* (G. Don) Kotschy: FC 2: 49 (1964).
subsp. **nilotica** (Kotschy) A.N. Henry, V. Chithra & N.C. Nair
HENRY, CHITHRA & NAIR 1983: 286.
Syn.: *Butyrospermum niloticum* Kotschy: FPS 2: 373 (1952). *Butyrospermum paradoxum* (C.F. Gaertn.) Hepper subsp. *niloticum* (Kotschy) Hepper: FTEA, Sapotac.: 49 (1968). *Butyrospermum parkii* (G. Don) Kotschy var. *niloticum* (Kotschy) Pierre: FS: 239 (1929); ITU: 388 (1952).

Imatong Mountains group, Sudan side: Kinyeti Valley, 6 km. south of Hiliu on the road to Imeila, 750 m., edge of riparian scrub along small,

temporary stream, surroundings open wooded grassland, 27.2.1982, *Friis & Vollesen* 1047 (C, KHF); Kit, 900 m., flat grassland with scattered *Combretum* and *Terminalia*, 19.12.1984, *Sommerlatte* 12 (EA).

General habitat range: in lowland and medium-altitude wooded grassland, often in clumps of trees. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a small to medium sized tree in lowland woodland.

General distribution: Sudan, Ethiopia, Uganda and East Congo [previously Zaire]. Species as a whole west to Guinea Bissau.

Order 59. **Myrsinales** Bromhead

Fam. 121. **Myrsinaceae** R. Br.

Embelia Burm. f.

Embelia schimperi Vatke

FPNA 2: 32 (1947); ITU: 269 (1952); FWTA 2: 32 (1963); FAC, Myrsinac.: 46 (1980); FZ 7,1: 206 (1983); FTEA, Myrsinac.: 13 (1984); EL AMIN 1990: 357 {Imatong Mountains, Gilo}; KTSL: 459 (1994).

Syn.: *Embelia abyssinica* Bak.: FTA 3: 497 (1877).

Imatong Mountains group, Sudan side: near Mt. Nargi, 1830-2130 m., 14.6.1939, *Andrews* 1956 (K); Gilo, further data lost, *Jackson* 1406 (KHF); Gilo to Itibol, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 11.11.1980, *Friis & Vollesen* 142 (BR, C, K, KHF).

General habitat range: in medium-altitude and montane forest and evergreen bushland.

General distribution: Sierra Leone and Nigeria and Cameroon to Ethiopia, south to Angola, Zambia, Zimbabwe and Malawi.

Maesa Forssk.

Maesa lanceolata Forssk.

FTA 3: 492 (1877); FS: 240 (1929); ITU: 269 (1952); FPS 2: 377 (1952) {Imatong Mountains}; JACKSON 1956: 362-364; FWTA 2: 33 (1963); WICKENS 1976: 126; FAC, Myrsinac.: 6 (1980); FZ 7,1: 199 (1983); FTEA, Myrsinac.: 3 (1984); EL AMIN 1990: 357 {Imatong Mountains, Gilo}; SOMMERLATTE 1990: 244; KTSL: 459 (1994); HYF: 131 (1997).

Syn.: *Maesa lanceolata* Forssk. var. *mildbraedii* (Gilg & Schellenb.) Lebrun: FPNA 2: 30 (1947). *Maesa rufescens* A.DC.: FPNA 2: 29 (1947).

Imatong Mountains group, Sudan side: without further locality, 2130 m., 27.1.1976, *Howard* IM 4 (K, KHF); near Mt. Garia, 1830-2130 m., 13.6.1939, *Andrews* 1865 (K, WM); Issore-Lomariti path, 1570 m., 4.8.1939, *Myers* 11,800 (K); Ibahin to Itibol, Itibol, 1860 m., edge of forest, 19.12.1935, *Thomas* 1701 (BM, K); Itibol, 1980 m., 19.8.1940, *Myers* 13,419 (K, WM); below Lomuleng, 1980 m., 29.8.1939, *Myers* 11,719 (K, WM).

Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).

General habitat range: in medium-altitude and montane forest, especially in clearings and along edges, in evergreen bushland and colonising montane wooded grassland and grassland. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a shrub or a small tree to 8 m in *Acacia abyssinica* woodland, *Hagenia abyssinica* woodland and *Loudetia*-dominated grassland and woodland; it is most common below 2400 m., and is a common successor to *Rubus* tangle in the succession from grassland to forest.

General distribution: Guinée and Sierra Leone to Ethiopia, south to South Africa (Transvaal, Natal); also in Madagascar and tropical Arabia.

Maesa welwitschii Gilg
FTEA, Myrsinac.: 5 (1984).
Syn.: *Maesa schweinfurthii* Mez: FPNA 2: 28 (1947); FPS 2: 377 (1952); FAC, Myrsinac.: 3 (1980). *Maesa zenkeri* Gilg.
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber in forest, 29.11.1980, *Friis & Vollesen* 517 (BR, C, EA, K, KHF).
General habitat range: in lowland and medium-altitude forest and evergreen bushland, often as a coloniser of woodland.
General distribution: Cameroon to Congo [previously Zaire], South Sudan and Uganda, south to Angola.

Myrsine L.

Myrsine africana L.
FTA 3: 493 (1877); FPNA 2: 33 (1947); FAC, Myrsinac.: 50 (1980); FZ 7,1: 201 (1983); FTEA, Myrsinac.: 6 (1984); El Amin 1990: 357; KTSL: 460 (1994); HYF: 131 (1997).
Didinga Mountains: Mt. Lotuke, 1900 m., grassland in shade of rocks, 29.3.1950, *Jackson* 1327 (BM).
General habitat range: in medium-altitude and montane evergreen bushland and at forest edges, sometimes colonising wooded grassland.
General distribution: Ethiopia and North Somalia south to Angola and South Africa (Cape Prov.); also in the mountains of tropical Asia, including tropical Arabia, to South West China.

Rapanea Aubl.

Rapanea melanophloeos (L.) Mez
FAC, Myrsinac.: 55 (1980); FZ 7,1: 204 (1983); FTEA, Myrsinac.: 8 (1984); Sommerlatte 1990: 240; KTSL: 461 (1994).
Syn.: *Rapanea pellucido-striata* Gilg & Schellenb.: FPNA 2: 34 (1947); FAC, Myrsinac.: 53 (1980). *Rapanea runssorica* (Gilg) Mez: FPNA 2: 35 (1947); FAC, Myrsinac.: 59 (1980). *Rapanea pulchra* Gilg & Schellenb.: FPNA 2: 35 (1947); El Amin 1990: 358 {Imatong Mountains}. *Rapanea neurophylla* (Gilg) Mez: FPS 2: 377 (1952) {Imatong Mountains}; FWTA 2: 31 (1963). *Rapanea rhododendroides* (Gilg) Mez: FPNA 2: 33 (1947); ITU: 271 (1952).
Imatong Mountains group, Sudan side: Dumuso Ridge, 2350 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum,* at forest edge towards *Hagenia abyssinica* woodland, 8.3.1982, *Friis & Vollesen* 1137 (BR, C, K, KHF); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak, (3° 58' N, 32° 54' E), 3100 m., in upper elfin forest belt, 10.6.1984, *Kielland-Lund* 910 (C, NLH).
Imatong Mountains group, Uganda side: without further locality, 2620 m., in *Podocarpus latifolius* forest, 4.1938, *Eggeling* 3603 (EA, K); Lomwaga, 2620 m., in dense *Hagenia* woodland and scattered in *Podocarpus latifolius* forest, 5.4.1945, *Greenway & Hummel* 7286 (EA, K, MHU).
General habitat range: in medium-altitude and montane forest and evergreen bushland, especially at the upper altitudinal limit of forest. According to Sommerlatte 1990 it occurs at the Imatong Mountains as a small tree in *Hagenia abyssinica* woodland and in mixed *Podocarpus latifolius* forest between 2400 and 2800 m.
General distribution: Cameroon to Ethiopia, south to South Africa; also in Madagascar and Comoro Islands.

Order 60. **Loganiales** Lindl.

Fam. 122. **Loganiaceae** R. Br. ex Mart.

Anthocleista Afzel. ex R. Br.

Anthocleista grandiflora Gilg
LEEUWENBERG 1961: 28; FAC, Loganiac.: 4 (1979); FZ 7,1: 329 (1983); KTSL: 462 (1994).
Syn.: *Anthocleista zambesiaca* Bak.: FTA 4,1: 540 (1903); FTEA, Loganiac.: 10 (1960); EL AMIN 1990: 359. *Anthocleista pulcherrima* Gilg: FTA 4,1: 540 (1903); ITU: 165 (1952); FPS 2: 380 (1956) {Imatong Mountains}.
Imatong Mountains group, Sudan side: Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* in small forest swamp along river, 15.11.1980, *Friis & Vollesen* 230 (C), & 20.11.1980, *Friis & Vollesen* 349 (C, K, KHF).
Imatong Mountains group, Uganda side: upper reach of Aringa River, 1990 m., riverine vegetation near stream, 6.4.1945, *Hummel* 661 (FHO, MHU).
General habitat range: in lowland an medium-altitude swamp forest.
General distribution: Cameroon and Congo [previously Zaire] to Sudan, south to Angola and South Africa (Transvaal); also in the Comoro Islands.

Nuxia Comm. ex Lam.

Nuxia congesta R. Br. ex Fresen.
FTA 4,1: 512 (1903); FTEA, Loganiac.: 44 (1960); FWTA 2: 46 (1963); FC 12: 38 (1972); FG 19: 38 (1972); FAC, Loganiac.: 39 (1979); FZ 7,1: 349 (1983); EL AMIN 1990: 359 {Imatong Mountains, Gilo, Itibol-Kipia track, Dongotona Hills}; SOMMERLATTE 1990: 242; KTSL: 464 (1994); HYF: 210 (1997).
Syn.: *Nuxia sambesina* Gilg: FTA 4,1: 514 (1903); CHIPP 1929: 190; *Lacnopylis congesta* (Fresen.) C.A. Sm.: FPNA 2: 59 (1947); ITU: 166 (1952); FPS 2: 381 (1952) {Imatong Mountains, Loyaru, also Itibol to Kipia}; *Lacnopylis compacta* C.A. Sm.: ITU: 166 (1952); FPS 2: 381 (1952) {Imatong Mountains, above Kipia}. *Nuxia mannii* Gilg: FTA 4,1: 512 (1903).
Imatong Mountains group, Sudan side: without further locality, 2140 m., grassy clearing in forest, 27.1.1976, *Howard* IM 1 (K); Upper Talanga, 2000 m., edge of mixed *Podocarpus latifolius* forest, 28.4.1984, *Sommerlatte* 72 (EA); Itibol, 1860 m., forest, 19.12.1935, *Thomas* 1694 (BM); Loyaru, 1920 m., scrub, 28.12.1935, *Thomas* 1775 (BM, K); Loyaru, 2320 m., edge of forest, 29.12.1935, *Thomas* 1778 (BM); above Loyaru, 1830 m., 2.1936, *Johnston* 1431 (K); Itibol, 1990 m., *Hagenia abyssinica* woodland, colonised by *Dombeya* and *Maesa,* 31.1.1947, *Jackson* 171 (FHO); on the Itibol-Kipia track, 2590 m., 20.9.1940, *Myers* 13,485 (K, WM); above Kipia, 2740 m., one of the commonest components of the forest in the high mountain ravines, 1929, *Chipp* 95 (KHF).
Imatong Mountains group, Uganda side: Lomwaga Mts., 2630 m., *Hagenia* forest, 5.4.1945, *Greenway & Hummel* 7282 (EA, K, MHU).
Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., north slope, 1400 m., in *Combretum* woodland with *Annona senegalensis* and *Acacia seyal,* 20.1.1950, *Jackson* 1071 (FHO, KHF).
General habitat range: in montane forest and evergreen bushland. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a pioneer tree commonly found between 1500 and 2500 m on forest edges and in shrub grassland.
General distribution: Guinée, Sierra Leone, Nigeria, and Cameroon to Ethiopia, south to Botswana and South Africa (Transvaal, Natal, Cape Prov.); also in tropical Arabia.

Strychnos L.

Strychnos innocua Del.
FTA 4,1: 532 (1903); FS: 241 (1929); ITU: 167 (1952); FPS 2: 381 (1952); FTEA, Loganiac.: 25 (1960); FWTA 2: 41 (1963); LEEUWENBERG 1969: 138; FC 12: 88 (1972); FG 19: 88 (1972); WICKENS 1976: 126; FAC, Loganiac.: 91 (1979); FZ 7,1: 361 (1983); EL AMIN 1990: 361 {Imatong Mountains}; SOMMERLATTE 1990: 124; KTSL: 465 (1994).
Syn.: *Strychnos xerophila* Bak.: FTA 4,1: 534 (1903); FS: 242 (1929). *Strychnos penduliflora* Bak.: FTA 4,1: 531 (1903); FS: 241 (1929).
Imatong Mountains group, Sudan side: Kinyeti Valley, below hill west of Hiliu (4° 17' N, 32° 40' E), no alt., 14.1.1984, *Kielland-Lund* 631 (C, NLH); near Palwar, towards Talanga, 1000 m., on rocky ground in *Combretum* wooded grassland, 26.4.1984, *Sommerlatte* 70 (EA); Molongori, 750 m., 11.6.1939, *Andrews* 1805 (K, WM).
Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).
General habitat range: in lowland and medium-altitude deciduous bushland and woodland. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree on rocky sites in lowland woodland.
General distribution: Senegal and Mali to Ethiopia, south to Angola, Zimbabwe, Malawi and Mozambique.

Strychnos mitis S. Moore
ITU: 167 (1952); JACKSON 1956: 354 {Lotti, Laboni}; FTEA, Loganiac.: 21 (1960); FWTA 2: 43 (1963); LEEUWENBERG 1969: 190; FAC, Loganiac.: 108 (1979); FZ 7,1: 367 (1983); EL AMIN 1990: 362 {Imatong Mountains, Gilo}; KTSL: 466 (1994).
Syn.: *Strychnos holstii* Gilg: FTA 4,1: 529 (1903); FPS 2: 383 (1952) {Imatong Mountains, Lorienton}. [*Strychnos henningsii* auct., non Gilg: EL AMIN 1990: 361 {Imatong Mountains, Lorienton}].
Imatong Mountains group, Sudan side: Gilo, 1900 m., *Podocarpus latifolius-Olea capensis* forest with *Polyscias fulva*, 6.9.1948, *Jackson* 313 (FHO, KHF).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1800 m., in closed forest, 16.5.1972, *Synnott* 1006 (EA, MHU).
General habitat range: in medium-altitude and montane forest, sometimes riverine.
General distribution: South Sudan to Ethiopia, south to Zimbabwe.

Strychnos spinosa Lam.
FTA 4,1: 536 (1903), pro parte; FS: 242 (1929); ITU: 169 (1952); FPS 2: 383 (1952); FTEA, Loganiac.: 17 (1960); FWTA 2: 41 (1963); FC 12: 111 (1972); FG 19: 111 (1972); WICKENS 1976: 126; FAC, Loganiac.: 125 (1979); FZ 7,1: 371 (1983); EL AMIN 1990: 362; KTSL: 467 (1994).
Syn.: *Strychnos gracillima* Gilg: FTA 4,1: 536 (1903); FS: 242 (1929); FPS 2: 383 (1952). *Strychnos spinosa* Lam. var. *pubescens* Bak.: FTA 4,1: 537 (1903); FPS 2: 383 (1952) {Imatong Mountains, Lorima}.
Imatong Mountains group, Sudan side: without further locality, 1420 m., 12.6.1939, *Andrews* 1827 (K); Palotaka, no alt., 1979, *Shigeta* 176 (?EA, identified and listed by M.G. Gilbert, not traced); Kinyeti Valley, near the foot of the mountains east of Hiliu, no alt., 29.1.1984, *Kielland-Lund* 1004 (C, NLH); Lorima, 1100 m., woodland, 23.12.1935, *Thomas* 1749 (BM, K).
Imatong Mountains group, Uganda side: Agoro, no alt., 3.1935, *Eggeling* 1715 (MHU).
Didinga Mountains: Naligede, 1770 m., 22.4.1939, *Myers* 11,009 (K).
General habitat range: in lowland and medium-altitude deciduous bushland and woodland.
General distribution: Senegal to Sudan south to Angola and South Africa (Transvaal, Natal, Cape Prov.); also Comoro Islands, Madagascar, Mascarene Islands.

Fam. 123. **Oleaceae** Hoffmanns. & Link

Chionanthus L.
Syn.: *Linociera* Sw. ex Schrad.

Chionanthus mildbraedii (Gilg & Schellenb.) Stearn
KTSL: 468 (1994).
Syn.: *Olea mildbraedii* (Gilg & Schellenb.) Knobl.: FPNA 2: 52 (1947); FTEA, Oleac.: 7 (1952). *Linociera latipetala* M.R.F. Taylor: ITU: 285 (1952); FAC, Oleac.: 28 (1973). *Linociera giordanoi* Chiov.
Imatong Mountains group, Sudan side: at path from Gilo to Mt. Garia, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* in ravine with *Pouteria adolfi-friederici* and *Cyathea manniana,* 19.3.1982, *Friis & Vollesen* 1258 (C, K, KHF).
General habitat range: in medium-altitude and montane forest.
General distribution: Cameroon to Ethiopia, south to Tanzania. First record from the Sudan.

Jasminum L.

Jasminum abyssinicum Hochst. ex DC.
FTA 4,1: 11 (1902); FPNA 2: 55 (1947); FPS 2: 384 (1952) {Imatong Mountains, Atiaro}; FTEA, Oleac.: 18 (1952); FAC, Oleac.: 11 (1973); FZ 7,1: 308 (1983); ; El Amin 1990: 363 {Imatong Mountains, Atiaro, Torit}; UKWF: 171 (1994); KTSL: 468 (1994).
Imatong Mountains group, Sudan side: above Gilo Pool (4° 02' N, 32° 50' E), 15.1.1984, *Kielland-Lund* 640 (NLH); Gilo, 1800 m., scrub in stream valley, 11.11.1949, *Jackson* 898 (FHO); Gilo, 1900 m., in montane forest with *Podocarpus latifolius,* 8.1.1950, *Jackson* 1042 (FHO, KHF); Gilo, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* climber at forest edge, 19.2.1982, *Friis & Vollesen* 962 (BR, C, K, KHF); Itibol to Ibahin, Atiaro, 1950 m., *Acacia abyssinica* low forest, 18.12.1935, *Thomas* 1659 (BM, K).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, no alt., 6.12.1970, *C.R. Field* 25 (EA).
General habitat range: in medium-altitude and montane forest and evergreen bushland.
General distribution: East Congo [previously Zaire] to Ethiopia, south to South Africa (Transvaal, Natal).

Jasminum dichotomum Vahl
FTA 4,1: 9 (1902); FPNA 2: 57 (1947); FPS 2: 385 (1952); FTEA, Oleac.: 22 (1952); FWTA 2: 50 (1963); FAC, Oleac.: 28 (1973); Wickens 1976: 127; FZ 7,1: 310 (1983); El Amin 1990: 363; UKWF: 171 (1994); KTSL: 469 (1994).
Syn.: *Jasminum ternifolium* Bak.: FTA 4,1: 9 (1902); FS: 243 (1929). *Jasminum bukobense* Gilg: FTA 4,1: 9 (1902). *Jasminum gardeniodorum* Gilg ex Bak.: FTA 4,1: 8 (1902).
Didinga Mountains: north of Naperatang Valley (4° 19' N, 33° 30' E), 1700 m., 18.12.1983, *Kielland-Lund* 384 (NLH).
General habitat range: in lowland and medium-altitude woodland, wooded grassland, bushland and along forest margins.
General distribution: Senegal to Sudan and Ethiopia, south to Angola and Zambia.
Note: This species has been recorded by El Amin 1990: 363 from Imatong Mountains, as well as from two localities in Darfur province. While the latter records are confirmed by specimens and other observations, we have no confirmation of the occurrence of this species from the Imatong Mountains group.

Jasminum pauciflorum Benth.
FTA 4,1: 6 (1902); FPNA 2: 58 (1947); FTEA, Oleac.: 28 (1952); FWTA 2: 50 (1963); FAC, Oleac.: 17 (1973); FZ 7,1: 315 (1983); UKWF: 171 (1994); KTSL: 470 (1994).

Syn.: *Jasminum schweinfurthii* Gilg: FTA 4, 7 (1902); FS: 242 (1929).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber in forest, 17.3.1982, *Friis & Vollesen* 1229 (C, K, KHF).
General habitat range: in lowland and medium-altitude forest.
General distribution: Sierra Leone to South Sudan, Uganda and Kenya, south to Tanzania and Zambia. First record from the Sudan.

Jasminum schimperi Vatke
FTA 4,1: 4 (1902); FZ 7,1: 318 (1983); UKWF: 171 (1994); KTSL: 470 (1994).
Syn.: *Jasminum eminii* Gilg: FTA 4,1: 6 (1902); FPNA 2: 57 (1947); FTEA, Oleac.: 28 (1952); FAC, Oleac.: 16 (1973); El Amin 1990: 363 {Imatong Mountains}.
Imatong Mountains group, Sudan side: south of Torit, 650 m., in tangle on termite mound in *Lannea-Dalbergia melanoxylon* woodland, 24.6.1949, *Jackson* 817 (FHO); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber in forest, 6.12.1980, *Friis & Vollesen* 719 (BR, C, EA, K, KHF).
General habitat range: in lowland, medium-altitude forest, evergreen bushland and grasslands.
General distribution: Ethiopia, South Sudan, Uganda, Kenya and Tanzania.

Jasminum streptopus E. Mey.
FCap 4: 481 (1907); FZ 7,1: 315 (1983); KTSL: 471 (1994); UKWF: 171 (1994).
Syn.: *Jasminum parvifolium* Knobl.: FTA 4: 8 (1902); FTEA, Oleac.: 26 (1952); FAC, Oleac.: 18 (1973). *Jasminum swynnertonii* S. Moore: FTEA, Oleac.: 27 (1952). *Jasminum bussei* Gilg & Schellenb.: FTEA, Oleac.: 29 (1952). *Jasminum angustitubum* Knobl.: FTEA, Oleac.: FTEA, Oleac.: 27 (1952). *Jasminum biflorum* Knobl.: FTEA, Oleac.: 25 (1952). *Jasminum stolzeanum* Knobl.: FTEA, Oleac.: 27 (1952). *Jasminum ellipticum* Knobl.: FTEA, Oleac.: 26 (1952).
Imatong Mountains group, Sudan side: plain south east of Torit, between Torit and Ngarama (4° 22' N, 32° 37' E), no alt., 28.5.1984, *Kielland-Lund* 771 (C, NLH); Kinyeti Valley, Hiliu, in compound (4° 16' N, 32° 48' E), no alt., 30.5.1984, *Kielland-Lund* 804 (C, NLH).
General habitat range: in lowland woodland and wooded grassland, often on rocky outcrops or termite mounds.
General distribution: East Congo [previously Zaire] and Burundi to Ethiopia and Somalia, south to South Africa.

Olea L.

Olea europaea L.
FTA 4,1: 18 (1902); FS: 243 (1929); KTSL: 472 (1994); HYF: 258 (1997).
subsp. **cuspidata** (Viv.) P.S. Green
HYF: 259 (1997).
Syn.: *Olea chrysophylla* Lam.: FTA 4,1: 18 (1902); FS: 244 (1929); FPNA 2: 53 (1947); Jackson 1951: 340 {Didinga Mountains, near Nagichot}; ITU: 286 (1952); FPS 2: 385 (1952); FTEA, Oleac.: 9 (1952); FAC, Oleac.: 22 (1973). *Olea africana* Miller: El Amin 1990: 365 {Didinga Mountains, Iwowa}. *Olea europaea* L. subsp. *africana* (Mill.) P.S. Green: FZ 7,1: 324 (1983); KTSL: 472 (1994).
Didinga Mountains: Iwowa, 1700 m., in dry forest with *Vepris nobilis, Rhus, Maytenus,* etc., 8.4.1949, *Jackson* 698 (FHO, KHF).
General habitat range: in dry medium-altitude and montane forest and evergreen bushland.
General distribution: East Congo [previously Zaire] to Ethiopia and North Somalia, south to South Africa (Transvaal, Orange Free State,

Natal, Cape Prov.); also in tropical Arabia. Species as a whole also in North India and Central Asia.

Olea capensis L.
FZ 7,1: 324 (1983); KTSL: 471 (1994).
subsp. **hochstetteri** (Bak.) Friis & P.S. Green
SOMMERLATTE 1990: 298; KTSL: 471 (1994)
Syn.: *Olea hochstetteri* Bak.: FTA 4,1: 17 (1902); FS: 243 (1929); FPNA 2: 52 (1947); ITU: 286 (1952); FPS 2: 386 (1952) {Imatong Mountains; Didinga Mountains, Mt. Lotuke}; FTEA, Oleac.: 10 (1952); FWTA 2: 49 (1963); FAC, Oleac.: 23 (1973); EL AMIN 1990: 366 {Imatong Mountains, Gilo, Itibol}.
Imatong Mountains group, Sudan side: without further locality [probably near Gilo], 1980 m., 27.1.1976, *Howard* IM 5 (K, KHF); Upper Talanga, 2000 m., mixed *Podocarpus latifolius* forest with *Syzygium*, 27.3.1984, *Sommerlatte* 17 (EA); at Ngairigi River, no alt., 30.1.1976, *Howard* IM 15 (K, KHF); Gilo, common between 1700 and 2700 m., 6.1953, *Jackson* 2998 (FHO, KHF); Itibol, no alt., 5.2.1940, *Turner* s.n. (KHF); Itibol, 2070 m., 19.8.1940, *Myers* 13,422 (K); south-west of Itibol, 2040 m., *Podocarpus latifolius* forest, 2.8.1939, *Myers* 11,759 (K, WM); along path from Bushbuck Hill to Mt. Konoro, 2300 m., upland forest with *Podocarpus latifolius*, *Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, 5.6.1982, *Friis & Vollesen* 1106 (BR, C, K, KHF); Lomuleng, 2440 m., *Podocarpus latifolius* forest, 25.7.1939, *Myers* 11,576 (K); Kipia, 2650 m., *Podocarpus latifolius* forest, 28.7.1939, *Myers* 11,689 (K).
Imatong Mountains group, Uganda side: Aringa River, 2140 m., forest, 7.4.1945, *Hummel* 672 (FHO).
Didinga Mountains: Mt. Lotuke, 2070 m., 20.4.1939, *Myers* 10,966 A (K).
General habitat range: in medium-altitude and montane forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in mixed *Podocarpus latifolius* forest up to 2700 m.
General distribution: Cameroon to Ethiopia, south to South Africa (Transvaal, Natal).
subsp. **welwitschii** (Knobl.) Friis & P.S. Green
KTSL: 471 (1994).
Syn.: *Olea welwitschii* (Knobl.) Gilg & Schellenb.: JACKSON 1951: 340; FAC, Oleac.: 24 (1973); EL AMIN 1990: 366 {Dongotona Mountains}. *Steganthus welwitschii* (Knobl.) Knobl.: ITU: 288 (1952); FPS 2: 387 (1952) {Dongotona Mountains}; FTEA, Oleac.: 12 (1952).
Lafit, Dongotona and Nangeya Mountains: no specimen seen; recorded by FPS from the Dongotona Mountains.
General habitat range: in medium-altitude and montane forest.
General distribution: East Congo [previously Zaire] to Ethiopia, south to South Africa.

Schrebera Roxb.

Schrebera golungensis Welw.
FAC, Oleac.: 3 (1973).
Syn.: *Schrebera arborea* A. Chev.: FTEA, Oleac.: 2 (1952); FWTA 2: 49 (1963). *Schrebera macrantha* Gilg & Schellenb.: FPNA 2: 49 (1947); ITU: 288 (1952); FPS 2: 387 (1952); FTEA, Oleac.: 2 (1952); JACKSON 1956: 353 {Talanga, Lotti, Laboni}; EL AMIN 1990: 367; SOMMERLATTE 1990: 166.
Imatong Mountains group, Sudan side: Talanga to Upper Talanga, 1100 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, canopy tree, 10.12. 1980, *Friis & Vollesen* 791 (C, (carpological collection only, accession no. 15951), KHF).
General habitat range: in lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in lowland forest.
General distribution: Senegal and Ivory Coast to

South Sudan and Uganda, south to Congo [previously Zaire] and Angola.

Order 61. **Apocynales** Bromhead

Fam. 124. **Apocynaceae** Juss.

Acokanthera G. Don

Acokanthera schimperi (A. DC.) Oliv.
FTA 4,1: 93 (1902); FPS 2: 388 (1952); EL AMIN 1990: 367; KTSL: 475 (1994); HYF: 212 (1997).
Didinga Mountains: no material seen; recorded by FPS and EL AMIN 1990.
General habitat range: Intermediate and montane dry forest, evergreen bushland and woodland.
General distribution: Ethiopia, Somalia, East Africa; also in tropical Arabia.
Note. The record of this species from Didinga Mountains, Naligede, in *Andrews* (FPS 2: 388 (1952), repeated by EL AMIN 1990 (p. 367) is based on a misinterpretation of *Myers* 10,985, which is *Carissa edulis* Vahl. Nearest record of *A. schimperi* is in the Karamoja region of Uganda, at Lokitonyala (*Wilson* 800).

Adenium Roem. & Schult.

Adenium obesum (Forssk.) Roem. & Schult.
FS: 247 (1929); FWTA 2: 76 (1965); WICKENS 1976: 127; EL AMIN 1990: 369; UKWF: 172 (1994); KTSL: 475 (1994); HYF: 212 (1997).
Syn.: *Adenium honghel* A. DC.: FTA 4,1: 229 (1902); FS: 247 (1929); FPS 2: 389 (1952). *Adenium speciosum* Fenzl: FTA 4,1: 228 (1902); FS: 247 (1929); FPS 2: 390 (1952). *Adenium coetaneum* Stapf: FTA 4,1: 227 (1902); FPS 2: 390 (1952).
Imatong Mountains group, Sudan side: south of Torit, c. 600 m., woodland, 20.12.1938, *Macdonald* 4 (BM); south of Torit, 610 m., woodland, 14.4.1930, *Snowden* 1674 (BM); south of Torit, 610 m., open woodland, 5.2.1947, *Jackson* 179 (FHO); north-eastern side of mountains, 10 km. north-west of Molongori on track to Ngarama, 700 m., dense *Acacia seyal-Balanites aegyptiaca* woodland on clay, 10.3.1982, *Friis & Vollesen* 1157 (C); Kinyeti Valley, Hiliu, near compound, 700 m., 30.11.1983, *Kielland-Lund* 120 (C, NLH).
Imatong Mountains group, Uganda side: Agoro, no alt., dry hillside, 12.1932, *Eggeling* 838 (EA, MHU); Agoro, 1370 m., dry scrub, 13.11.1945, *Thomas* 4367 (EA, K); Agoro, 1370 m., on rocky slope, 5.12.1945, *Dawkins* 129 (EA, FHO, MHU).
Didinga Mountains: Boya Hill, Kimatong, 700 m., open woodland, 17.11.1983, *Fukui* 83-9 (EA).
General habitat range: in deciduous woodland and bushland.
General distribution: Egypt, Sudan, Ethiopia and Somalia south to North Tanzania; also in tropical Arabia. Recorded from West Africa (Senegal to Cameroon), but in that part of Africa often grown as an ornamental, and doubtfully indigenous.

Alstonia R. Br.

Alstonia boonei De Wild.
FPS 2: 390 (1952); ITU: 24 (1952); JACKSON 1956: 353 {Talanga, Lotti}; FWTA 2: 68 (1965); EL AMIN 1990: 369; SOMMERLATTE 1990: 164.
Syn.: *Alstonia congensis* Engl.: FTA 4,1: 121 (1902); FS: 246 (1929); FWTA 2: 68 (1963).
Imatong Mountains group, Sudan side: Lotti, 1040 m., in closed forest, tall tree to 30 m., 26.12.1935, *Thomas* 1761 (BM, K); between Talanga and Upper Talanga, 1100 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* uncom-

mon canopy tree, 7.12.1980, *Friis & Vollesen* 742 (C).
General habitat range: in lowland and medium-altitude forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in lowland and medium-altitude forest.
General distribution: Senegal to Ethiopia, south to Congo [previously Zaire] and Uganda.

Carissa L.

Carissa edulis (Forssk.) Vahl: FTA 4,1: 89 (1902); FS: 245 (1929); FPNA 2: 72 (1947); FPS 2: 390 (1952); FWTA 2: 54 (1965); WICKENS 1976: 127; FZ 7,2: 399 (1985); EL AMIN 1990: 371; UKWF: 172 (1994); KTSL: 478 (1994); HYF: 212 (1997). [*Acokanthera schimperi* auct., non (A. DC.) Oliv.: FPS 2: 388 (1952) {Didinga Mountains, Naligede}].
Imatong Mountains group, Sudan side: Loa, Moliandro village west of Kerepi (3° 54' N, 31° 54' E), no alt., 5.6.1984, *Kielland-Lund* 848 (C, NLH); Kinyeti Valley, Hiliu, no alt., 13.3.1984, *Kielland-Lund* 1008 (C, NLH); Gilo, lower southern slope of Mt. Konoro, 2100 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum,* at forest edge towards *Loudetia arundinacea* grassland, 2.3.1982, *Friis & Vollesen* 1079 (C, K, KHF).
Imatong Mountains group, Uganda side: 2 km. east of Lututuru, near a rivulet, 1400 m., in open woodland, 17.2.1969, *Lye* 2096 (MHU).
Didinga Mountains: north of Chukudum (4° 15' N, 33° 27' E), 1100 m., 20.12.1983, *Kielland-Lund* 420 (C, NLH); north of Naperatang Valley (4° 19' N, 33° 30' E), 1700 m., 18.12.1983, *Kielland-Lund* 385 (NLH); Naligede 1770 m., 21.4.1939, *Myers* 10,985 (K); north of Duguru village, Nagichot (4° 17' N, 33° 35' E), 2000 m., 18.12.1983, *Kielland-Lund* 371 (C, NLH).
General habitat range: in lowland, medium-altitude and montane habitats, often at forest edges, on termitaria and in riverine vegetation.
General distribution: Guinée to Ethiopia and Kenya, south to Namibia and South Africa (Transvaal); also in Madagascar, tropical Arabia and India; cultivated in China (see Li, Leeuwenberg & Middleton 1995: 146).

Funtumia Stapf

Funtumia elastica (Preuss) Stapf
FTA 4,1: 191 (1902); FPNA 2: 79 (1947); FPS 2: 392 (1952); ITU: 27 (1952); JACKSON 1956: 353 {Talanga, Lotti, Laboni}; FWTA 2: 74 (1963); EL AMIN 1990: 371.
Imatong Mountains group, Sudan side: no specimen seen; recorded by JACKSON 1956 from lowland rain forest at the Imatong Mountains.
General habitat range: in lowland forest and moist woodland.
General distribution: Guinée to Sudan, south to Congo [previously Zaire] and Uganda.

Landolphia P. Beauv.

Landolphia buchananii (Hall. f.) Stapf
FTA 4,1: 35 (1902); FZ 7,2: 409 (1985); EL AMIN 1990: 373 {Imatong Mountains, Gilo}; KTSL: 481 (1994).
Syn.: *Landolphia ugandensis* Stapf: FTA 4,1: 121 (1904); FPS 2: 395 (1952) {Imatong Mountains, Mt. Itibol}.
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* climber in forest, 17.2.1982, *Friis & Vollesen* 925 (C, K, KHF); Gilo, 1900 m., in montane forest, 20.1.1949, *Jackson* 598 (KHF); Mt. Itibol, 1950 m., forest, 15.6.1939, *Andrews* 2005 (K, WM).
General habitat range: in medium-altitude and montane forest, often riverine.

General distribution: East Congo [previously Zaire] to Ethiopia, south to Angola, Zambia, Zimbabwe, Malawi and Mozambique.

Oncinotis Benth.

Oncinotis pontyi Dubard
De Kruif 1985: 28, 30.
Imatong Mountains group, Sudan side: Lotti, near rest house, no alt., forest, 9.6.1939, *Andrews* 1732 (K).
General habitat range: in lowland forest.
General distribution: Ivory Coast to South Sudan and Uganda.

Oncinotis tenuiloba Stapf
FTA 4,1: 222 (1902); FZ 7,2: 493 (1985); KTSL: 482 (1994).
Syn.: *Oncinotis inandensis* J. M. Wood & Evans
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, climber in forest, 6.12.1980, *Friis & Vollesen* 721 (BR, C, K, KHF); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea*, climber in open part of forest and at the Ngairigi River, 20.11.1980, *Friis & Vollesen* 355 (BR, C, K, KHF); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea*, climber in open part of forest and at the Ngairigi River, 17.2.1982, *Friis & Vollesen* 926 (C, carpological collection only, accession no. 15946).
General habitat range: in lowland and medium-altitude forest, often in riverine habitats.
General distribution: Cameroon and Central African Republic to Ethiopia and Kenya, south to South Africa (Natal, Cape Prov.). First record from the Sudan.

Rauvolfia L.

Rauvolfia caffra Sond.
FTA 4,1: 110 (1902); ITU: 30 (1952); FWTA 2: 69 (1965); FZ 7,2: 460 (1985); UKWF: 172 (1994); KTSL: 483 (1994).
Syn.: *Rauvolfia oxyphylla* Stapf: FS: 245 (1929); FPS 2: 396 (1952); Jackson 1956: 354 {Talanga}; El Amin 1990: 374.
Imatong Mountains group, Sudan side: without further locality, 1410 m., 12.6.1939, *Andrews* 1824 (K); Kinyeti Valley, above Katire, near Lofoha forest ranger post, 1600 m., in small patch of medium-altitude forest in rocky ravine, 7.3.1982, *Friis & Vollesen* 1121 (C, K, KHF).
Imatong Mountains group, Uganda side: Agoro, no alt., river bank, 3.1935, *Eggeling* 1725 (K, MHU); Agoro, 1830 m., river bank, 1.1934, *Brassnett* in *Dawkins* 1461 (EA, K, MHU); Lututuru, no alt., 4.1945, *Hummel* 667 (MHU); Lomwaga, no alt., *Combretum* woodland, 27.1. 1964, *Mwanga* 1 (MHU).
General habitat range: in lowland and medium-altitude forest, sometimes in riverine forest.
General distribution: Ghana to Sudan, Uganda and Kenya, south to Angola and South Africa (East Cape Prov.).

Rauvolfia vomitoria Afzel.
FTA 4,1: 115 (1902); FS: 245 (1929); FPNA 2: 78 (1947); FPS 2: 396 (1952); ITU: 30 (1952); FWTA 2: 69 (1963); El Amin 1990: 374 {Yambio, Lotti}.
Imatong Mountains group, Sudan side: Lotti, no alt., forest, 9.6.1939, *Andrews* 1741 (K); Lotti, 1000 m., in rather open forest, 26.3.1950, *Jackson* 1274 (K, WM); Talanga, 1100 m., in immature forest with *Albizia zygia,* 7.3.1950, *Jackson* 1190 (FHO, K).
General habitat range: in lowland and medium-altitude forest.
General distribution: Senegal to Sudan and Uganda, south to Tanzania.

Saba (Pichon) Pichon

Saba comorensis (Bojer) Pichon
El Amin 1990: 375 {Yei, Imatong Mountains, Loka}; UKWF: 172 (1994); KTSL: 484 (1994).
var. **florida** (Benth.) K. Schum.
Syn.: *Saba florida* Benth.: FS: 244 (1929); Jackson 1956: 354 {Talanga}. *Saba florida* (Benth.) Bullock: FWTA 2: 61 (1963); Wickens 1976: 127. *Landolphia florida* Benth.: FTA 4,1: 38 (1902); FPNA 2: 74 (1947). *Landolphia comorensis* (Bojer) K. Schum. var. *florida* (Benth.) K. Schum.: FPS 2: 394 (1952).
Imatong Mountains group, Sudan side: Talanga, 900 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber, 1.3.1982, *Friis & Vollesen* 1061 (C, K, KHF); Kinyeti Valley, at river 1 km. north of Hiliu, 700 m., banks of seasonal river, 3.12. 1983, *Kielland-Lund* 177 (C, NLH); Imeila forest, 700 m., in gallery forest, 26.1.1949, *Jackson* 579 (FHO); Katire, at Kinyeti River, 1070 m., in riverine vegetation, 15.12.1935, *Thomas* 1565 (BM, K); Katire, 1100 m., gallery forest, 8.2.1950, *Jackson* 1137 (FHO); Jebel Lulir, 910-1220 m., 12.6.1939, *Andrews* 1819 (K, WM).
General habitat range: in lowland and medium-altitude forest.
General distribution: Mali and Guinée to Ethiopia, south to Angola and Zimbabwe (species as a whole).

Tabernaemontana L.
Syn.: *Conopharyngia* G. Don

Tabernaemontana pachysiphon Stapf
FWTA 2: 66 (1963); FZ 7,2: 440 (1985); KTSL: 486 (1994).
Syn.: *Conopharyngia pachysiphon* (Stapf) Stapf: FTA 4,1: 145 (1902). *Conopharyngia holstii* (K. Schum.) Stapf: FTA 4,1: 146 (1902); FS: 247 (1929); FPS 2: 392 (1952); ITU: 26 (1952); Jackson 1956: 344 {Laboni}. *Tabernaemontana holstii* K. Schum.: El Amin 1990: 375 {Laboni}.
Imatong Mountains group, Sudan side: Laboni, no alt., forest, 14.2.1951, *Jackson* 1728 (KHF).
General habitat range: in lowland and medium-altitude forest, often at edges and in riverine habitats.
General distribution: Ghana to Sudan, Uganda and Kenya, south to Angola and Tanzania.
Note. The quoted *Jackson* specimen is sterile; the identification published by Jackson 1956 is based on the vernacular name.

Fam. 125. **Asclepiadaceae** R. Br.

Aspidoglossum E. Mey.

Aspidoglossum angustissimum (K. Schum.) Bullock
FWTA 2: 92 (1963); UKWF: 374 (1974).
Syn.: *Schizoglossum angustissimum* K. Schum.: FTA 4,1: 357 (1902); FS: 251 (1929); FPS 2: 416 (1952).
Imatong Mountains group, Sudan side: Mt. Baghanj, 1830-2140 m., 13.6.1939, *Andrews* 1889 (K).
Imatong Mountains group, Uganda side: Lututuru, 5.6.1963, *Kertland* s.n. (K, MHU).
General habitat range: in medium-altitude and montane grassland and wooded grassland.
General distribution: Cameroon to South Sudan, south to Zimbabwe.

Brachystelma R. Br.

Brachystelma lineare A. Rich.
FTA 4,1: 470 (1903); FPS 2: 402 (1952) {Imatong Mountains}; UKWF: 184 (1994).
Imatong Mountains group, Uganda side: Aringa River watershed, 2440 m., rock pavement with *Aeollanthus sp.,* 7.4.1945, *Greenway & Hummel* 7313 (EA, K).

General habitat range: in medium-altitude and montane grassland and bushland.
General distribution: South Sudan, Ethiopia, North East Uganda, and North Kenya.
Note. The basis of the record from the Sudan side of the Imatong Mountains in FPS 2, p. 402, has not been traced.

Brachystelma sp. ?nov.
Imatong Mountains group, Sudan side: spur of Mt. Konoro towards Gilo, 2100 m., *Loudetia arundinacea* grassland with scattered trees on shallow soil, recently burnt, 14.3.1982, *Friis & Vollesen* 1202 (C).

Buckollia Venter & Verhoeven

Buckollia tomentosa (E.A. Bruce) Venter & Verhoeven
VENTER & VERHOEVEN 1994: 98.
Syn.: *Tacazzea tomentosa* E.A. Bruce
Imatong Mountains group, Uganda side: Agoro, no alt., open woodland, 3.1935, *Eggeling* 1704 (K, holotype; MHU, isotype).
General habitat range: in lowland and medium-altitude woodland, bushland and thicket.
General distribution: North Uganda and South West Ethiopia.

Calotropis R. Br.

Calotropis procera (Willd.) Aiton
FTA 4,1: 294 (1902); FS: 251 (1929); ITU: 37 (1952); FPS 2: 402 (1952); FWTA 2: 91 (1963); WICKENS 1976: 127; EL AMIN 1990: 377; UKWF: 177 (1994); KTSL: 490 (1994); HYF: 215 (1997).
Imatong Mountains group, Sudan side: without further locality, no alt., 1947, *Maxwell Forbes* 92 (K).
Imatong Mountains group, Uganda side: Agoro, no alt., open bush, 12.1932, *Eggeling* 830 (MHU); Agoro, no alt., open ground near rest house, 5.12.1945, *Dawkins* 128 (MHU).
Didinga Mountains: near Keiala (Chukudum; 4° 15' N, 33° 27' E), 1100 m., 22.12.1983, *Kielland-Lund* 445 (NLH).
General habitat range: in lowland subdesert grassland and open deciduous bushland, usually in disturbed sites.
General distribution: Senegal and Mauritania to Sudan, Ethiopia and Somalia, south to Zimbabwe; also in North Africa and Arabia, and extending to Pakistan and India, and in Central and South America (introduced).

Caralluma R. Br.

Caralluma acutangula (Decne.) N.E. Br.
FTA 4,1: 483 (1903); UKWF: 185 (1994); HYF: 222 (1997).
Didinga Mountains: 2 km. east of Kidepo River, no alt., 27.8.1940, *Myers* 13,461 (?K, not traced); 16 km. west of Kapoeta, no alt., 23.8.1940, *Myers* 13,438 (K); 13 km. north of Kapoeta, no alt., thorn scrub, 7.9.1940, *Myers* 13,459 (K).
General habitat range: in lowland dry deciduous bushland.
General distribution: South Sudan, Ethiopia, Somalia, North East Uganda, and Kenya; also in tropical Arabia.

Ceropegia L.

Ceropegia abyssinica (A. Rich.) Decne.
FTA 4,1: 462 (1903); UKWF: 183 (1994).
Imatong Mountains group, Sudan side: Mt. Dumusum [= Dumuso], no alt., montane grassland, 9.1981, *van Nordvijk* s.n. (K, photo).
General habitat range: in medium-altitude and montane woodland and grassland.
General distribution: South Sudan and Ethiopia through eastern Africa and East Congo [previously Zaire] to Malawi and Zambia.

Ceropegia meyeri-johannis Engl.
FTA 4,1: 449 (1903); UKWF: 183 (1994).
var. **angiensis** (De Wild.) H. Huber
Imatong Mountains group, Uganda side: 1 km. south of Aringa River (3° 44' N, 32° 55' E), 1750 m., between rocks in montane grassland, 11.6.1973, *Katende* 1892 (EA, MHU); 4 km. south-east of Lomwaga, 1500 m., in tall-grass grassland, 18.7.1974, *Katende* 2155 (MHU) & 2174 (MHU).
General habitat range: in medium-altitude woodland, grassland and thicket.
General distribution: Uganda and Kenya. Species as a whole from Uganda, Kenya, through East Congo [previously Zaire] and eastern Africa, south to Zimbabwe.

Cynanchum L.

Cynanchum gerrardii (Harv.) Liede
Liede 1991: 117; Liede 1996: 314.
Syn.: *Sarcocyphula gerrarrdii* Harvey. *Cynanchum sarcostemmatoides* K. Schum.: FTA 4,1: 399 (1903); FCap 4,1: 754 (1908). [*Cynanchum tetrapterum* auct., non (Turcz.) Bullock: UKWF: 179 (1994); HYF: 216 (1997).]
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, c. 200 m. south of compound, c. 700 m., on rocks, 2.12.1983, *Kielland-Lund* 145 (C, NLH).
General habitat range: in lowland and medium-altitude deciduous bushland, especially on rocky outcrops.
General distribution: Sudan to Ethiopia and Somalia, south to South Africa (Transvaal, Natal, East Cape); also in Madagascar and tropical Arabia.

Cynanchum praecox Schult. ex S. Moore
FTA 4,1: 399 (1903); FWTA 2: 89 (1963); Liede 1996: 331.
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, hillside above bridge, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 3.3.1982, *Friis & Vollesen* 1082 (C).
General habitat range: in medium-altitude and montane grassland and wooded grassland.
General distribution: Sierra Leone, North Nigeria and Cameroon to East Congo [previously Zaire] and South Sudan, south to Tanzania, Zambia and Zimbabwe.

Dregea E. Mey.

Dregea abyssinica (Hochst.) K. Schum.
FWTA 2: 97 (1902); Wickens 1976: 128; UKWF: 182 (1994); KTSL: 492 (1994); HYF: 217 (1997).
Syn.: *Marsdenia abyssinica* (Hochst.) Schltr.: FPNA 2: 107 (1947); FPS 2: 411 (1952). *Marsdenia spissa* S. Moore: FTA 4,1: 420 (1903); FS: 254 (1929).
Imatong Mountains group, Uganda side: Agoro, no alt., no date, *Eggeling* 827 (K, MHU); Agoro, no alt., 3.1935, *Eggeling* 1718 (K, MHU); Agoro, 910 m., woodland, 4.1943, *Purseglove* 1377 (EA, K); Lututuru, 1470 m., riverine forest, 28.4. 1947, *Dawkins* 263 (K, MHU).
General habitat range: in lowland and medium-altitude woodland and along forest edges.
General distribution: Senegal to Ethiopia, south to Zimbabwe; also in tropical Arabia.

Dregea schimperi (Decne.) Bullock
FWTA 2: 97 (1963); UKWF: 182 (1994); KTSL: 495 (1994); HYF: 218 (1997).
Syn.: *Marsdenia schimperi* Decne.: FTA 4,1: 419 (1903).
Imatong Mountains group, Sudan side: Mt. Angargi, 1830-2140 m., 14.6.1939, *Andrews* 1952 (K); Gilo, 1900 m., in secondary forest, 3.6.1953, *Jackson* 3000 (K, KHF).
General habitat range: in medium-altitude and montane evergreen bushland and forest.
General distribution: Cameroon to Ethiopia,

south to Central Tanzania, and Angola; also in tropical Arabia.

Ectadiopsis Benth.

Ectadiopsis oblongifolia (Meisn.) Schltr.
FWTA 2: 84 (1963); UKWF: 174 (1994).
Syn.: *Cryptolepis oblongifolia* (Meisn.) Schltr.: FTA 4,1: 249 (1902); FS: 248 (1929); FPNA 2: 86 (1947); FPS 2: 406 (1952). *Cryptolepis nigritana* (Benth.) N.E. Br.: FTA 4,1: 251 (1902); FPNA 2: 86 (1947).
Imatong Mountains group, Sudan side: without further locality, no alt., 1947, *Maxwell Forbes* 118 (K); Palotaka, 1200 m., open woodland, 31.1. 1979, *Shigeta* 151 (EA); Mt. Baghanj, no alt., 13.6.1939, *Andrews* 1921 (K); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered *Combretum molle, Erythrina abyssinica* and *Protea sp.*, 17.2.1982, *Friis & Vollesen* 934 (C, KHF); slope of Mt. Lohocho (Ilungi), above the Katire-Gilo road, 1900 m., *Loudetia arundinacea* grassland with scattered trees, recently burnt, 7.3.1982, *Friis & Vollesen* 1123 (BR, C, K, KHF); Mt. Itibol, 1960 m., 14.6.1939, *Andrews* 1975 (K).
Imatong Mountains group, Uganda side: north of Okako, south of Mingaro (3° 44' N, 32° 55' E), no alt., montane grassland, 9.6.1973, *Katende* 1860 (EA, MHU); 4-5 km. south of Lomwaga, no alt., at rocky outcrop in montane grassland, 18.7.1974, *Katende* 2188 (MHU).
General habitat range: in lowland and medium-altitude woodland and wooded grassland.
General distribution: Guinea Bissau to Sudan, south to South Africa.

Leptadenia R. Br.

Leptadenia hastata (Pers.) Decne.
FWTA 2: 98 (1963); Wickens 1976: 128; El Amin 1990: 381; UKWF: 182 (1994); KTSL: 494 (1994).
Syn.: *Leptadenia lancifolia* (Schumach.) Decne.: FTA 4,1: 430 (1902); FS: 254 (1929); FPS 2: 409 (1952).
Imatong Mountains group, Sudan side: Loboya (4° 2' N, 32° 59' E), 830 m., in *Acacia seyal* woodland, 18.1.1950, *Jackson* 1063 (BM); Kinyeti Valley, between Imeila and Hiliu, 750 m., woodland with *Ficus sycomorus, Piliostigma thonningii, Lonchocarpus laxiflorus* and *Andira inermis*, 27.2.1982, *Friis & Vollesen* 1043 (BR, C, K, KHF); 15 km. north of Katire, 800 m., wooded grassland with *Combretum collinum, C. molle, Annona senegalensis*, etc., 18.3.1982, *Friis & Vollesen* 1250 (BR, C, K, KHF); c. 200 m from Hiliu along the road to Torit, 700 m., 21.11.1983, *Kielland-Lund* 13B (C, NLH).
Imatong Mountains group, Uganda side: Agoro, no alt., 1.1937, *Sangster* 229 (MHU); Agoro, 920 m., savannah 4.1943, *Purseglove* 1374 (EA, K); Agoro, 1470 m., 12.1932, *Eggeling* 788 (K, MHU).
Lafit, Dongotona and Nangeya Mountains: south east side of Lafon (5° 02' N, 32° 27-28' E), no alt., 28.12.1983, *Kielland-Lund* 492 (C, NLH).
Didinga Mountains: Longumu Valley north of Chukudum (4° 20' N, 33° 23' E), 900 m., 20.12.1983, *Kielland-Lund* 391 (C, NLH); Boya Hill, 640 m., open woodland, 31.12.1984, *Fukui* 84-24 (EA).
General habitat range: in lowland and medium-altitude grassland, dry, open woodland and deciduous bushland.
General distribution: Senegal to Ethiopia and West Kenya, south to Uganda and Kenya.

Mondia Skeels

Mondia whitei (Hook. f.) Skeels
FWTA 2: 82 (1963); UKWF: 175 (1994); KTSL: 495 (1994).

Syn.: *Chlorocodon whitei* Hook. f.: FTA 4,1: 255 (1902); FPNA 2: 84 (1947).
Imatong Mountains group, Sudan side: Lotti, near rest house, no alt., forest, 9.6.1939, *Andrews* 1739 (K); Palotaka, 1200 m., open woodland, 9.1.1979, *Shigeta* 79 (EA); Katire, 910 m., undergrowth in woodland, 20.6.1953, *Jackson* 3011 (K, KHF).
General habitat range: in lowland and medium-altitude forest and woodland.
General distribution: Guinea Bissau to Sudan, south to South Africa (Transvaal, Natal).

Pachycarpus E. Mey.

Pachycarpus bisacculatus (Oliv.) Goyder
GOYDER 1996: 798.
Syn.: *Gomphocarpus bisacculatus* Oliv. [*Pachycarpus lineolatus* auct., non (Decne.) Bullock: FWTA 2: 93 (1963); UKWF: 382 (1974)].
Imatong Mountains group, Sudan side: without further locality, no alt., 1947, *Maxwell Forbes* 81 (K).
Imatong Mountains group, Uganda side: 4 km. south-east of Lomwaga, no alt., at rock in tall-grass grassland, 18.7.1974, *Katende* 2141 (EA, MHU).
General habitat range: in lowland and medium-altitude grassland, wooded grassland and woodland.
General distribution: Senegal to Ethiopia, south to Angola and Zimbabwe.

Pachycarpus eximius (Schltr.) Bullock
UKWF: 178 (1994).
Syn.: *Schizoglossum eximium* Schltr.: FTA 4,1: 370 (1903); FS: 251 (1929); FPNA 2: 89 (1947); FPS 2: 416 (1952).
Imatong Mountains group, Sudan side: Itibol, 1990 m., 1812.1935, *Thomas* 1650A (K).
Didinga Mountains: near Nagichot, 2040 m., upland pasture, 24.4.1939, *Myers* 11,100 (K).
General habitat range: in intermediate and montane grassland.
General distribution: South Sudan through Uganda and West Kenya to Rwanda, West and Central Tanzania.

Pachycarpus lineolatus (Decne.) Bullock
EL AMIN 1990: 382 {Imatong Mountains, Loka}; UKWF: 178 (1994).
Syn.: *Asclepias lineolata* (Decne.) Schltr.: FTA 4,1: 322 (1902); FS: 252 (1929); FPNA 2: 90 (1947); FPS 2: 400 (1952). *Pachycarpus schweinfurthii* (N.E. Br.) Bullock: FWTA 2: 93 (1963); UKWF: 382 (1974). *Asclepias schweinfurthii* N.E. Br.: FTA 4,1: 323 (1902); FS: 252 (1929); FPS 2: 401 (1952).
Imatong Mountains group, Sudan side: Mt. Baghanj, 1830-2140 m., 13.6.1939, *Andrews* 1913 (K).
Imatong Mountains group, Uganda side: 4 km. south-east of Lomwaga, no alt. between rocks in tall-grass grassland, 18.7.1974, *Katende* 2141 (MHU).
General habitat range: in medium-altitude and montane grassland, wooded grassland and woodland.
General distribution: North Nigeria and Cameroon to Sudan, south to Angola and Malawi.

Pachycarpus sp.
Imatong Mountains group, Sudan side: Loa, Moliandro village west of Kerepi (3° 54' N, 31° 54' E), no alt., 5.6.1984, *Kielland-Lund* 839 (NLH).
Note: An unidentifiable sterile specimen.

Pergularia L.

Pergularia daemia (Forssk.) Chiov.
FPS 2: 413 (1952); FWTA 2: 90 (1963); WICKENS 1976: 128; UKWF: 180 (1994); HYF: 217 (1997).
Syn.: *Daemia extensa* R. Br.: FTA 4,1: 387 (1903); FS: 254 (1929); FPNA 2: 99 (1947).

Imatong Mountains group, Sudan side: near Molongori, 750 m., 11.6.1939, *Andrews* 1801 (K); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber at edge of forest in small clearing, 3.12.1980, *Friis & Vollesen* 658 (BR, C, K, KHF); Katire, 900 m., in *Albizia zygia* woodland, 10.1948, *Jackson* 471 (BM, KHF).
Didinga Mountains: Longumu River north of Chukudum (4° 21' N, 33° 21' E), 900 m., 20.12.1983, *Kielland-Lund* 404 (C, NLH).
General habitat range: in lowland and medium-altitude woodland and at forest edges.
General distribution: Senegal to Ethiopia, south to South Africa; also in tropical Arabia and India.

Periploca L.

Periploca linearifolia Dill. & A. Rich.
FTA 4,1: 257 (1902); FS: 249 (1929); FPNA 2: 85 (1947); FPS 2: 413 (1952); UKWF: 175 (1994); KTSL: 496 (1994).
Imatong Mountains group, Sudan side: Mt. Baghanj, 1830-2140 m., 13.6.1939, *Andrews* 1882 (K); Gilo, 1710 m., secondary scrub, 27.6.1947, *MacLeay* 84 (BM); Gilo, 1900 m., commonly colonising montane grassland, 3.6.1953, *Jackson* 3003 (KHF); above Gilo, 2070 m., among rocks in grassland, 13.6.1953, *Osman & Aziz* 249 (KHU); between Bushbuck Hill and Mt. Konoro, 2300 m., rocky hills and outcrops in mountain grassland dominated by *Loudetia,* 5.3.1982, *Friis & Vollesen* 1098 (C, K, KHF); Kipia, 2650 m., *Podocarpus latifolius* forest, 28.7.1939, *Myers* 11,686 (WM).
Imatong Mountains group, Uganda side: in hills west of Agoro, 2190 m., 6.1942, *Eggeling* 5091 (EA, MHU); Langia, 2740 m., grassland, 1943, *Purseglove* 1415 (EA).
General habitat range: in medium-altitude and montane grassland and woodland, and at forest edges, often on rocky outcrops.
General distribution: South Sudan and Ethiopia through eastern Africa and East Congo [previously Zaire], south to North East Zambia and Malawi.

Sarcostemma R. Br.

Sarcostemma viminale (L.) R. Br.
FTA 4,1: 51 (1902); FS: 253 (1929); FPNA 2: 98 (1947); FPS 2: 416 (1952); FWTA 2: 93 (1963); WICKENS 1976: 128; EL AMIN 1990: 382; UKWF: 180 (1994); HYF: 216 (1997).
Imatong Mountains group, Sudan side: Lofulong (4° 7' N, 32° 54' E), 900 m., dry woodland with *Acacia* and *Ziziphus pubescens,* 11.11.1948, *Jackson* 510 (FHO, KHF); Kinyeti Valley, at junction between roads to Ngarama and Katire north of Hiliu, 700 m., 3.12.1983, *Kielland-Lund* 181 (C, NLH); 5 km. north of Hiliu on road to Torit, 650 m., 6.12.1983, *Kielland-Lund* 234 (C, NLH); 2 km. from Hiliu along Torit road, no alt., 25.12.1983, *Kielland-Lund* 461 (C, NLH).
Imatong Mountains group, Uganda side: 2 km. east of Lututuru, near a rivulet, 1400 m., in open woodland, 17.2.1969, *Lye* 2114 (MHU).
Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., east of Isoke (4° 14' N, 33° 5' E), 1400 m., between rocks with *Encephalartos septentrionalis* and *Aloe,* 22.1.1950, *Jackson* 1103 (BM).
Didinga Mountains: 2 km. north of Keiala, near Chukudum (4° 15' N, 33° 27' E), 1100 m., 22.12.1983, *Kielland-Lund* 440 (C, NLH).
General habitat range: in lowland and medium-altitude grassland and wooded grassland, often among rocks.
General distribution: Ghana to Ethiopia and Somalia, south to South Africa; also in tropical Arabia.

Schizostephanus Hochst. ex Benth. & Hook. f.

Schizostephanus alatus K. Schum.
LIEDE 1996: 345.
Syn.: *Cynanchum validum* N.E. Br.: FTA 4,1: 398 (1903); FPNA 2: 96 (1947); LIEDE 1993: 537. [*Cynanchum somaliense* auct., non (N.E. Br.) N.E. Br.: LIEDE 1996: 338, pro parte, see note.]
Imatong Mountains group, Sudan side: between Ngarama and Molongori, 700 m., on rocky outcrop with *Sterculia setigera, Cordyla richardii, Ficus arbutilifolia,* etc., 13.3.1982, *Friis & Vollesen* 1189 (C, K); Kinyeti Valley, hills east of Hiliu (4° 17' N, 32° 39' E), no alt., 7.1.1984, *Kielland-Lund* 603 (NLH).
General habitat range: in lowland and medium-altitude woodland, wooded grassland and deciduous bushland.
General distribution: Eastern Congo [previously Zaire] and Sudan to Ethiopia and Somalia, south to South Africa (Transvaal).
Note: LIEDE 1996: 340 has stated that the specimen *Friis & Vollesen* 1189 is *Cynanchum somaliense* (N.E. Br.) N.E. Br. However, according to the current authors and Dr. David Goyder, Kew, there is no doubt that the specimen should be referred here.

Secamone R. Br.

Secamone africana (Oliv.) Bullock
FWTA 2: 88 (1963); GOYDER 1992: 467 (1992); UKWF: 176 (1994); KTSL: 497 (1994).
Syn.: *Secamone platystigma* K. Schum.: FTA 4,1: 280 (1902); FPNA 2: 101 (1947).
Imatong Mountains group, Sudan side: Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, climbing over rocks, 8.12.1980, *Friis & Vollesen* 781 (C, K, KHF).
General habitat range: in medium-altitude and montane woodland, thickets, and along forest edges.
General distribution: Nigeria and Cameroon to South Sudan, south to Kenya, Burundi and North West Tanzania. First record from the Sudan.

Secamone parvifolia (Oliv.) Bullock
GOYDER 1992: 448 (1992); UKWF: 176 (1994);
Syn.: *Gymnema parvifolium* Oliv. *Secamone schweinfurthii* K. Schum.: FTA 4,1: 284 (1902); FS: 250 (1929); FPS 2: 417 (1952). *Secamone zambeziaca* Schltr.: FTA 4,1: 285 (1902). *Secamone mombasica* N.E. Br.: FTA 4,1: 281 (1902).
Imatong Mountains group, Sudan side: Kinyeti Valley, 10 km. north of Hiliu towards Torit, 650 m., 8.12.1983, *Kielland-Lund* 272 (C, NLH); Hiliu, in compound, no alt., 28.5.1984, *Kielland-Lund* 775 (C, NLH).
General habitat range: in lowland and medium-altitude deciduous bushland and woodland, and in riverine forest.
General distribution: South Sudan to Ethiopia, south to Botswana and South Africa (Transvaal).

Sphaerocodon Benth.

Sphaerocodon caffrum (Meisn.) Schltr.
FWTA 2: 97 (1963); UKWF: 181 (1994).
Syn.: *Sphaerocodon obtusifolium* Benth.: FTA 4,1: 412 (1902).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 13.11.1980, *Friis & Vollesen* 197 (C, K, KHF); hill behind Gilo, 1890 m., in grassland among rocks, 13.6.1953, *Prowse* 241 (KHU); hill between Mt. Konoro and Mt. Garia, 1800 m., *Loudetia arundinacea* grassland with scattered trees on shallow soil, 12.3.1982, *Friis & Vollesen* 1180 (BR, C, K).
General habitat range: in medium-altitude and

montane grassland, wooded grassland and woodland.
General distribution: Sierra Leone, North Nigeria and Cameroon to South Sudan, south to South Africa.

Tacazzea Decne.

Tacazzea conferta N.E. Br.
FTA 4,1: 265 (1902).
Syn.: *Tacazzea galactogoga* Bullock: UKWF: 175 (1994); KTSL: 498 (1994).
Imatong Mountains group, Sudan side: Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* climber at edge of forest, 20.11.1980, *Friis & Vollesen* 360 (BR, C, K, KHF); Lowiliwili, 2400 m., edge of *Podocarpus latifolius* forest, 28.3.1949, *Jackson* 641 (KHF).
General habitat range: in medium-altitude and montane forest and at forest edges.
General distribution: South Sudan and Ethiopia through eastern Africa, south to Angola, Zambia and Malawi.

Xysmalobium R. Br.

Xysmalobium heudelotianum Decne.
FTA 4,1: 304 (1902); FPS 2: 418 (1952); FWTA 2: 93 (1963).
Syn.: *Xysmalobium reticulatum* N.E. Br.: FTA 4,1: 303 (1902); UKWF: 176 (1994). *Saxymolbium heudelotianum* (Decne.) Bullock: UKWF (1. ed.): 374 (1974).
Imatong Mountains group, Uganda side: north of Okako, south of Mingaro, no alt., edge of forest, 9.6.1973, *Katende* 1853 (EA, MHU).
General habitat range: in lowland and medium-altitude grassland and woodland.
General distribution: Guinée to North Uganda, south to Zimbabwe.

Order 62. **Rubiales** Dumort.

Fam. 126. **Rubiaceae** Juss.

Anthospermum L.

Anthospermum usambarense K. Schum.
CHIPP 1929: 191; FPNA 2: 372 (1947); FPS 2: 425 (1952) {Imatong Mountains, summit of Mt. Kinyeti}; HEDBERG 1957: 176, 328; FTEA, Rubiac. 1: 331 (1976); UKWF: 191 (1994); KTSL: 501 (1994).
Imatong Mountains group, Sudan side: Dumuso, 2450 m., grassland, 31.5.1950, *Jackson* 1516 (K); summit of Dumuso Ridge, 2450 m., montane evergreen bushland with scattered *Protea gaguedi, Nuxia congesta* and stunted *Podocarpus latifolius,* 8.3.1982, *Friis & Vollesen* 1131 (BR, C, K, KHF); slope of Mt. Kinyeti, 2990 m., clearing in *Podocarpus latifolius* forest, 4.7.1947, *MacLeay* 171 (BM); summit of Mt. Kinyeti, 3050 m., rocky summit, 30.12.1935, *Thomas* 1855 (BM, K); summit of Mt. Kinyeti, 3170 m., 21.9.1940, *Tothill* in *Myers* 13,511 (K); summit of Mt. Kinyeti, 3170 m., in low scrub with *Helichrysum fruticosum* and *Gnidia glauca,* 2.1929, *Chipp* 74 (K); summit of Mt. Kinyeti, 3180 m., ericaceous bushland, 15.11.1949, *Jackson* 934 (BM).
General habitat range: in montane evergreen bushland (ericaceous bushland), at edges and in clearings of montane forest, and in montane grassland.
General distribution: East Congo [previously Zaire] to South Sudan, south to Malawi and Zimbabwe.

Belonophora Hook. f.

Belonophora hypoglauca (Welw. ex Hiern) A. Chev.
FWTA 2: 158 (1963); FTEA, Rubiac. 2: 728 (1988).

Syn.: *Belonophora glomerata* M.B. Moss in Chipp: CHIPP 1929: 191 & 195; ITU: 338 (1952); FPS 2: 425 (1952) {Lotti, Laboni}; JACKSON 1956: 354 {Lotti, Laboni}; EL AMIN 1990: 384 {Lotti}. *Coffea hypoglauca* Welw. ex Hiern: FTA 3: 183 (1877).
Imatong Mountains group, Sudan side: Laboni, 1220 m., forest undergrowth, 8.2.1929, *Chipp* 46 (K, holotype of *B. glomerata*, WM, isotype); Laboni, 1100 m., undergrowth in rain forest, 22.12.1935, *Thomas* 1744 (BM, K); Lotti, no alt., in fringing forest, associated with *Coffea canephora*, 4.2.1929, *Chipp* 14 (K, KHF).
General habitat range: in lowland forest.
General distribution: Guinée and Sierra Leone to South Sudan, south to Angola and Zambia.

Calycosiphonia Robbr.

Calycosiphonia spathicalyx (K. Schum.) Robbr.
FTEA, Rubiac. 2: 727 (1988); KTSL: 503 (1994).
Syn.: *Coffea spathicalyx* K. Schum.: CHIPP 1929: 191; FPS 2: 432 (1952) {Laboni, Lotti}; FWTA 2: 156 (1963).
Imatong Mountains group, Sudan side: Laboni, no alt., forest, 8.2.1929, *Chipp* 47 (K, KHF, WM); Laboni, 1280 m., forest, 19.4.1930, *Snowden* 1681 (EA, K); Lotti, no alt., in closed forest associated with *Coffea canephora*, 8.2.1929, *Chipp* 13 (K, KHF, WM); Lotti, near rest house, no alt., forest, 10.6.1939, *Andrews* 1786 (BR, K).
General habitat range: in lowland and medium-altitude forest.
General distribution: Ivory Coast eastwards to Sudan and Kenya, south to Angola and Tanzania.

Canthium Lam.

Canthium lactescens Hiern
ITU: 339 (1952); FPS 2: 430 (1952); FTEA, Rubiac. 3: 871 (1991); EL AMIN 1990: 386; KTSL: 505 (1994).
Syn.: *Canthium crassum* Hiern, pro parte: FTA 3: 145 (1877); ITU: 339 (1952); EL AMIN 1990: 385 {Imatong Mountains}.
Imatong Mountains group, Uganda side: Agoro, 1380 m., stony hillside, 13.11.1945, *Thomas* 4362 (EA, K).
General habitat range: in medium-altitude and montane bushland, often associated with rocky hillsides.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Angola, Zambia, and Zimbabwe.

Canthium oligocarpum Hiern
FTA 3: 138 (1877); FTEA, Rubiac. 3: 877 (1991); KTSL: 505 (1994).
subsp. **oligocarpum**
FTEA, Rubiac. 3: 878 (1991).
Syn.: *Canthium ruwenzoriense* Bullock: FPNA 2: 352 (1947); EPA: 1010 (1965). [*Canthium captum* auct., non Bullock: FPNA 2: 352 (1947); EL AMIN 1990: 385 {Imatong Mountains}].
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea*, at forest edge, 17.2.1982, *Friis & Vollesen* 929 (C, K, KHF); Gilo to Mt. Konoro, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea*, 16.11.1980, *Friis & Vollesen* 270 (BR, C, K, KHF); Gilo, 1920 m., *Albizia gummifera* forest, 20.11.1946, *Jackson* 233 (FHO).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1900 m., old high forest, 16.5.1972, *Synnott* 1054 (EA, MHU).
Didinga Mountains: Nagichot, 1990 m., forest, 26.4.1939, *Myers* 11,143 (K).
General habitat range: in montane forest.
General distribution: East Congo [previously Zaire] to South Sudan, Ethiopia and Uganda, south to West Tanzania. In Kenya, East Tanzania, Malawi, Mozambique and Zimbabwe replaced by other subspecies.

Canthium sp./Rytigynia sp. ?
Didinga Mountains: Nalala, 2000 m., in understorey of *Albizia* forest, 8.4.1949, *Jackson* 658 (KHF).

Catunaregam Wolf

Catunaregam nilotica (Stapf) Tirveng.
FTEA, Rubiac. 2: 497 (1988); KTSL: 506 (1994).
Syn.: *Randia nilotica* Stapf: FS: 262 (1929); ITU: 356 (1952). *Xeromphis nilotica* (Stapf) Keay: FWTA 2: 121 (1963). *Lacnosiphonium niloticum* (Stapf) Dandy: FPS 2: 441 (1952). [*Randia dumetorum* auct., non (Retz.) Lam.: FTA 3: 94 (1877)].
Imatong Mountains group, Sudan side: Kinyeti Valley, half way between Torit and Hiliu, near Imatong junction (4° 21' N, 32° 38' E), no alt., 31.5.1984, *Kielland-Lund* 810 (C, NLH).
Imatong Mountains group, Uganda side: Agoro, no alt., no date, *Eggeling* 1708 (K).
General habitat range: in lowland dry wooded grassland and deciduous bushland.
General distribution: Guinée to Ethiopia and Somalia, south to Tanzania.

Chassalia Commers. ex Poir.

Chassalia cristata (Hiern) Bremek.
FWTA 2: 192 (1963); FTEA, Rubiac. 1: 122 (1976); KTSL: 507 (1994).
Syn.: *Psychotria cristata* Hiern: FTA 3: 205 (1877); FS: 270 (1929); FPS 2: 460 (1952).
Imatong Mountains group, Sudan side: Lotti, near rest house, no alt., 8.6.1939, *Andrews* 1710 (K). Palotaka (Lotti), 1200 m., forest, 31.1.1979, *Shigeta* 161 (EA); between Talanga and Upper Talanga, 1300 m., medium-altitude rain forest with *Diospyros abyssinica, Garcinia buchananii, Uvariopsis congoensis, Turraea floribunda, Manilkara butugi,* etc., 7.12.1980, *Friis & Vollesen* 737 (C, K, KHF).
General habitat range: in lowland and medium-altitude forest.
General distribution: Nigeria and Cameroon to South Sudan, Uganda and Kenya, south to Angola and Tanzania.

Coffea L.

Coffea arabica L.
FTA 3: 180 (1877), pro parte; FPS 2: 432 (1952); FWTA 2: 156 (1963); FTEA, Rubiac. 2: 712 (1988); KTSL: 509 (1994).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 27.11.1980, *Friis & Vollesen* 491 (BR, C, K, KHF); also cultivated at Talanga and Katire, *Friis & Vollesen* (sight records).
General habitat range: in medium-altitude forest, cultivated and naturalised.
General distribution: the indigenous records of this species are probably restricted to North Kenya, South East Sudan, and South West Ethiopia; but the species is widely cultivated throughout the tropics.

Coffea canephora Pierre ex Froehner
FPNA 2: 354 (1947); ITU: 340 (1952); FPS 2: 432 (1952); JACKSON 1956: 354 {Talanga, Lotti}; FWTA 2: 154 (1963); FTEA, Rubiac. 2: 710 (1988); SOMMERLATTE 1990: 226.
Syn.: *Coffea robusta* Linden: CHIPP 1929: 191; ITU: 340 (1952).
Imatong Mountains group, Sudan side: Laboni, no alt., forest, 1929, *Chipp* 40 (K, KHF); Laboni, no alt., in forest undergrowth, 15.10.1938, *Myers* 9752 (WM); Laboni, 1100 m., in forest, 22.12.1935, *Thomas* 1741 (BM, K); Laboni, 1280 m., in fringing forest, 19.4.1930, *Snowden* 1680 (BM, EA); Acholi hills between Pojok and

Palwar, 1310 m., in riverine forest, 17.4.1930, *Snowden* 1677 (BM); Lotti, no alt., in equatorial type of fringing forest at the foot of the hills, 1929, *Chipp* 10 (K, WM) & 11 (K, KHF, WM); Lotti, no alt., forest, 18.10.1938, *Myers* 9782 (WM); Lotti, near rest house, no alt., forest, 8.6.1939, *Andrews* 1707 (K); Lotti, 910 m., in closed forest, 25.12.1935, *Thomas* 1757 (BM, K); at Lotti near Palotaka, 1200 m., forest, 9.1.1979, *Shigeta* 76 (EA); Talanga, 890 m., understorey in forest, 16.12.1935, *Thomas* 1572 (BM, K); Talanga, 1000 m., in forest, 8.1.1949, *Jackson* 608 (KHF).

General habitat range: in lowland forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as an understorey shrub in lowland forest.

General distribution: Senegal to Sudan, Uganda and Tanzania, south to Angola; widely cultivated.

Coffea liberica Hiern

FTA 3: 181 (1877), pro parte; FPNA 1: 354 (1947); FWTA 2: 154 (1963); FTEA, Rubiac. 2: 706 (1988).

Syn.: *Coffea excelsa* A. Chev.: ITU: 341 (1952); FPS 2: 432 (1952); JACKSON 1956: 354 {Talanga}.

Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, 27.11.1980, *Friis & Vollesen* 497 (C, K, KHF).

General habitat range: in lowland forest.

General distribution: Guinea Bissau to Sudan and Uganda; now widely cultivated and escaped throughout the moister tropics.

Conostomium (Stapf) Cufod.

Conostomium quadrangulare (Rendle) Cufod.

FTEA, Rubiac. 1: 243 (1976); UKWF: 188 (1994).

Imatong Mountains group, Sudan side: without further locality, no alt., 1947, *Maxwell Forbes* 91 (K); 5 km. south of Torit, 630 m., thorn scrub, 12.6.1961, *Jackson* 4236 (K); Kinyeti Valley, Hiliu, west of bridge on Kinyeti River, 700 m., 11.12.1983, *Kielland-Lund* 301 (C, NLH).

General habitat range: in lowland and medium-altitude bushland or dry wooded grassland, often in sandy places along temporary streams.

General distribution: Uganda and Sudan to Ethiopia and Kenya.

Craterispermum Benth.

Craterispermum schweinfurthii Hiern

FS: 268 (1929); FPS 2: 433 (1952); FTEA, Rubiac. 1: 162 (1976); EL AMIN 1990: 389; KTSL: 510 (1994).

Syn.: [*Canthium laurinum* auct., non (Poir.) Benth.: ITU: 341 (1952)].

Imatong Mountains group, Sudan side: between Talanga and Upper Talanga, 1300 m., medium-altitude rain forest with *Diospyros abyssinica, Garcinia buchananii, Uvariopsis congoensis, Turraea floribunda, Manilkara butugi*, etc., dominant understorey tree, 7.12.1980, *Friis & Vollesen* 738 (BR, C, EA, K, KHF); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, 19.11.1980, *Friis & Vollesen* 329 (C, K, KHF).

General habitat range: in medium-altitude and montane forest.

General distribution: Nigeria eastwards to Ethiopia and West Kenya, south to Angola, Zimbabwe and Mozambique.

Cremaspora Benth.

Cremaspora triflora (Thonn.) K. Schum.

FPS 2: 433 (1952); FWTA 2: 148 (1963); FTEA, Rubiac. 2: 733 (1988); EL AMIN 1990: 389; KTSL: 511 (1994).

Syn.: *Psychotria triflora* Thonn. *Cremaspora afri-*

cana Benth.: FTA 3: 126 (1877). *Cremaspora heterophylla* F. Didr.
subsp. **triflora**
FTEA, Rubiac. 2: 733 (1988).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 29.11.1980, *Friis & Vollesen* 547 (BR, C, EA, K, KHF).
General habitat range: in lowland forest and moist woodland.
General distribution: Cape Verde Islands and Senegal eastwards to Sudan, Uganda, Kenya and Tanzania, south to Angola, Zimbabwe and Mozambique.

Crossopteryx Fenzl

Crossopteryx febrifuga Benth.
FTA 3: 43 (1877); ITU: 342 (1952); FPS 2: 433 (1952); FWTA 2: 113 (1963); FTEA, Rubiac. 2: 457 (1988); El Amin 1990: 389; KTSL: 512 (1994).
Syn.: *Crossopteryx kotschyana* Fenzl: FTA 3: 44 (1877); FS: 258 (1929).
Imatong Mountains group, Sudan side: Magwe (4° 8' N, 32° 17' E), 800 m., woodland with *Vitellaria paradoxa, Lophira lanceolata, Annona senegalensis, Bridelia scleroneura,* etc., 18.5.1948, *Jackson* 303 (FHO, KHF).
General habitat range: in lowland woodland.
General distribution: Senegal to Ethiopia, south to Namibia and South Africa (Transvaal).

Fadogia Schweinf.

Fadogia cienkowskii Schweinf.
FTA 3: 154 (1877); FS: 268 (1929); FPS 2: 434 (1952); FWTA 2: 178 (1963); Wickens 1976: 129; El Amin 1990: 390; FTEA, Rubiac. 3: 788 (1991); UKWF: 191 (1994).
var. **cienkowskii**
FTEA, Rubiac. 3: 789 (1991).
Syn.: *Fadogia agrestis* Hiern: FTA 3: 154 (1877); FS: 268 (1929); FPS 2: 434 (1952).
Imatong Mountains group, Uganda side: Langia, 1830 m., bamboo zone, 4.1943, *Purseglove* 1396 (EA, K); 2 km. north-east of Lututuru, near end of road, 1800 m., grassland, 17.2.1969, *Lye* 2075 (K, MHU, NLH); south of Mt. Ludarza, no alt., montane grassland, 11.6.1973, *Katende* 1894 (EA, MHU).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 2140 m., montane grassland, 4.1960, *Wilson* 892 (EA).
Didinga Mountains: slope of Mt. Lotuke, 1900 m., in *Protea* grassland, common, 29.3.1950, *Jackson* 1306 (WM).
General habitat range: in grassland and woodland.
General distribution: Mali eastwards to Ethiopia, south to South Africa (Transvaal).

Feretia Del.

Feretia apodanthera Del.
FTA 3: 115 (1877); FS: 265 (1929); FPS 2: 434 (1952); FWTA 2: 147 (1963); Wickens 1976: 129; FTEA, Rubiac. 2: 698 (1988); El Amin 1990: 391; KTSL: 512 (1994).
subsp. **apodanthera**
FTEA, Rubiac. 2: 698 (1988).
Imatong Mountains group, Sudan side: at northernmost point of the continuous mountain chain of the Imatong Mts., just south-east of Ngarama along track to Molongori, 700 m., open woodland with *Acacia seyal, Albizia amara* subsp. *sericocephala, Lannea humilis,* etc., on sandy soil, 13.3.1982, *Friis & Vollesen* 1197 (BR, C, EA, K).
General habitat range: in lowland riverine forest, woodland and bushland.
General distribution: Mauritania, Senegal and

Gambia to Ethiopia and Somalia; species as a whole also in Kenya and Tanzania.

Galiniera Del.

Galiniera saxifraga (Hochst.) Bridson
FTEA, Rubiac. 2: 696 (1988); KTSL: 513 (1994).
Syn.: *Galiniera coffeoides* Del.: FTA 3: 114 (1877); FPNA 2: 344 (1947); ITU: 342 (1952); FPS 2: 435 (1952) {Imatong Mountains, Lomuleng}; EL AMIN 1990: 391 {Imatong Mountains, Gilo}; SOMMERLATTE 1990: 338.
Imatong Mountains group, Sudan side: without further locality [probably near Gilo], 1980 m., 27.1.1976, *Howard* IM 25 (K, EA, KHF); Acholi Hills [probably Upper Talanga], 1800 m., *Podocarpus latifolius-Olea* forest, 9.2.1948, *Jackson* 282 (FHO); Mt. Baghanj, 1830-2130 m., 14.6.1939, *Andrews* 1936 (K); Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 15.11.1980, *Friis & Vollesen* 216 (C, K); Bushbuck Hill, 2200 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum,* 16.2.1982, *Friis & Vollesen* 905 (C, K); Lowiliwili, 2400 m., *Dombeya* forest, 16.11.1949, *Jackson* 982 (FHO, destroyed, KHF); Lomuleng, 2440 m., forest, 29.12.1935, *Thomas* 1799 (BM, K).
Imatong Mountains group, Uganda side: Aringa River, upper reaches, 6.4.1945, *Hummel* 765 (FHO); Lututuru, no alt., 1992, *Katende* (sight record).
General habitat range: in mountain forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree at edges and in gaps of *Albizia* forest and mixed *Podocarpus latifolius* forest up to 2700 m.
General distribution: Ethiopia and Sudan through eastern Africa, south to Zambia and Malawi.

Galium L.

Galium chloroionanthum K. Schum.
FPS 2: 436 (1952) {Imatong Mountains, Issore to Itibol, near Issore}; FTEA, Rubiac. 1: 388 (1976); UKWF: 193 (1994).
Imatong Mountains group, Sudan side: between Katire and Gilo, 1700 m., 26.12.1983, *Kielland-Lund* 481 (C, NLH); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* on moist slope along trail, 9.11.1980, *Friis & Vollesen* 89 (C, K, KHF); Itibol to Issore, Timalarem, 1950 m., at forest edge, 20.12.1935, *Thomas* 1709 (BM, K); Bushbuck Hill, 2200 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum,* along brook, 24.3.1982, *Friis & Vollesen* 1316 (BR, C, K, KHF); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 59' N, 32° 53' E), 2500 m., 9.6.1984, *Kielland-Lund* 889 (C, NLH).
General habitat range: in medium-altitude forest, especially in glades, and in scrub.
General distribution: Ethiopia and Sudan through eastern Africa, south to Zimbabwe and Malawi.

Galium simense Fresen.
FS: 274 (1929); FWTA 2: 223 (1963); FTEA, Rubiac. 1: 391 (1976); UKWF: 193 (1994).
Syn.: [*Galium apparine* L. var. *spurium* auct., non (L.) Coss. & Germ.: FTA 3: 245 (1877). *Galium spurium* auct., non L.: FPNA 2: 380 (1947)].
Imatong Mountains group, Sudan side: Mt. Itibol, 1950 m., 14.6.1939, *Andrews* 1966 (K, WM); at second rest-house above Ras Logoforok, 1830 m., 24.7.1939, *Myers* 11,560 (K).
General habitat range: in montane evergreen bushland.
General distribution: Cameroon to Sudan and Ethiopia, south to Congo [previously Zaire] and Tanzania.

Gardenia Ellis

Gardenia ternifolia Schumach. & Thonn.
FWTA 2: 123 (1963); SOMMERLATTE 1990: 128; KTSL: 514 (1994).
subsp. **ternifolia**
FTEA, Rubiac 2: 509 (1988).
Imatong Mountains group, Sudan side: Loa, Moliandro village west of Kerepi (3° 54' N, 31° 54' E), no alt., 5.6.1984, *Kielland-Lund* 841 (NLH); Kinyeti Valley, 10 km. north of Hiliu towards Torit, 650 m., 8.12.1983, *Kielland-Lund* 271 (C, NLH); Hiliu, near compound, 700 m., 29.11. 1983, *Kielland-Lund* 87 (C, NLH); near Imeila, 850 m., woodland with *Albizia zygia, Annona senegalensis, Combretum collinum, Lonchocarpus laxiflorus,* etc., 24.2.1982, *Friis & Vollesen* 1025 (C, K, KHF).
Didinga Mountains: Iwowa, 1620 m., 23.4.1939, *Myers* 11,051 (K); near Nagichot, 1500 m., in *Combretum* woodland, 6.4.1949, *Jackson* 650 (KHF).
General habitat range: in deciduous woodland and bushland. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a tree in lowland woodland.
General distribution: Senegal to Ethiopia.

Gardenia vogelii Planch.
FTA 3: 103 (1877); FS: 264 (1929); FPS 2: 437 (1952); FWTA 2: 123 (1963); FG 17: 222 (1970); FTEA, Rubiac. 2: 505 (1988); EL AMIN 1990: 394.
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 9.12.1980, *Friis & Vollesen* 783 (BR, C, EA, K, KHF).
General habitat range: in lowland forest.
General distribution: Liberia to South Sudan and Uganda, south to Angola.

Geophila D. Don

Geophila repens (L.) I.M. Johnston
FWTA 2: 205 (1963); FTEA, Rubiac. 1: 110 (1976); UKWF: 191 (1994).
Syn.: *Geophila reniformis* D. Don: FTA 3: 220 (1877). *Geophila uniflora* Hiern: FTA 3:221 (1877); FS: 271 (1929); FPNA 2: 368 (1947). *Geophila herbacea* (Jacq.) K. Schum.: FPS 2: 439 (1952).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* on forest floor, 26.11.1980, *Friis & Vollesen* 465 (C, K).
General habitat range: in lowland and medium-altitude forest.
General distribution: Guinea Bissau eastwards to South Sudan and Ethiopia, south to Zimbabwe and Malawi; almost pantropical.

Heinsenia K. Schum.
Syn.: *Aulacocalyx* Hook. f. subgen. *Heinsenia* (K. Schum.) Verdc.

Heinsenia diervilleoides K. Schum.
ITU: 346 (1952); FTEA, Rubiac. 2: 730 (1988); EL AMIN 1990: 394 [as "*Heinsonia diarvillcoides*"] {Imatong Mountains}; KTSL: 515 (1994).
Syn.: *Aulacocalyx diervilleoides* (K. Schum.) Petit
Imatong Mountains group, Sudan side: Talanga to Upper Talanga, 1100 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 7.12.1980, *Friis & Vollesen* 753 (BR, C, EA, K, KHF); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and Ocotea, 9.11. 1980, *Friis & Vollesen* 72 (BR, C, K, KHF); Gilo, at bridge on Ngairigi River, 1800 m., 17.2.1982, *Friis & Vollesen* 922 (BR, C, K, KHF); on banks of Kinyeti River, 1830-2130 m., forest, 15.6.

1939, *Andrews* 2030 (K); Gilo, 1990 m., *Podocarpus latifolius* forest, no date, *Jackson* 217 (FHO).
Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).
General habitat range: in medium-altitude forest.
General distribution: South Sudan and Uganda to Kenya, south to Zimbabwe and Mozambique.

Hymenocoleus Robbr.

Hymenocoleus hirsutus (Benth.) Robbr.
FTEA, Rubiac. 1: 115 (1976).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* in forest, 1.12.1980, *Friis & Vollesen* 858 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude forest.
General distribution: West Africa to Sudan, south to Angola, Congo [previously Zaire] and Tanzania. First record from the Sudan.

Hymenocoleus neurodictyon (K. Schum.) Robbr.
var. **orientalis** (Verdc.) Robbr.
FTEA, Rubiac. 1: 116 (1976).
Syn.: [*Chassalia sp.* sensu FPS 2: 431 (1952) {Imatong Mountains, Talanga}].
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* on forest floor, 26.11.1980, *Friis & Vollesen* 464 (C, K); Talanga, at River Loboli, 970 m., in forest, 16.12.1935, *Thomas* 1583 (K, holotype of *H. orientalis* Verdc.; BM, isotype).
General habitat range: in lowland and medium-altitude forest.
General distribution: Ivory Coast to Sudan, Congo [previously Zaire], south to Tanzania; species as a whole from Guinée to Congo [previously Zaire] and Tanzania.

Hymenodictyon Wall.

Hymenodictyon floribundum (Hochst. & Steud.) B.L. Robinson
FPNA 2: 332 (1947); ITU: 346 (1952); FPS 2: 441 (1952); FWTA 2: 111 (1963); FG 12: 58 (1966); FTEA, Rubiac. 2: 452 (1988); El Amin 1990: 395 {Imatong Mountains}; Sommerlatte 1990: 252; KTSL: 516 (1994).
Syn.: *Hymenodictyon kurria* Hochst.: FTA 3: 42 (1877); FS: 257 (1929).
Imatong Mountains group, Sudan side: without further locality [possibly near Gilo], no alt., 12.3.1976, *Howard* IM 77 (K, KHF); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, especially *Combretum, Faurea,* etc., on rocky outcrop, 26.3.1982, *Friis & Vollesen* 1320 (C, K); Gilo, 1920 m., rocky outcrop in *Loudetia* grassland, 3.5.1947, *Jackson* 220 (FHO); Gilo, Observation Hill, 2000 m., rocky outcrop, 18.4.1984, *Sommerlatte* 57 (EA); Gomia, 2000 m., growing on rocky outcrop in grassland, 12.2.1951, *Jackson* 1699 (KHF).
Imatong Mountains group, Uganda side: Agoro, 2140 m., on rocks in open *Protea* woodland, 8.4.1945, *Greenway & Hummel* 7317 (EA, K, MHU); 5 km. south-east of Lomwaga, no alt., between rocks, 18.7.1974, *Katende* 2181 (EA, MHU).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 2140 m., rock faces, 4.1960, *Wilson* 906 (EA).
General habitat range: in medium-altitude and montane woodland, often on rocky outcrops. According to Sommerlatte 1990 it occurs at the Imatong Mountains as a small tree on rocky outcrops in *Loudetia* grassland.

General distribution: Guinée to Ethiopia, south to Angola and Zimbabwe.

Hymenodictyon parvifolium Oliv.
KTSL: 517 (1994).
subsp. **scabrum** (Stapf) Verdc.
FTEA, Rubiac. 2: 455 (1988).
var. **scabrum**
Syn.: *Hymenodictyon scabrum* Stapf: FS: 258 (1929); ITU: 348 (1952); EL AMIN 1990: 395 {Imatong Mountains, near Torit}.
Imatong Mountains group, Sudan side: without further locality, 1080 m., on rocky outcrop, 12.6.1939, *Andrews* 1816 (K); Kinyeti Valley, 2 km. from junction between Katire and Ngarama roads (4° 21' N, 32° 39' E), no alt., 26.5.1984, *Kielland-Lund* 754 (C, NLH); Hiliu, in compound, 700 m., in shallow soil between rocks, 2.12.1983, *Kielland-Lund* 168 (C, NLH).
Imatong Mountains group, Uganda side: Agoro, no alt., arid hills, 12.1932, *Eggeling* 845 (K, MHU); Lututuru, 1380 m., on steep rocky slope, 29.4.1947, *Dawkins* 290 (MHU).
Didinga Mountains: Boya Hill, Karauili, 1200 m., rocky outcrop, 22.12.1982, *Fukui* 82-6 (EA); Boya Hill, Kimatong, 700 m., rocky outcrop, 9.1.1985, *Fukui* 84-144 (EA).
General habitat range: in lowland and medium-altitude woodland.
General distribution: Sudan, Uganda, Tanzania and Zambia; species as a whole also in Kenya and south to South Africa (Transvaal).

Keetia E. Phillips

Keetia gueinzii (Sond.) Bridson
FTEA, Rubiac. 3: 911 (1991); KTSL: 517 (1994).
Syn.: *Canthium gueinzii* Sond.: FWTA 2: 184 (1963); EL AMIN 1990: 386. *Canthium scabrosum* Bullock.
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* scandent at edge of clearing, 10.12.1980, *Friis & Vollesen* 805 (C, K, KHF).
Imatong Mountains group, Uganda side: Lututuru, 1530 m., riverine scrub, 5.6.1963, *Kertland* s.n. (MHU).
General habitat range: in lowland and medium-altitude forest and woodland.
General distribution: Ghana and Cameroon to Sudan and Ethiopia and Kenya, south to Angola, Zimbabwe and South Africa (Natal).

Keetia venosa (Oliv.) Bridson
FTEA, Rubiac. 3: 914 (1991); KTSL: 518 (1994).
Syn.: *Canthium venosum* (Oliv.) Hiern: FTA 3: 144 (1877); FS: 266 (1929); FPS 2: 431 (1952); FWTA 2: 184 (1963); EL AMIN 1990: 387.
Imatong Mountains group, Sudan side: Kinyeti Valley, 10 km. north of Katire, 850 m., woodland with *Combretum collinum, C. molle* and *Annona senegalensis,* 3.3.1982, *Friis & Vollesen* 1084 (C, K, KHF).
General habitat range: at edges of lowland and medium-altitude forest, and in scrub and woodland.
General distribution: Senegal to Sudan, south to Angola, Zimbabwe and Mozambique.

Keetia zanzibarica (Klotzsch) Bridson
KTSL: 518 (1994)
Syn.: *Canthium zanzibaricum* Klotzsch: FS: 266 (1929); FPS 2: 430 (1952); JACKSON 1956: 354 {Laboni}; EL AMIN 1990: 388 {Lotti}.
subsp. **gentilii** (De Wild.) Bridson
FTEA, Rubiac. 3: 918 (1991).
Imatong Mountains group, Sudan side: Laboni, 1100 m., forest undergrowth, 22.12.1935, *Thomas* 1746 (BM, K); Talanga, 950 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, along small brook

between rocks, 2.12.1980, *Friis & Vollesen* 642 (C, K, KHF); Kinyeti Valley, near Kinyieti River 12 km. south of Hiliu towards Katire, 700 m., in *Vitex doniana* woodland, 700 m., 7.12.1983, *Kielland-Lund* 248 (C, NLH).
General habitat range: in lowland and medium-altitude dry forest, woodland and scrub.
General distribution: Central African Republic eastwards to Ethiopia, south to Congo [previously Zaire] and Tanzania. Species as a whole also from Sierra Leone to Tanzania.

Kohautia Cham. & Schlecht.

Kohautia coccinia Royle
FWTA 2: 210 (1963); FTEA, Rubiac.: 1: 235 (1976); WICKENS 1976: 130; UKWF: 188 (1994); HYF: 280 (1997).
Syn.: *Oldenlandia abyssinica* (A. Rich.) Hiern: FTA 3: 57 (1877).
Didinga Hills: Chukudum Regional District Centre (4° 14' N, 33° 29' E), c. 1100 m., 16.12.1983, *Kielland-Lund* 331 (C, NLH).
General habitat range: in lowland, medium-altitude and montane grassland, including seasonall damp places, wooded grassland, especially at rocky outcrops, and in waste ground and as a weed in cultivations.
General distribution: Senegal to Ethiopia, south to Zambia, Zimbabwe, Malawi and Mozambique; also in tropical Arabia and northern India.

Leptactina Hook. f.

Leptactina platyphylla (Hiern) Wernham
FPS 2: 442 (1952); FTEA, Rubiac. 2: 689 (1988); EL AMIN 1990: 396 {Imatong Mountains}; KTSL: 521 (1994).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* scandent in forest, 4.12.1980, *Friis & Vollesen* 686 (C, K, KHF); Talanga, 1000 m., 11.6.1961, *Jackson* 4222 (K).
General habitat range: in lowland and medium-altitude forest and woodland.
General distribution: Cameroon eastwards to Sudan and Kenya, south to Congo [previously Zaire], Malawi and Mozambique.

Meyna Link

Meyna tetraphylla (Hiern) Robyns
FS: 267 (1929); FPS 2: 443 (1952); EL AMIN 1990: 396; FTEA, Rubiac. 3: 859 (1991); KTSL: 521 (1994).
subsp. **tetraphylla**
FTEA, Rubiac. 3: 859 (1991).
Imatong Mountains group, Sudan side: at the northernmost point of the continuous mountain chain of the Imatong Mts., just south-east of Ngarama on the track to Molongori, 700 m., on rocky outcrop with *Sterculia setigera, Cordyla richardii, Ficus arbutilifolia,* etc., 13.3.1982, *Friis & Vollesen* 1185 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: Agoro, no alt., 3.1935, *Eggeling* 1708 (MHU); Agoro, no alt., dry plains, 4.1938, *Eggeling* 3563 (K, MHU).
Didinga Mountains: Boya Hill, Kimatong, 700 m., open woodland at rocks, 17.11.1983, *Fukui* 83-3 (EA).
General habitat range: in lowland and medium-altitude woodland and riverine scrub.
General distribution: South Sudan, South Ethiopia, North East Uganda and North West Kenya. Species as a whole also in Somalia, Tanzania and on the Comoro Islands.

Mitracarpus Zucc.

Mitracarpus villosus (Sw.) DC.
WICKENS 1976: 191; FTEA, Rubiac. 1: 375 (1976); UKWF: 192 (1994).
Syn.: *Mitracarpus scaber* Zucc.: FTA 3: 243 (1877); FS: 273 (1929); FPS 2: 443 (1952); FWTA 2: 222 (1963); WICKENS 1976: 130. *Mitracarpus verticillatus* (Schumach. & Thonn.) Vatke.
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, 700 m., in agricultural land, 28.11.1983, *Kielland-Lund* 60 (C, NLH); Hiliu, near houses in compound, 700 m., 9.12.1983, *Kielland-Lund* 284 (C, NLH).
Lafit, Dongotona and Nangeya Mountains: south east of Lafon (5° 02' N, 32° 27-28' E), no alt., 28.12.1983, *Kielland-Lund* 495 (NLH).
General habitat range: a weed in cultivations.
General distribution: Cape Verde Islands, Mauritania and Senegal to Ethiopia, south to Angola, Zambia and Malawi; also in Seychelles, and tropical Asia from India to New Guinea, Marianas Islands, and widespread in tropical America.

Multidentia Gilli

Multidentia crassa (Hiern) Bridson & Verdc.
FTEA, Rubiac. 3: 845 (1991); KTSL: 522 (1994).
Syn.: *Canthium crassum* Hiern: FTA 3: 145 (1877); FS: 266 (1929); FPS 2: 430 (1952).
var. **crassa**
Imatong Mountains group, Sudan side: Mt. Baghanj, 1830-2130 m., 13.6.1939, *Andrews* 1910 (K).
Imatong Mountains group, Uganda side: without further locality, 1220 m., savannah, 4.1943, *Purseglove* 1439 (EA, K).
General habitat range: in medium-altitude lowland and woodland.
General distribution: Central African Republic and Cameroon to Sudan, Ethiopia and Kenya, south to Angola, Zimbabwe and Mozambique.

Multidentia dichrophylla (Mildbr.) Bridson
FTEA, Rubiac. 3: 842 (1991).
Syn.: *Plectronia dichrophylla* Mildbr. *Canthium sillitoei* Bullock.
Imatong Mountains group, Sudan side: Lotti, near rest house, no alt., 9.6.1939, *Andrews* 1731 (K).
General habitat range: in lowland and medium-altitude forest.
General distribution: Cameroon to South Sudan and West Uganda.

Mussaenda L.

Mussaenda arcuata Poir.
FTA 3: 68 (1877); FS: 261 (1929); FPNA 2: 334 (1947); FPS 2: 446 (1952); FWTA 2: 165 (1963); FG 12: 152 (1966); WICKENS 1976: 130; FTEA, Rubiac. 2: 461 (1988); EL AMIN 1990: 399; KTSL: 522 (1994).
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* climber at trail in forest, 3.12.1980, *Friis & Vollesen* 653 (C, K, KHF).
General habitat range: in lowland and medium-altitude forest and woodland.
General distribution: Senegal to Ethiopia and West Kenya, south to Angola, Zimbabwe and Mozambique; also in Madagascar.

Mussaenda erythrophylla Schumach. & Thonn.
FTA 3: 69 (1877); FS: 261 (1929); FPNA 2: 335 (1947); FPS 2: 446 (1952); FWTA 2: 165 (1963); FG 12: 148 (1966); FTEA, Rubiac. 2: 463 (1988); EL AMIN 1990: 400 {Lotti}; KTSL: 522 (1994).
Imatong Mountains group, Sudan side: on the Lokung-Laboni path where it crosses the Sudan-

Uganda border, 1220 m., in flat land between the Agu and the main Agoro (Imatong) massifs in dense lowland bamboo forest, associated with *Ficus thonningii, Terminalia sp., Oxytenanthera abyssinica, Annona senegalensis, Piliostigma thonningii, Combretum molle,* etc., 28.7.1946, *Dawkins* 204 (MHU); Acholi hills, near Lomariti, 1400 m., in riverine forest, 18.4.1930, *Snowden* 1678 (BM, EA, K); Lotti, no alt., forest, 15.4.1933, *Smith* 30 (K, KHF); Lotti, 1000 m., rain forest, 20.5.1949, *Jackson* 736 (FHO); Lotti, 1000 m., shrub in forest understorey, 24.6.1953, *Jackson* 3047 (FHO, KHF).
General habitat range: in lowland and medium-altitude forest and woodland.
General distribution: Guinée and Sierra Leone to South Sudan and West Kenya, south to Angola and Tanzania.

Oldenlandia L.

Oldenlandia corymbosa L.
FTA 3: 62 (1877); FS: 260 (1929); FPS 2: 446 (1952); FWTA 2: 211 (1963); FG 12: 99 (1966); FTEA, Rubiac. 1: 308 (1976); WICKENS 1976: 130; UKWF: 189 (1994); HYF: 279 (1997).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 3.1.1984, *Kielland-Lund* 572 (C, NLH); Kinyeti Valley, Hiliu, between compound and river, 700 m., 28.11.1983, *Kielland-Lund* 77 (C, NLH).
General habitat range: in lowland, medium-altitude and montane grassland and open woodland, often in disturbed places along rivers, roadsides, and as a weed on sandy soils.
General distribution: Senegal to Ethiopia, south to South Africa (Transvaal); also in tropical Arabia, widespread in the tropics and subtropics of both Old and New World.

Oldenlandia goreensis (DC.) Summerh.
FPS 2: 453 (1952); FWTA 2: 211 (1963); FG 12: 104 (1966); FTEA, Rubiac. 1: 279 (1976); UKWF: 188 (1994).
var. **goreensis**
FTEA, Rubiac. 1: 279 (1976).
Syn.: [*Oldenlandia trinervia* auct., non Retz.: FTA 3: 63 (1877); FS: 259 (1929)].
Imatong Mountains group, Sudan side: Gilo to Mt. Konoro, c. 1800 m., seepage meadow on edge between upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea* and grassland with *Loudetia arundinacea,* 18.11.1980, *Friis & Vollesen* 314 (BR, C, EA, K, KHF).
General habitat range: in lowland and medium-altitude grassland and swamps.
General distribution: Senegal to Ethiopia, south to South Africa (Transvaal); also in Madagascar and on the Mascarene Islands.

Oldenlandia herbacea (L.) Roxb.
FPNA 2: 323 (1947); FPS 2: 451 (1952); FWTA 2: 212 (1963); FG 12: 101 (1966); FTEA, Rubiac. 1: 305 (1976); WICKENS 1976: 130; UKWF: 189 (1994).
var. **herbacea**
FTEA, Rubiac. 1: 305 (1976).
Syn.: *Oldenlandia heynei* G. Don: FTA 3: 59 (1877).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 3.1.1984, *Kielland-Lund* 557 (C, NLH); Talanga, 950 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 30.11.1980, *Friis & Vollesen* 576 (C, K, KHF); Hiliu, 700 m., in agricultural land, 28.11.1983, *Kielland-Lund* 62 (C, NLH); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* on moist slope along trail, 8.11.1980, *Friis & Vollesen* 27 (BR, C, K, KHF).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 2260 m., moist shallow turf over rock, 26.8.1966, *Lock* K 7 (EA, MHU).
General habitat range: in lowland and medium-altitude grassland and woodland.

General distribution: Senegal to Ethiopia, south to South Africa; also in tropical Asia.

Oldenlandia lancifolia (Schumach.) DC.
FTA 3: 61 (1877); FS: 259 (1929); FPS 2: 453 (1952); FWTA 2: 212 (1963); FG 12: 100 (1966); FTEA, Rubiac. 1: 292 (1976); UKWF: 189 (1994).
var. **scabridula** Bremek.
FTEA, Rubiac. 1: 293 (1976).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* in grassy swamp with stagnant water along the river, 21.11.1980, *Friis & Vollesen* 370 (BR, C, K, KHF).
General habitat range: in medium-altitude and montane forest and woodland.
General distribution: Senegal to Ethiopia, south to South Africa (Transvaal); also introduced into South America and the West Indies.

Oxyanthus DC.

Oxyanthus speciosus DC.
FTA 3: 108 (1877); ITU: 353 (1952); FWTA 2: 129 (1963); FG 17: 196 (1970); FTEA, Rubiac. 2: 527 (1988); El Amin 1990: 401 {Lotti}; KTSL: 524 (1994).
subsp. **stenocarpus** (K. Schum.) Bridson
FTEA, Rubiac. 2: 529 (1988); KTSL: 524 (1994).
Imatong Mountains group, Sudan side: Lotti, at rest house, no alt., 9.6.1939, *Andrews* 1750 (K); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 8.11.1980, *Friis & Vollesen* 54 (C, K, KHF).
Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).
General habitat range: in montane forest.
General distribution: Ethiopia south to South Africa (North Transvaal).
Note. Not recorded from the Sudan by Bridson. *Andrews* 1750 has no fruits, but matches typical subsp. *stenocarpus* in the morphology of leaves and inflorescence.

Oxyanthus unilocularis Hiern
FTA 3: 110 (1877); FS: 264 (1929); ITU: 353 (1952); FPS 2: 455 (1952); Jackson 1956: 354 {Lotti}; FWTA 2: 129 (1963); FG 17: 193 (1970); FTEA, Rubiac. 2: 537 (1988); El Amin 1990: 401 {Lotti}.
Imatong Mountains group, Sudan side: Lotti, near rest house, no alt., in forest, 9.6.1939, *Andrews* 1735 (K); Lotti, 1000 m., in forest understorey, 20.5.1950, *Jackson* 1496 (FHO, KHF); Lotti near Palotaka, 1200 m., forest, 3.1.1979, *Shigeta* 141 (EA).
General habitat range: in lowland and medium-altitude forest.
General distribution: Sierra Leone to Sudan, south to Angola.

Pavetta L.

Pavetta abyssinica Fresen.
FPS 2: 457 (1952); FTEA, Rubiac. 2: 660 (1988); El Amin 1990: 402; KTSL: 527 (1994).
var. **abyssinica**
FTEA, Rubiac. 2: 661 (1988).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1800 m., small tree in high forest, 16.5.1972, *Synnott* 1016 (MHU); Nangeya Mts., Mt. Lonyili, 1900 m., closed old forest, 16.5.1972, *Synnott* 1067 (EA, MHU); Nangeya Mts., Mt. Lonyili, 2000 m., closed forest, 2.9.1972, *Synnott* 1254 (EA, MHU).
General habitat range: in montane forest and scrub.
General distribution: Ethiopia south to Tanzania.

Pavetta sp. nov. near P. abyssinica Fresen.
Syn.: [*Pavetta abyssinica* auct., non Fresen.: FPS 2: 457 (1952), pro parte].

Imatong Mountains group, Sudan side: Mt. Garia, 1830-2140 m., 13.6.1939, *Andrews* 1876 (K); Gilo, no alt., 13.6.1953, *Prowse* 257 (K, photo; KHU); Gilo, no alt., in *Acacia abyssinica* woodland, 24.6.1947, *MacLeay* 43 (BM); Gilo, near bridge on Ngairigi River, 1750 m., upland forest with *Albizia-Macaranga-Croton,* 9.11.1980, *Friis & Vollesen* 70 (C, K, KHF); Itibol, 1900 m., colonising forest under *Acacia abyssinica,* 22.4.1950, *Jackson* 1409 (BM); small hill on the south-east slope of Mt. Konoro, 2350 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum,* 14.3.1982, *Friis & Vollesen* 1212 (BR, C, K, KHF).
General habitat range: in montane forest and woodland.
General distribution: the range of this so far undescribed species is not known.

Pavetta crassipes K. Schum.
ITU: 354 (1952); FPS 2: 457 (1952); FWTA 2: 140 (1963); FTEA, Rubiac. 2: 670 (1988); El Amin 1990: 402; KTSL: 527 (1994).
Imatong Mountains group, Sudan side: Kinyeti Valley, 8 km. south of Hiliu along Katire road (4° 12' N, 32° 40' E), no alt., in savannah, 30.5.1984, *Kielland-Lund* 787 (C, NLH); path from Lomuleng to Logoforok, 1500 m., on stony hillside with bamboo, 2.6.1950, *Jackson* 1526 (FHO, KHF).
Imatong Mountains group, Uganda side: Agoro, 1990 m., steep slope with *Combretum* woodland, 8.4.1945, *Greenway & Hummel* 7321 (EA, K, MHU).
General habitat range: in lowland and medium-altitude woodland.
General distribution: Senegal to Ethiopia, south to Malawi and Zambia.

Pavetta gardeniifolia A. Rich.
FTA 3: 177 (1877); FPS 2: 458 (1952); FTEA, Rubiac. 2: 676 (1988); KTSL: 528 (194).
var. **gardeniifolia**
FTEA, Rubiac. 2: 677 (1988).
Syn.: *Pavetta assimilis* Sond.: FCap 3: 20 (1865); FPNA 2: 360 (1947). *Pavetta saxicola* K. Krause: FWTA 2: 140 (1963). *Pavetta hochsteteri* Bremek. var. *glaberrima* Bremek.: FPS 2: 458 (19952).
Imatong Mountains group, Sudan side: Kinyeti, Hiliu, east of compound and stream, 700 m., 9.12.1983, *Kielland-Lund* 280B (C, NLH).
General habitat range: in lowland, medium-altitude and montane bushland, wooded grassland, and at forest edges, often on rocky outcrops.
General distribution: Togo and Nigeria to Ethiopia and Somalia, south to South Africa (Transvaal, Natal). Species as a whole within the same general area.

Pavetta incana Klotzsch
Jackson 1956: 354 {Talanga}.
Note. The identity of the record referred to by Jackson 1956 is not known, perhaps it represents *Pavetta oliveriana* Hiern; true *Pavetta incana* Klotzsch is restricted to Malawi, Zimbabwe and Mozambique.

Pavetta molundensis K. Krause
FTEA, Rubiac. 2: 631 (1988); El Amin 1990: 403 {Acholi Hills, between Laboni and Issore}.
Syn.: *Pavetta insignis* Bremek. var. *glabra* Bremek.: FPS 2: 456 (1952) {Acholi Hills [Imatong mountains], between Laboni and Issore}.
Imatong Mountains group, Sudan side: Talanga, no alt., 6.4.1950, *Jackson* 1390 (K); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 4.12.1980, *Friis & Vollesen* 690 (C, K, KHF); Talanga, 1000 m., understorey of rain forest, 5.4.1950, *Jackson* 1376 bis (K); Acholi Hills, Opari, between Laboni and Issore, 1300 m., fringing forest with *Coffea,* 20.4.1930, *Snowden* 1692 (BM, EA, K).
General habitat range: in medium-altitude forest.

General distribution: Cameroon and Sudan south to East Congo [previously Zaire] and West Tanzania.

Pavetta oliveriana Hiern
FS: 269 (1929); FPNA 2: 359 (1947); FPS 2: 457 (1952); FTEA, Rubiac. 2: 644 (1988); EL AMIN 1990: 404 {Lotti}; KTSL: 528 (1994).
var. **oliveriana**
FTEA, Rubiac. 2: 644 (1988); KTSL: 528 (1994).
Imatong Mountains group, Sudan side: Lotti, near rest house, 8.6.1939, *Andrews* 1715 (K); Talanga to Upper Talanga, 1300 m., medium-altitude rain forest with *Diospyros abyssinica, Garcinia buchananii, Uvariopsis congoensis, Turraea floribunda, Manilkara butugi,* etc., 10.12.1980, *Friis & Vollesen* 790 (BR, C, K, KHF).
General habitat range: in montane forest and grasslands.
General distribution: Sudan to Ethiopia, south to East Congo [previously Zaire] and Tanzania.

Pavetta "praelata" Bremek. (ined.)
Imatong Mountains group, Sudan side: Talanga, 1000 m., along stream near edge of forest, 19.2.1950, *Jackson* 1153 (KHF).
The identity and range of this taxon is not known.

Pavetta subcana Hiern
FTA 3: 172 (1877); FS: 269 (1929); FPS 2: 457 (1952); FWTA 2: 140 (1963); FTEA, Rubiac. 2: 681 (1988); EL AMIN 1990: 404; KTSL: 529 (1994).
var. **longiflora** (Vatke) Bridson
FTEA, Rubiac. 2: 681 (1988).
Syn.: *Pavetta albertina* S. Moore
Imatong Mountains group, Sudan side: near Torit, 620 m., evergreen tangle on termite mound, 24.6.1949, *Jackson* 820 (FHQ).
General habitat range: in lowland and medium-altitude bushland, often riparian or on termite hills.
General distribution: Central African Republic to Ethiopia and West Kenya, south to Congo [previously Zaire] and Tanzania. Species as a whole also in Nigeria.

Pentanisia Harv.

Pentanisia ouranogyne S. Moore
FTEA, Rubiac. 1: 172 (1976); UKWF: 191 (1994).
Imatong Mountains group, Uganda side: Agoro, 1530 m., in old fields, no date, *Eggeling* 784 (K); north of Madi Opei, 920 m., road side, 4.1943, *Purseglove* 1366 (EA).
Didinga Mountains: Chukudum Regional District Centre (4° 24' N, 33° 29' E), no alt., at roadside, 13.6.1984, *Kielland-Lund* 947 (C, NLH).
General habitat range: in lowland and medium-altitude grassland, bushland and woodland.
General distribution: North Uganda, South Ethiopia and Somalia through eastern Africa, south to Tanzania.

Pentas Benth.

Pentas decora S. Moore
FWTA 2: 215 (1963); FTEA, Rubiac. 1: 195 (1976); UKWF: 190 (1994).
var. **decora**
FTEA, Rubiac. 1: 197 (1976).
Syn.: [*Pentas globifera* auct., non Hutch.: FPS 2: 458 (1952) {Laboni}, quoad *Myers* 9771].
Imatong Mountains group, Sudan side: Laboni, no alt., in grass near cultivations, 16.10.1938, *Myers* 9771 (K, WM); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 19.11.1980, *Friis & Vollesen* 340 (C, K); Gilo, 1860 m., in regularly burnt grassland, 24.6.1947, *MacLeay* 32 (BM); at path from Gilo to Mt. Konoro, 2000 m., *Loudetia arundinacea* grassland with scattered trees

on very shallow soil, 19.3.1982, *Friis & Vollesen* 1260 (C, K); hill above Gilo, 2130 m., grassland on rocky ground, 14.6.1953, *Prowse* 278 (KHU); Mt. Baghanj, 1830-2130 m., 13.6.1939, *Andrews* 1886 (K); Dumuso, 2400 m., grassland with rocks, 31.5.1950, *Jackson* 1511 (K); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 59' N, 32° 53' E), 2200 m., in grassland, 9.6.1984, *Kielland-Lund* 890 (C, NLH).

Imatong Mountains group, Uganda side: without further locality, 2290 m., grassland, 4.1938, *Eggeling* 3566 (K, ?EA); above Agoro, ridge above Aringa Valley, 2290 m., abundant, 6.1942, *Eggeling* 5059 (EA, MHU); Lomwaga, 2380 m., 1963, *Morrison* 2002 (EA, MHU); 4 km. south-east of Lomwaga, no alt., tall-grass grassland with scattered trees, 18.7.1974, *Katende* 2146 (MHU), & 2190 (MHU).

General habitat range: in montane woodland and grassland.

General distribution: Sudan south to Angola and Malawi; species as a whole also in West Africa.

Pentas lanceolata (Forssk.) Deflers
FPNA 2: 329 (1947); FTEA, Rubiac. 1: 208 (1976); UKWF: 190 (1994); HYF: 279 (1997).
subsp. **lanceolata**
FTEA, Rubiac. 1: 210 (1976).

Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 13.11.1980, *Friis & Vollesen* 195 (C, K, KHF).

General habitat range: in montane grassland.

General distribution: Ethiopia, Sudan, Uganda, Kenya and Tanzania; also in tropical Arabia.
subsp. **quartiniana** (A. Rich.) Verdc.
FTEA, Rubiac. 1: 210 (1976).
var. **leucaster** (K. Krause) Verdc.
FTEA, Rubiac. 1: 210 (1976).
Syn.: [*Pentas carnea* auct., non Benth.: FPS 2: 459 (1952) {Laboni}].

Imatong Mountains group, Sudan side: without further locality, no alt., 1932, *Johnston* 1442 (K); without further locality, 1520-1830 m., 12.6. 1939, *Andrews* 1828 (K, WM); Laboni, no alt., 14.10.1938, *Myers* 9715 (K, WM); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea.*, forest edge, 9.11.1980, *Friis & Vollesen* 94 (BR, C, K, KHF); Gilo, 1830 m., grassland at road in forest, 10.7.1947, *MacLeay* 197 (BM); Loyaru, 2140 m., 28.12.1935, *Thomas* 1777 (K).

Imatong Mountains group, Uganda side: Langia, 1220-2740 m., mountain grassland, 4.1943, *Purseglove* 1401 (?K, not traced); Lututuru, no alt., 5.6.1963, *Kertland* s.n. (MHU); 2 km. east of Lututuru, near a rivulet, 1400 m., in open woodland, 17.2.1969, *Lye* 2100 (MHU); 1 km. south of Aringa River, north-east of Mingaro (3° 44' N, 32° 55' E), 1800 m., damp places in grassland, 9.6.1973, *Katende* 1871 (MHU); 5 km. south-west of Lomwaga, no alt., tall-grass grassland with scattered trees, 18.7.1974, *Katende* 2187 (MHU).

Didinga Mountains: between Nagichot and Duguru village (4° 16' N, 33° 35' E), 2000 m., 17.12.1983, *Kielland-Lund* 358 (C, NLH).

General habitat range: in montane grassland.

General distribution: Ethiopia and Sudan south to Tanzania. The distribution of the species as a whole agrees with the total distribution of the infraspecific taxa enumerated above.

Pentas purseglovei Verdc.
FTEA, Rubiac. 1: 206 (1976).

Imatong Mountains group, Sudan side: summit of Mt. Konoro, 2500 m., *Loudetia arundinacea* grassland on very shallow soil, 16.3.1982, *Friis & Vollesen* 1221 (C, K, KHF); Dumuso, 2330 m., grassland, 31.5.1950, *Jackson* 1505 (K); Kipia, 2680 m., mountain meadow, 1939, *MacDonald* 72 (BM).

Imatong Mountains group, Uganda side: Langia, 2830 m., mountain grassland, 4.1943, *Purseglove* 1421 (EA, holotype of *P. purseglovei*, K, isotype).

General habitat range: in mountain grassland.

General distribution: not known elsewhere.

Pentas schimperiana (A. Rich.) Vatke
FTA 3: 45 (1877); FPNA 2: 327 (1947); FWTA 2: 216 (1963); FTEA, Rubiac. 1: 187 (1976); UKWF: 190 (1994); KTSL: 531 (1994).
subsp. **schimperiana**
KTSL: 531 (1994)
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 13.11.1980, *Friis & Vollesen* 202 (C, K, KHF); Gilo, 2070 m., grassland over rocks, 14.6.1953, *Osman* 277 (KHU); slope of Mt. Kinyeti, 2130 m., in grassland, 17.6.1953, *Prowse* 342 (KHU).
General habitat range: in montane grassland.
General distribution: South Sudan, Ethiopia and Kenya south to Zambia. Species as a whole also from Cameroon to Sudan and Congo [previously Zaire]. First record from the Sudan.

Polysphaeria Hook. f.

Polysphaeria parvifolia Hiern
FTA 3: 128 (1877); FPS 2: 459 (1952); FTEA, Rubiac. 2: 573 (1988); El Amin 1990: 405; KTSL: 532 (1994).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, 700 m., below compound near river, 23.11.1983, *Kielland-Lund* 34 (C, NLH); south west of Hiliu, in small ravine (4° 16' N, 32° 48' E), no alt., 25.5.1984, *Kielland-Lund* 727 (C, NLH).
General habitat range: in lowland woodland and dry and open forest and coastal bushland.
General distribution: Sudan to Ethiopia and Somalia, south to Tanzania.

Pseudomussaenda Wernham

Pseudomussaenda flava Verdc.
FPS 2: 459 (1952); Jackson 1956: 350; FTEA, Rubiac. 2: 467 (1988); El Amin 1990: 405; KTSL: 533 (1994).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., open woodland, 8.1.1979, *Shigeta* 60 (EA); Talanga, 950 m., rocky outcrop in wooded grassland with much *Terminalia laxiflora, T. brownii, Pterocarpus lucens, Combretum collinum,* and *Vitex doniana,* grass cover dominated by *Loudetia,* 28.11.1980, *Friis & Vollesen* 515 (C, K, KHF); just west of Hiliu, near bridge, 700 m., 21.11.1983, *Kielland-Lund* 16 (C, NLH).
Imatong Mountains group, Uganda side: 2 km. east of Lututuru, near a rivulet, 1400 m., in open woodland, 17.2.1969, *Lye* 2102 (MHU, NLH, UPS); Lututuru, 1220 m., bottom of glen, 9.6.1963, *Kertland* s.n. (MHU); north of Okako peak, south of Mingaro, no alt., ravine woodland, 9.6.1973, *Katende* 1864 (EA, MHU); 6 km. east of Lututuru Rest House, 1500 m., woodland, 19.7.1974, *Katende* 2200 (MHU).
Didinga Mountains: Boya Hill, Karauili, 1200 m., rocky outcrop, 22.12.1982, *Fukui* 82-28 (EA).
General habitat range: in lowland and medium-altitude woodland and open forest. According to Jackson 1956 it occurs at the Imatong Mountains in moist woodland west and north of the mountains.
General distribution: Nigeria to Ethiopia, south to Uganda and Kenya.

Psilanthus Hook. f.

Psilanthus leroyi Bridson
FTEA, Rubiac. 2: 727 (1988).
Didinga Mountains: Boya Hill, Kimatong, 700 m., rocky outcrop, 9.1.1985, *Fukui* 84-96 (EA); Boya Hill, Thuguru region (4° 40' N, 33° 7' E), no alt., in open secondary bushland on riverine soils, 12.6.1984, *Kielland-Lund* 936 (C, NLH).
General habitat range: in lowland deciduous bushland, mainly on rocky outcrops.

General distribution: only known from this locality, the type locality (Mt. Zulia) in Karamoja, North East Uganda, and from the Omo Valley, South West Ethiopia.

Psychotria L.

Psychotria capensis (Eckl.) Vatke
subsp. **riparia** (K. Schum. & K. Krause) Verdc.
Syn.: *Psychotria riparia* (K. Schum. & K. Krause) Petit subsp. *riparia*: FTEA, Rubiac. 1: 39 (1976); KTSL: 537 (1994).
Imatong Mountains group, Uganda side: Lututuru, no alt., stream-side, 2.1938, *Eggeling* 3514 (K, MHU).
General habitat range: in lowland woodland, bushland and riverine forest.
General distribution: Uganda and Kenya, south to Zambia, Malawi and Mozambique. Species as a whole also in South Africa.

Psychotria kirkii Hiern
FTEA, Rubiac. 1: 92 (1976); El Amin 1990: 406; UKWF: 187 (1994); KTSL: 535 (1994).
var. **mucronata** (Hiern) Verdc.
FTEA, Rubiac. 1: 98 (1976).
Syn.: *Psychotria mucronata* Hiern: FS: 271 (1929); FPS 2: 460 (1952).
Imatong Mountains group, Sudan side: Talanga to Upper Talanga, 1300 m., medium-altitude rain forest with *Diospyros abyssinica, Garcinia buchananii, Uvariopsis congoensis, Turraea floribunda, Manilkara butugi,* etc., 10.12.1980, *Friis & Vollesen* 794 (BR, C, K, KHF); Imeila, 750 m., lowland forest with *Khaya* and *Cola*, 27.5.1949, *Jackson* 774 (FHO).
General habitat range: in lowland and medium-altitude forest.
General distribution: Congo [previously Zaire], Sudan, Uganda and Tanzania. Species as a whole also in Ethiopia, Kenya, Malawi, Zambia, Zimbabwe and Mozambique.

Psychotria mahonii C.H. Wright
FTEA, Rubiac. 1: 58 (1976); KTSL: 536 (1994).
var. **puberula** (Petit) Verdc.
FTEA, Rubiac. 1: 60 (1976); KTSL: 536 (1994).
Imatong Mountains group, Sudan side: without further locality [possibly Gilo], 1990 m., *Podocarpus latifolius* forest, 10.2.1976, *Howard* IM 94 (K); Gilo, 1830 m., understorey in forest, 7.1946, *Sangster* 820 (MHU); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea*, 8.11.1980, *Friis & Vollesen* 55 (C, K, KHF); Gilo, 1890 m., *Podocarpus latifolius* forest, 24.6.1947, *MacLeay* 35 (BM); Gilo, 1900 m., *Podocarpus latifolius* forest, 23.3.1950, *Jackson* 1263 (K).
General habitat range: in montane forest.
General distribution: Sudan south to Malawi and Zimbabwe. Species as a whole with same distribution.
Note. *Jackson* 1263 is the type of *P. megistosticha* (S. Moore) Petit var. *imatongensis* Petit. Verdcourt in FTEA Rubiac., vol., 1 included *P. megistosticha* in *P. mahonii* but did not include var. *imatongensis* in the synonymy. It seems, however, that var. *imatongensis* is a synonym of var. *puberula.*
var. **pubescens** (Robyns) Verdc.
FTEA, Rubiac. 1: 61 (1976); KTSL: 536 (1994).
Syn.: *Psychotria robynsiana* Petit var. *paucionervata* Petit: El Amin 1990: 407 {Imatong Mountains, Mt. Garia, Itibol}.
Imatong Mountains group, Sudan side: Mt. Garia, 1830-2140 m., 13.6.1939, *Andrews* 1875 (K); Itibol, 1860 m., 19.12.1935, *Thomas* 1691 (K).
General habitat range: in medium-altitude and montane forest and bushland.
General distribution: South Sudan, Uganda, Kenya, Tanzania, Congo [previously Zaire].

Psychotria orophila Petit
Sommerlatte 1990: 336; FTEA, Rubiac. 1: 49 (1976); El Amin 1990: 407 {Imatong Mountains, Mt. Baghanj}; KTSL: 536 (1994).
Imatong Mountains group, Sudan side: near pool

in Kinyeti River near Gilo, 1750 m., 26.12.1983, *Kielland-Lund* 484 (C, NLH); Upper Talanga, 2000 m., in mixed *Podocarpus latifolius* forest, 14.3.1984, *Sommerlatte* 23 (EA); Mt. Baghanj, 1830-2140 m., 14.6.1939, *Andrews* 1927 (K); Bushbuck Hill, 2150 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. afromontanum, 10.11.1980, *Friis & Vollesen* 111 (BR, C, K, KHF); near Dumuso, 2500 m., *Podocarpus latifolius* forest, 16.11.1949, *Jackson* 986 (FHO).

General habitat range: in montane forest. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a shrub or small tree in *Albizia* forest, and in mixed *Podocarpus latifolius* forest.

General distribution: South Sudan, Ethiopia, Uganda, Kenya and Tanzania.

Psychotria peduncularis (Salisb.) Steyerm.
FTEA, Rubiac. 1: 72 (1976); EL AMIN 1990: 388; UKWF: 187 (1994); KTSL: 536 (1994).
Syn.: *Cephaelis peduncularis* Salisb.: FWTA 2: 204 (1963).
var. **ciliato-stipulata** Verdc.
FTEA, Rubiac. 1: 74 (1976).
Syn.: *Uragoga ciliato-stipulata* De Wild., nom. inval.: FPNA 2: 369 (1947). *Cephaelis suaveolens* Schweinf. ex Hiern: FTA 3: 224 (1877); FPS 2: 431 (1952). *Cephaelis peduncularis* Salisb. var. *suaveolens* (Schweinf. ex Hiern) Hepper: FWTA 2: 204 (1963); EL AMIN 1990: 388.

Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* on forest floor, 28.11.1980, *Friis & Vollesen* 514 (C, K, KHF); Talanga, 970 m., forest, 16.12.1935, *Thomas* 1585 (BM, K).

General habitat range: in lowland and medium-altitude forest.

General distribution: Guinée, Ghana, Cameroon, Sudan, Uganda, Kenya, Tanzania and Congo [previously Zaire]. Species as whole also south to Zambia, Malawi and Zimbabwe.

Psychotria schweinfurthii Hiern
FS: 270 (1929); FPS 2: 460 (1952); JACKSON 1956: 355 {Talanga}; FTEA, Rubiac. 1: 64 (1976); EL AMIN 1990: 407.
Syn.: [*Psychotria latisepala* sensu Jackson: JACKSON 1956: 355 {Lotti}].

Imatong Mountains group, Sudan side: Laboni, no alt., 19.4.1930, *Snowden* 1686 (BM, K); Lotti, 1000 m., lowland rain forest, 20.5.1949, *Jackson* 735 (FHO); Torit district, no alt., 10.6.1939, *Andrews* 1769 (K); Talanga, 970 m., in forest under *Coffea,* 16.12.1935, *Thomas* 1584 (BM, K); Talanga, in forest (original data lost, no date), *Jackson* s.n. (KHF); Talanga, 900 m., in *Pterocarpus* woodland, 17.3.1950, *Jackson* 1225 (BM); Kinyeti Valley, 12 km. south of Hiliu along Katire road (4° 09' N, 32° 41' E), no alt., in teak plantation, 1.6.1984, *Kielland-Lund* 825 (C, NLH); Katire, 1000 m., in *Tectona* plantation, 16.8.1958, *Jackson* 3886 (K); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* 27.11.1980, *Friis & Vollesen* 506 (C, K), & 1.12.1980, *Friis & Vollesen* 603 (C); Talanga to Upper Talanga, 1100 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* shrub in forest, 7.12.1980, *Friis & Vollesen* 748 (BR, C, K, KHF); Imeila, 750 m., lowland forest with *Khaya* and *Cola,* 27.5.1949, *Jackson* 773 (FHO).

General habitat range: in lowland and medium-altitude forest.

General distribution: Ivory Coast to Sudan, south to Angola, Congo [previously Zaire] and Uganda.

Psychotria sp.
Syn.: *Grumilea sp. cf. G. platyphylla* K. Schum.: JACKSON 1956: 365.

The identity of Jackson's record is not certain. It could represent either *Psychotria orophila* or *Psychotria mahonii*. The former is the most common species.

Psychotria sp. ?nov.
Imatong Mountains group, Sudan side: Lotti, 1000 m., in forest understorey, 23.6.1953, *Jackson* 3022 (KHF).
Note. A species with extremely long and narrow stipules.

Psydrax Gaertn.

Psydrax parviflora (Afzel.) Bridson
FTEA, Rubiac. 3: 896 (1991); KTSL: 539 (1994).
subsp. **parviflora**
FTEA, Rubiac. 3: 897 (1991); KTSL: 539 (1994).
Syn.: *Canthium vulgare* (K. Schum.) Bullock: FPNA 2: 352 (1947); ITU: 340 (1952); FPS 2: 431 (1952); FWTA 2: 184 (1963); El Amin 1990: 388 {Didinga Mountains, Loghak}. *Canthium afzelianum* Hiern: FPS 2: 431 (1952); El Amin 1990: 385.
Imatong Mountains group, Sudan side: at Kinyeti River near Katire, 1160 m., riverine vegetation, 15.12.1935, *Thomas* 1567 (BM, K); near pool in Kinyieti River, Gilo, 1750 m., 26.12.1983, *Kielland-Lund* 488 (NLH).
Didinga Mountains: Iwowa, 1620 m., wooded grassland, 22.4.1939, *Myers* 11,026 (K, WM); head of River Loghak, 1800 m., in riverine forest with *Albizia schimperiana, Celtis africana, Syzygium guineense,* etc., 11.4.1949, *Jackson* 690 (FHO, KHF).
General habitat range: in medium-altitude and montane forest and evergreen bushland.
General distribution: Senegal, Guinea Bissau and Guinée to Ethiopia and Kenya, south to Angola and Zambia.
subsp. **rubrocostata** (Robyns) Bridson
FTEA, Rubiac. 3: 898 (1991); KTSL: 539 (1994).
Syn.: *Canthium rubrocostatum* Robyns: ITU: 340 (1952); FPS 2: 2 431 (1952); El Amin 1990: 387 {Imatong Mountains}.
Imatong Mountains group, Sudan side: Ras Logoforok, 1960 m., rocky riverbed, 29.7.1939, *Myers* 11,720 (K, WM).
General habitat range: in mountain forest.
General distribution: South Sudan, Uganda, Kenya, Tanzania and Malawi.

Rothmannia Thunb.

Rothmannia longiflora Salisb.
FWTA 2: 125 (1963); FG 17: 237 (1970); FTEA, Rubiac. 2: 515 (1988); El Amin 1990: 408; KTSL: 541 (1994).
Syn.: *Randia maculata* DC.: FTA 3: 96 (1877); FPNA 2: 341 (1947).
Imatong Mountains group, Sudan side: Laboni, 1280 m., fringing forest with *Coffea canephora*, 19.4.1930, *Snowden* 1687 (BM, EA, K); Lotti, no alt., 9.6.1939, *Andrews* 1737 (K); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, in forest, 6.12.1980, *Friis & Vollesen* 720 (C, K, KHF).
General habitat range: in lowland and medium-altitude forest.
General distribution: Guinea Bissau to Sudan and Kenya, south to Angola and Tanzania.

Rothmannia urcelliformis (Hiern) Bullock ex Robyns
FPNA 2: 340 (1947); FPS 2: 461 (1952); Jackson 1956: 354 {Talanga, Lotti, Laboni}; FWTA 2: 125 (1963); FTEA, Rubiac. 2: 514 (1988); El Amin 1990: 408; KTSL: 541 (1994).
Syn.: *Gardenia urcelliformis* Hiern: FTA 3: 104 (1877); FS: 264 (1929). *Randia urcelliformis* (Hiern) Eggeling: ITU: 356 (1952).

Imatong Mountains group, Sudan side: Laboni, near Opari, 1280 m., fringing forest with *Coffea canephora*, 19.4.1930, *Snowden* 1688 (K).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1900 m., in old high forest, 16.5.1972, *Synnott* 1055 (MHU).
General habitat range: in lowland and medium-altitude forest.
General distribution: Guinée and Sierra Leone to Ethiopia and West Kenya, south to Angola, Zimbabwe and Mozambique.

Rothmannia whitfieldii (Lindl.) Dandy
FPS 2: 461 (1952); FWTA 2: 126 (1963); FG 17: 252 (1970); FTEA, Rubiac. 2: 518 (1988); EL AMIN 1990: 409 {Imeila Forest}.
Syn.: *Randia malleifera* (Hook.) Hook. f.: FTA 3: 98 (1877); FS: 262 (1929); ITU: 355 (1952).
Imatong Mountains group, Sudan side: without further locality, no alt., 1935, *Thomas* 1740A (?BM, ?K; carp. col. only); Imeila, 750 m., in forest undergrowth with *Khaya grandifoliola* and *Cola gigantea*, 27.5.1949, *Jackson* 764 (FHO, KHF); Talanga, 1100 m., 7.3.1950, *Jackson* 1188 (K); Talanga, 1050 m., *Khaya-Chrysophyllum* forest, 20.3.1950, *Jackson* 1244 (K); Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa*, understorey in forest, 6.12.1980, *Friis & Vollesen* 732 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude forest.
General distribution: Senegal and Sierra Leone to Sudan, Uganda and Tanzania, south to Angola and Zambia.

Rubia L.

Rubia cordifolia L.
FPNA 2: 383 (1947); FTEA, Rubiac. 1: 381 (1976); UKWF: 193 (1994).
subsp. **conotricha** (Gand.) Verdc.
FTEA, Rubiac. 1: 381 (1976).
Imatong Mountains group, Sudan side: Kinyeti Valley, above Katire at Lofoha forest ranger post, 1400 m., wooded grassland with *Combretum molle, Cussonia arborea, Stereospermum kunthianum, Erythrina abyssinica, Entada abyssinica*, etc., grass cover with *Hyparrhenia* and *Pennisetum purpureum*, in tall grass at road verge, 21.3.1982, *Friis & Vollesen* 1266 (C, K, KHF).
Imatong Mountains group, Uganda side: 5 km. south-east of Lomwaga, no alt., tall-grass grassland with scattered trees, 18.7.1974, *Katende* 2178 (MHU).
Didinga Mountains: Nagichot, near house (4° 16' N, 33° 35' E), 1970 m., 17.12.1983, *Kielland-Lund* 346 (C, NLH).
General habitat range: at montane forest edges, in bushland and grassland.
General distribution: East Congo [previously Zaire], Sudan, and Uganda to North Somalia, south to South Africa (Natal, Transvaal). Species as a whole from the Mediterranean part of North Africa through the Middle East to Indonesia, China and Japan.

Rytigynia Blume

Rytigynia neglecta (Hiern) Robyns
FWTA 2: 186 (1963); FTEA, Rubiac. 3: 813 (1991); KTSL: 544 (1994).
var. **neglecta**
Syn.: *Canthium neglectum* Hiern: FTA 3: 150 (1877).
Imatong Mountains group, Sudan side: Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton*, and *Ocotea*, 8.11.1980, *Friis & Vollesen* 60 (C); Gilo, 1900 m., at forest edge, 10.5.1954, *Jackson* 3130 (KHF); Mt. Garia, 1830-2130 m., 13.6.1939, *Andrews* 1882 (K); Itibol, 1950 m., 14.6.1939, *Andrews* 1977 (K); lower southern slope of Mt. Konoro, 2100 m., *Loudetia* grassland with scattered trees on skeletal soil, 2.3.1982, *Friis & Vollesen* 1074 (BR, C, K, KHF).

Imatong Mountains group, Uganda side: 2380 m., rocky bushland, 4.1938, *Eggeling* 3609 (K, MHU).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1800 m., old high forest, 17.5.1972, *Synnott* 995 (EA, MHU); Mt. Lonyili, 1900 m., shrub in old high forest, 16.5.1972, *Synnott* 1054 (MHU).
Didinga Mountains: Mt. Lotuke, 1950-2040 m., undergrowth, 20.4.1939, *Myers* 10,963 (K); Nagichot, 1980 m., 25.4.1939, *Myers* 11,124 (K, WM).
General habitat range: in montane forest.
General distribution: South Sudan, Ethiopia, North Uganda and Kenya. Species as a whole also west to Cameroon and south to Congo [previously Zaire].

Rytigynia umbellulata (Hiern) Robyns
FWTA 2: 186 (1963).
Syn.: *Vangueria umbellulata* Hiern: FTA 3: 150 (1877). *Rytigynia sp. near umbellulata* (Hiern) Robyns: EL AMIN 1990: 410 {Imatong Mountains, Gilo}.
Imatong Mountains group, Sudan side: Talanga, 1000 m., 11.6.1961, *Jackson* 4223 (K).
General habitat range: in lowland and medium-altitude forest.
General distribution: Guinea Bissau and Sierra Leone to South Sudan, south to Angola and Zambia.

Sarcocephalus Afzel. ex Sabine
Syn.: *Nauclea* L., pro parte.

Sarcocephalus latifolius (Smith) E.A. Bruce
FTEA, Rubiac. 2: 439 (1988).
Syn.: *Sarcocephalus esculentus* Afzel. ex Sabine: FTA 3: 38 (1877); FS: 257 (1929). *Nauclea latifolia* Smith: FPS 2: 446 (1952); JACKSON 1956: 349; FWTA 2: 163 (1963); FG 12: 40 (1966); EL AMIN 1990: 400; SOMMERLATTE 1990: 122; KTSL: 523 (1994). *Nauclea "latifolius* (Smith) E.A. Bruce": ITU: 352 (1952).
Imatong Mountains group, Sudan side: Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees of *Terminalia laxiflora, T. brownii, Pterocarpus lucens, Combretum collinum* and *Vitex doniana* on rocky outcrop, 2.12.1980, *Friis & Vollesen* 643 (BR, C, K, KHF); Kinyeti Valley, near Kinyieti River 8 km. south of Hiliu towards Katire, 700 m., 7.12.1983, *Kielland-Lund* 245 (C, NLH); Katire, 910 m., in woodland, 16.12.1935, *Thomas* 1601 (BM, K).
General habitat range: in lowland and medium-altitude woodland. According to JACKSON 1956 it occurs at the Imatong Mountains in moist woodland west and north of the mountains; according to SOMMERLATTE 1990 it occurs as a tree in lowland woodland, and in closed forest.
General distribution: Senegal to Sudan, south to Congo [previously Zaire], Uganda and Kenya.

Spermacoce L.

Spermacoce chaetocephala DC.
FTEA, Rubiac. 1: 354 (1976);
Syn.: *Spermacoce kotschyana* Oliv.: FTA 3: 239 (1877); FS: 273 (1929). *Spermacoce hebecarpa* (A. Rich.) Oliv. var. *major* Schweinf.: FTA 3: 237 (1877); FS: 272 (1929). *Borreria kotschyana* (Oliv.) K. Schum.: FPS 2: 428 (1952). *Borreria chaetocephala* (DC) Hepper: FWTA 2: 220 (1963); WICKENS 1976: 129
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, near compound, 700 m., grazed area, 3.12.1983, *Kielland-Lund* 198 (C, NLH).
General habitat range: in lowland and medium-altitude grassland and wooded grassland.
General distribution: Senegal to Ethiopia, south to Tanzania.

Spermacoce minutiflora (K. Schum.) Verdc.
FTEA, Rubiac. 1: 360 (1976); UKWF: 192 (1994).

Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 2140 m., montane grassland, 4.1960, *Wilson* 896 (EA).
General habitat range: in medium-altitude and montane grassland.
General distribution: South Sudan, Uganda and Kenya.

Spermacoce ocymoides Burm. f.
FTEA, Rubiac. 1: 361 (1976).
Imatong Mountains group, Sudan side: Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 29.11.1980, *Friis & Vollesen* 522 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude forest and grassland.
General distribution: Senegal to Sudan, south to Angola, Zambia and Malawi; also in tropical Asia and tropical South America. First record from the Sudan.

Spermacoce princeae (K. Schum.) Verdc.
FTEA, Rubiac. 1: 362 (1976); UKWF: 192 (1994).
var. **princeae**
FTEA, Rubiac. 1: 362 (1976).
Syn.: *Borreria princeae* K. Schum.: FPNA 2: 377 (1947); FWTA 2: 222 (1963).
Imatong Mountains group, Sudan side: Gilo, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* in clearing (compound), 14.3.1982, *Friis & Vollesen* 1201 (C, K, KHF).
General habitat range: in medium-altitude and montane grassland and woodland.
General distribution: Cameroon to Ethiopia, south to Congo [previously Zaire] and Tanzania.

Spermacoce pusilla Wall.
FTEA, Rubiac. 1: 357 (1976); UKWF: 192 (1994).
Syn.: *Borreria pusilla* (Wall.) DC.: FPS 2: 427 (1952).
Imatong Mountains group, Sudan side: Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 29.11.1980, *Friis & Vollesen* 521 (C, K, KHF), & *Friis & Vollesen* 529 (BR, C, K, KHF); Gilo, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 17.11.1980, *Friis & Vollesen* 279 (C, K, KHF).
General habitat range: in lowland, medium-altitude and montane grasslands and woodlands.
General distribution: West Africa to Ethiopia, south to South Africa; also in Madagascar and widespread in tropical Asia.

Spermacoce sphaerostigma (A. Rich.) Vatke
FS: 273 (1929); FTEA, Rubiac. 1: 367 (1976); UKWF: 192 (1994).
Syn.: *Hypodematium sphaerostigma* A. Rich.: FPS 2: 441 (1952).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, east of compound and stream, 700 m., 9.12.1983, *Kielland-Lund* 285 (C, NLH).
Didinga Mountains: Lokwara (4° 40' N, 33° 27' E), 29.9.1953, *Peers* "Lokwara 3" (K).
General habitat range: in lowland and medium-altitude grassland and woodland.
General distribution: Nigeria to Ethiopia, south to Congo [previously Zaire], Zambia, Malawi and Mozambique.

Tarenna Gaertn.

Tarenna graveolens (S. Moore) Bremek.
ITU: 357 (1952); FTEA, Rubiac. 2: 598 (1988); KTSL: 546 (1994); HYF: 280 (1997).
var. **graveolens**
FTEA, Rubiac. 2: 598 (1988).
Imatong Mountains group, Sudan side: Kinyeti Valley, 3 km. south of Hiliu along Katire road

(4° 14' N, 32° 40' E), north face of rock, no alt., 26.5.1984, *Kielland-Lund* 743 (C, NLH).
Didinga Mountains: rocks north-east of Chukudum (4° 15' N, 33° 27' E), 1100 m., 21.12.1983, *Kielland-Lund* 432 (C, NLH).
General habitat range: in lowland, medium-altitude and montane evergreen bushland, often forming patches in deciduous bushland and frequently on rocky outcrops.
General distribution: East Congo [previously Zaire] to Ethiopia and Somalia, south to Tanzania. Species as a whole also in tropical Arabia. First records from the Sudan.

Tarenna pavettoides (Harv.) Sim
ITU: 357 (1952); FPS 2: 463 (1952); FWTA 2: 135 (1963); FTEA, Rubiac. 2: 588 (1988); El Amin 1990: 411; KTSL: 547 (1994).
subsp. **gillmanii** Bridson
FTEA, Rubiac. 2: 590 (1988).
Imatong Mountains group, Sudan side: Upper Talanga, 1800 m., upland forest, 11.1981, *Howard* UTT 28 (C, K).
General habitat range: in montane forest and woodland.
General distribution: Sudan, Congo [previously Zaire], Uganda and Kenya south to Zambia and Malawi. Species as a whole also from Cameroon to Ethiopia and Somalia, south to South Africa.

Tarenna sp.
Didinga Mountains: Mt. Lotuke, Char, 1830 m., wooded grassland, 19.4.1939, *Myers* 10,926 (?K, not traced).

Tricalysia A. Rich. ex DC.

Tricalysia niamniamensis Hiern
FTA 3: 123 (1877); FS: 265 (1929); ITU: 357 (1952); FPS 2: 464 (1952); FTEA, Rubiac. 2: 552 (1988); El Amin 1990: 412 {Talanga, Tong}; KTSL: 549 (1994).
var. **niamniamensis**
FTEA, Rubiac. 2: 552 (1988); KTSL: 549 (1994).
Imatong Mountains group, Sudan side: Talanga, 950 m., *Loudetia arundinacea* grassland with scattered trees of *Terminalia laxiflora, T. brownii, Pterocarpus lucens, Combretum collinum* and *Vitex doniana* on rocky outcrop, 5.12.1980, *Friis & Vollesen* 695 (BR, C, K, KHF); Talanga, 1000 m., in shallow soil over rocks, 16.3.1950, *Jackson* 1216 (EA, K).
Imatong Mountains group, Uganda side: above Agoro, 1220 m., steep rocky slope with *Terminalia, Acacia* and *Capparis*, 8.4.1945, *Greenway & Hummel* 7324 (EA, K, MHU); 6 km. east of Lututuru, 1500 m., open woodland, 19.7.1974, *Katende* 2199 (EA, MHU).
General habitat range: in medium-altitude woodland, often on rocks.
General distribution: Sudan and Congo [previously Zaire] south to Zimbabwe.
var. **djurensis** (Hiern) Robbr.
FTEA, Rubiac. 2: 553 (1988).
Syn.: *Tricalysia djurensis* Hiern: FTA 3: 123 (1877); FPS 2: 464 (1952); El Amin 1990: 412.
Imatong Mountains group, Sudan side: between Talanga and Upper Talanga, 1300 m., medium-altitude rain forest with *Diospyros abyssinica, Garcinia buchananii, Uvariopsis congoensis, Turraea floribunda, Manilkara butugi,* etc., 7.12. 1980, *Friis & Vollesen* 734 (C, K, KHF); Kinyeti Valley, 10 km. north of Katire, 850 m., rocky woodland with *Combretum collinum, C. molle* and *Annona senegalensis*, 3.3.1982, *Friis & Vollesen* 1087 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude woodland and forest.
General distribution: South Sudan. Species as a whole distributed as var. *niamniamensis.*

Vangueria Juss.

Vangueria apiculata S. Schum.
FS: 267 (1929); ITU: 358 (1952); FPS 2: 466 (1952); EL AMIN 1990: 413 {Didinga Mountains, Tok Valley}; FTEA, Rubiac. 3: 853 (1991); KTSL: 550 (1994).
Didinga Mountains: near Naligede, 1770 m., 22.4.1939, *Myers* 11,009 (WM); slope of Tok Valley, 1800 m., in woodland with *Terminalia brownii*, 3.4.1949, *Jackson* 659 (FHO, KHF); slope of Mt. Lotuke, 1900 m., in *Protea-Faurea* grassland, 29.3.1950, *Jackson* 1318 (K, WM).
General habitat range: in montane forest and woodland.
General distribution: South Sudan south to Zimbabwe and Mozambique.

Vangueria madagascariensis Gmel.
EL AMIN 1990: 413; FTEA, Rubiac. 3: 849 (1991); KTSL: 551 (1994).
Imatong Mountains group, Sudan side: summit of Mt. Iro, Opari-Torit road, 5.10.1938, *Myers* 9520 (K).
Imatong Mountains group, Uganda side: north of Mt. Madi Opei, no alt., 3.1935, *Eggeling* 1731 (EA).
Didinga Mountains: between Kiduru and Longumu north of Chukudum (4° 20' N, 33° 23' E), 1000 m., 20.12.1983, *Kielland-Lund* 413 (NLH); Mt. Lotuke, Char, 1830 m., edge of valley forest, 19.4.1939, *Myers* 10,914 (K).
General habitat range: in lowland, medium-altitude and montane forest and woodland.
General distribution: Ghana to Ethiopia, south to South Africa (Transvaal); cultivated for its edible fruits in Madagascar, tropical Asia and in the West Indies.

Vangueria volkensii K. Schum.
FTEA, Rubiac. 3: 845 (1991); KTSL: 551 (1994).
var. **volkensii**
FTEA, Rubiac. 3: 845 (1991).
Imatong Mountains group, Sudan side: without further locality, 1410 m., 12.6.1939, *Andrews* 1826 (K); lower southern slope of Mt. Konoro, 2100 m., *Loudetia* grassland with scattered trees on thin skeletal soil, 2.3.1982, *Friis & Vollesen* 1075 (BR, C, K, KHF).
General habitat range: in medium-altitude and montane woodland, thicket and forest.
General distribution: South Sudan and Ethiopia, south to Tanzania.

Order 63. **Asterales** Lindl.

Fam. 127. **Dipsacaceae** Juss.

Dipsacus L.

Dipsacus pinnatifidus Steud. ex A. Rich.
FTA 3: 250 (1877); CHIPP 1929: 191; FPNA 2: 385 (1947); FPS 2: 467 (1952) {Imatong Mountains, Mt. Kinyeti}; HEDBERG 1957: 183; FWTA 2: 223 (1963); FTEA, Dipsacac.: 2 (1968).
Imatong Mountains group, Sudan side: Kipia, 2680 m., scrub in meadow and at forest edge, 1.1939, *MacDonald* 71 (BM); shoulder of summit of Mt. Kinyeti, 3100 m., in ericaceous scrub, 15.11.1949, *Jackson* 948 (BM, WM); summit of Mt. Kinyeti, 3170 m., in low scrub on summit and in the forested ravines below, 11.2.1929, *Chipp* 67 (K, WM).
Imatong Mountains group, Uganda side: near Agoro, 1990 m., 12.1932, *Eggeling* 816 (K, MHU).
General habitat range: in montane grassland and damp places.
General distribution: Cameroon to Ethiopia, south to Tanzania.

Fam. 128. **Asteraceae** Dumort.
(*Compositae* Giseke, nom. altern.)

Acanthospermum Schrank

Acanthospermum hispidum DC.
FWTA 2: 241 (1963); WICKENS 1976: 131; UKWF: 214 (1994); HYF: 296 (1997).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, in compound, 700 m., near farm houses, 29.11.1983, *Kielland-Lund* 91 (C, NLH).
General habitat range: a serious weed of cultivations, also frequent in waste places.
General distribution: widespread in tropical Africa, pantropical, presumably originating in tropical America.

Acmella L.C. Rich. ex Pers.

Acmella caulirhiza Del.
UKWF: 216 (1994).
Syn.: *Spilanthes caulirhiza (as 'caulorhiza')* (Del.) DC.: FPS 3: 54 (1956). *Spilanthes mauritiana* (L.C. Rich. ex Pers.) DC. [*Spilanthes acmella* auct., non L.: FTA 3: 384 (1877); FS: 289 (1929); FPNA 2: 525 (1947)].
Imatong Mountains group, Sudan side: Lotti, in grass near rest house, 9.10.1938, *Myers* 9,648 (K); Kinyeti Valley, Hiliu, south-east of compound, 700 m., in cultivation, 2.12.1983, *Kielland-Lund* 152 (C, NLH); Katire, near water channel leading to lower turbine, 950 m., common weed along paths, 21.6.1961, *Jackson* 4256 (K); Gilo, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* in clearings, 19.2.1982, *Friis & Vollesen* 955 (BR, C, K, KHF).
Didinga Mountains: Nagichot, 1980 m., in moist khor, 27.4.1939, *Myers* 11,160 (K).
General habitat range: in lowland, medium-altitude and montane forest, woodland and grassland, often in moist places and where the natural vegetation has been disturbed.
General distribution: Liberia to Ethiopia, south to South Africa, also in Madagascar.

Adenostemma J.R. & G. Forst.

Adenostemma caffrum DC.
FPS 3: 8 (1956); FWTA 2: 286 (1963); WICKENS 1976: 131; UKWF: 203 (1994); HYF: 287 (1997).
Syn.: [*Adenostemma viscosum* auct., non J.R. & G. Forst.: FTA 3: 299 (1877), pro parte; FS: 279 (1929); FPNA 2: 455 (1947)].
Lafit, Dongotona and Nangeya Mountains: Dongotona Mts., above Sadit (4° 10' N, 33° 09' E), 1400 m., weed in cultivation near stream, 25.1.1950, *Jackson* 1112 (BM).
General habitat range: in lowland and medium-altitude shaded and moist habitats (in evergreen bushland and forest).
General distribution: Mali and Guinée to Sudan, south to South Africa; also in tropical Arabia.

Adenostemma mauritianum DC.
FPNA 2: 454 (1947); FPS 3: 8 (1956) {Imatong Mountains, Itibol}; FWTA 2: 286 (1963); UKWF: 203 (1994).
Syn.: [*Adenostemma viscosum* auct., non J.R. & G. Forst.: FTA 3: 299 (1877), pro parte; FS: 279 (1929)].
Imatong Mountains group, Sudan side: without further locality, no alt., 2.1936, *Johnston* 1462 (K); Itibol, 1860 m., common weedy herb, 19.12.1935, *Thomas* 1686 (BM, K); Gilo to Mt. Konoro, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 21.11.1980, *Friis & Vollesen* 408 (BR, C, K, KHF).
General habitat range: in medium-altitude and montane shaded and moist habitats (in evergreen bushland and forest).
General distribution: Nigeria and Cameroon to Ethiopia, south to Congo [previously Zaire] and Zimbabwe; also in the Mascarene Islands.

Adenostemma perrottetii DC.
FPS 3: 8 (1956); FWTA 2: 286 (1963); UKWF: 203 (1994).
Syn.: [*Adenostemma viscosum* auct., non J.R. & G. Forst.: FTA 3: 299 (1877), pro parte; FPNA 2: 455 (1947)].
Imatong Mountains group, Sudan side: Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 15.11.1980, *Friis & Vollesen* 226 (C).
General habitat range: in lowland and medium-altitude shaded and moist habitats (in evergreen bushland and forest).
General distribution: Senegal and Mali to Sudan and Ethiopia, south to Tanzania.

Ageratum L.

Ageratum conyzoides L.
FTA: 300 (1877); FS: 279 (1929); FPNA 2: 455 (1947); FPS 3: 8 (1956); FWTA 2: 287 (1963); UKWF: 204 (1994); HYF: 287 (1997).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., open woodland, 5.1.1979, *Shigeta* 23 (EA); Palotaka, 1200 m., open woodland, 16.2.1979, *Shigeta* 185 (EA); just west of Hiliu at dam on river, 700 m., 21.11.1983, *Kielland-Lund* 17 (C, NLH).
General habitat range: a common weed in disturbed places of most habitats and altitudes.
General distribution: Cape Verde Islands and Senegal to Somalia, south to South Africa; also in Madagascar, tropical Arabia and tropical Asia to Australia, and in Central and South America.

Anisopappus Hook. & Arn.

Anisopappus africanus (Hook f.) Oliv. & Hiern
FTA 3: 369 (1877); FS: 287 (1929); FPS 3: 9 (1956); FWTA 2: 258 (1963); WICKENS 1976: 131; FAC, Compositae 2: 194 (1989); UKWF: 214 (1994).
Imatong Mountains group, Sudan side: Bushbuck Hill, 2150 m., *Loudetia arundinacea* grassland with scattered trees, 10.11.1980, *Friis & Vollesen* 136 (C, K, KHF).
General habitat range: in medium-altitude and montane woodland and wooded grassland.
General distribution: Sierra Leone, Ghana and Nigeria to Ethiopia, south to Malawi and Mozambique.

Aspilia Thouars

Aspilia africana (Pers.) Adams.
FWTA 2: 238 (1963).
Syn.: *Wedelia africana* (Pers.) P. Beauv.: FTA 3: 376 (1877).
Imatong Mountains group, Sudan side: Gilo, 1900 m., in tangle growth, 27.8.1957, *Jackson* 3815 (K).
General habitat range: in medium-altitude and montane grassland, woodland and forest margins.
General distribution: Gambia and Guinée to Ethiopia, south to Angola and North West Tanzania.

Aspilia congoensis S. Moore
LISOWSKI 1991: 195.
Imatong Mountains group, Sudan side: without further locality, 1530-1830 m., 12.6.1939, *Andrews* 1855 (K); Kinyeti Valley, near Kinyieti River 7 km. south of Hiliu towards Katire, 700 m., 7.12.1983, *Kielland-Lund* 238 (C, NLH); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 13.11.1980, *Friis & Vollesen* 204 (BR, C, K, KHF); Mt. Baghanj, 1830-2140 m., 13.6.1939, *Andrews* 1885 (K).
General habitat range: in intermediate and montane grassland and woodland.
General distribution: South Sudan and South

West Ethiopia to Congo [previously Zaire], Burundi and West Tanzania.

Aspilia kotschyi (Sch. Bip.) Oliv.
FTA 3: 381 (1877); FS: 289 (1929); FPS 3: 10 (1956); FWTA 2: 239 (1963); WICKENS 1976: 131; UKWF: 216 (1994); HYF: 298 (1997).
Imatong Mountains group, Sudan side: Kinyeti Valley, c. 200 m from Hiliu along the road to Torit, 700 m., 21.11.1983, *Kielland-Lund* 10 (C, NLH); Gilo to Mt. Konoro, 1800 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 23.11.1980, *Friis & Vollesen* 411 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: 6 km. east of Lututuru rest house, 1500 m., shallow soil over rocks in grassland, 19.7.1974, *Katende* 2197 (MHU).
Didinga Mountains: Lokwara (4° 40'N, 33° 27' E), 29.9.1955, *Peers* 'Lokwara 10' (K).
General habitat range: in lowland, medium-altitude and montane woodland, wooded grassland and grassland.
General distribution: Senegal to Ethiopia, south to Angola, Zambia, Malawi and Mozambique; also in tropical Arabia.

Aspilia pluriseta Schweinf.
UKWF: 216 (1994).
Imatong Mountains group, Sudan side: Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 820 (C).
General habitat range: in medium-altitude and montane grassland and woodland.
General distribution: South Sudan through eastern Africa and Congo [previously Zaire], Rwanda and Burundi, south to South Africa (Transvaal).

Athrixia Ker-Gawl.

Athrixia rosmarinifolia (Sch. Bip. ex Walp.) Oliv. & Hiern
FTA 3: 355 (1877); CHIPP 1929: 191; FPS 3: 10 (1956) {Imatong Mountains}; EL AMIN 1990: 415 {Imatong Mountains}; UKWF: 213 (1994).
Imatong Mountains group, Sudan side: mountain meadow near highest peaks, without further locality [probably Kipia], no alt., 1929, *Hunter* in *Douglas Simpson* 7383 (K); without further locality, 2440 m., 10.2.1936, *Johnston* 1476 (K); without further locality, no alt., 10.2.1936, *Johnston* 1483 (K); without further locality, 2900 m., 12.2.1936, *Johnston* 1520 (K); without further locality, 2750-3060 m., 12.2.1936, *Johnston* 1523 (K); along path from Bushbuck Hill to Mt. Konoro, 2300 m., rocky outcrop in *Loudetia* grassland, 5.3.1982, *Friis & Vollesen* 1095 (C, K, KHF); Kipia, 2440 m., grassland, 29.12.1935, *Thomas* 1817 (BM, K); Kipia, 2680 m., montane meadow, 12.1938, *MacDonald* 13 (BM); Kinyeti, 3050 m., 11.2.1929, *Chipp* 71 (K, WM).
General habitat range: in montane grassland and bushland.
General distribution: South Sudan and Ethiopia through eastern Africa, south to Zimbabwe.

Berkheya Ehrh.

Berkheya spekeana Oliv.
FTA 3: 429 (1877); FS: 568 (1929); FPNA 2: 585 (1947); FPS 3: 10 (1956); FWTA 2: 289 (1963); UKWF: 226 (1994).
Imatong Mountains group, Sudan side: Gilo, 1900 m., in wattle plantation, 10.1948, *Jackson* 408 (BM); Mt. Baghanj, 1830-2140 m., 13.6.1939, *Andrews* 1899 (K); below Kipia, 2140 m., 2.1936, *Johnston* 1420 (K); Bushbuck Hill, 2150 m., *Loudetia arundinacea* grassland with scattered trees, 10.11.1980, *Friis & Vollesen* 133 (C, K, KHF); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 58' N, 32° 53'

E), 2200 m., in low montane grassland, 10.6. 1984, *Kielland-Lund* 906 (NLH); Kipia, 2440 m., in scrub, 29.12.1935, *Thomas* 1807 (BM, K); Mt. Kinyeti, 2440 m., in grassland, 17.4.1953, *Prowse* 340 (KHU).

Imatong Mountains group, Uganda side: 4 km. south-east of Lomwaga, no alt., tall-grass grassland with scattered trees, 18.7.1974, *Katende* 2143 (MHU).

Didinga Mountains: track Nagichot to Chukudum, 1740 m., 28.4.1939, *Myers* 11,212 (K).

General habitat range: in medium-altitude and montane woodland and wooded grassland.

General distribution: Cameroon to Ethiopia, south to East Congo [previously Zaire] and Tanzania.

Bidens L.

Bidens buchneri (Klatt) Sherff

MESFIN 1984: 103; UKWF: 218 (1994).

Syn.: *Bidens coriacea* (O. Hoffm.) Sherff: FPNA 2: 532 (1947).

Imatong Mountains group, Sudan side: Talanga, 950 m., wooded grassland with *Combretum molle, C. collinum, Stereospermum kunthianum* and *Acacia hockii,* tall grass cover of *Cymbopogon giganteum* and *Hyparrhenia spp.*, 4.12.1980, *Friis & Vollesen* 669 (BR, C, K, KHF).

General habitat range: in lowland and medium-altitude grassland and wooded grassland.

General distribution: South Sudan, East Congo [previously Zaire], Uganda and West Kenya, south to Angola and South Tanzania.

Bidens chippii (M.B. Moss) Mesfin

MESFIN 1984: 85 {Imatong Mountains}.

Syn.: *Coreopsis chippii* M.B. Moss: CHIPP 1929: 191 & 196; FPS 3: 20 (1956) {Imatong Mountains, summit of Mt. Kinyeti}; EL AMIN 1990: 415. *Coreopsis tripartita* M.B. Moss in CHIPP 1929: 191 & 196, non *Bidens tripartita* L. *Bidens mossiae* Sherff (as 'mosii'): FPS 3: 12 (1956) {summit of Mt. Kinyeti}. [*Coreopsis elgonensis* auct., non Sherff: FPS 3: 20 (1956), see note].

Imatong Mountains group, Sudan side: without further locality, 2130 m., 10.2.1936, *Johnston* 1587 (K); Dumuso Ridge, 2450 m., montane evergreen bushland with scattered *Protea gaguedi, Nuxia congesta* and stunted *Podocarpus latifolius*, 8.3.1982, *Friis & Vollesen* 1129 (BR, C, K, KHF); Mt. Kinyeti, in mountain meadow, 2440-3050 m., 11.2.1929, *Chipp* 80 (K, holotype of both *Coreopsis tripartita* and *Bidens mossiae*); summit of Mt. Kinyeti, 3170 m., 21.9.1940, *Tothill* in *Myers* 13,514 (K) & *Tothill* in *Myers* 13,518 (K); summit of Mt. Kinyeti, 3190 m., 27.7, 1939, *Myers* 11,654 (K); summit of Mt. Kinyeti, in low scrub on the mountain top, also in forested mountain ravines from 2440 m. and upwards, 3170 m., 11.2.1929, *Chipp* 66 (K, holotype of *Coreopsis chippii*); Mt. Kinyeti, rocky summit, 3050 m., 30.12.1935, *Thomas* 1843 (K); summit, 3050 m., 12.2.1936, *Johnston* 1506 (K) & *Johnston* 1528 (K); summit of Mt. Kinyeti, 3190 m., 27.7.1939, *Myers* 11,655 (K); summit of Mt. Kinyeti, 3170 m., 21.9.1940, *Tothill* in *Myers* 13,519 (K); Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 824 (C); Mt. Kinyeti, summit, 3180 m., among rocks, 15.11.1949, Jackson 928 (BM).

General habitat range: in montane grassland.

General distribution: not found elsewhere.

Note. The specimen *Tothill* in *Myers* 13,518 (K) has been named *Coreopsis elgonensis*, which accounts for the record of this species in FPS 3: 20 (1956). The species name *Bidens mossii* Sherff has, according to the International Code of Botanical Nomenclature, Art. 60.11, to be corrected to *B. mossiae.*

Bidens isostigmatoides Sherff

SHERFF 1957: 45; FPS 3: 13 (1956) {Imatong Mountains}; MESFIN 1984: 87 {Imatong Mountains}.

Imatong Mountains group, Sudan side: without further locality, 2140 m., 10.2.1936, *Johnston* 1487 (K); Kipia, mountain meadow, 2680 m., 12.1938, *MacDonald* 27 (BM, holotype of *Bidens isostigmatoides*); Kipia, 2690 m., mountain meadow, 22.9.1940, *Myers* 13,495 (K).
General habitat range: in montane grassland.
General distribution: not found elsewhere.

Bidens kilimandscharica (O. Hoffm.) Sherff
UKWF: 218 (1994); KTSL: 554 (1994).
Imatong Mountains group, Uganda side: Langia, Agoro, 2440 m., woodland, 14.11.1943, *Thomas* 4381 (EA, K).
General habitat range: in montane grassland.
General distribution: Uganda through East Congo [previously Zaire], Burundi and eastern Africa, south to Zimbabwe.

Bidens negriana (Sherff) Cufod.
MESFIN 1984: 56.
Syn.: *Bidens natator* Friis & Vollesen: FRIIS & VOLLESEN 1982: 468. *Bidens setigeroides* Sherff var. *munita* Sherff
Imatong Mountains group, Sudan side: 4° 02' N, 32° 50' E, 25.10.1949, *Jackson* 855 (BM) [cited from Mesfin]; Gilo to Mt. Konoro, 1900 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 18.11.1980, *Friis & Vollesen* 322 (C, holotype of *Bidens natator*, also carpological collection, accession no. 15944, K, KHF, isotypes); Talanga to Upper Talanga, 1400 m., medium-altitude rain forest with *Diospyros abyssinica, Garcinia buchananii, Uvariopsis congoensis, Turraea floribunda, Manilkara butugi*, etc., swampy area in clearing, 10.12.1980, *Friis & Vollesen* 802 (BR, C, EA, K, KHF).
Imatong Mountains group, Uganda side: Agoro, 2130 m., thicket, 15.11.1945, *Thomas* 4385 (EA, holotype of *Bidens setigeroides* var. *munita*, K, isotype).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., peak of Mt. Lonyili, 2260 m., moist shallow soil over rock, 26.8.1966, *Lock* K 10 (MHU).
General habitat range: in medium-altitude and montane grassland, often in wet areas with thin soil over rocks.
General distribution: South Sudan, South West Ethiopia, and North East Uganda.

Bidens pilosa L.
FTA 3: 392 (1877); FS: 290 (1929); FPNA 2: 528 (1947); FPS 3: 11 (1956); FWTA 2: 234 (1963); WICKENS 1976: 132; UKWF: 217 (1994); HYF: 299 (1997).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., top of dam, 6.1.1984, *Kielland-Lund* 596 (C, NLH); Loa, Molitokoro village north of Kerepi (3° 55' N, 31° 55' E), no alt., 5.6.1984, *Kielland-Lund* 854 (C, NLH); Palotaka, 1200 m., open woodland, 5.1.1979, *Shigeta* 29 (EA); Kinyeti Valley, Hiliu, near compound west of town, 700 m., 30.11.1983, *Kielland-Lund* 136 (C, NLH).
General habitat range: in a wide range of lowland, medium-altitude and montane habitats, usually with some disturbance by man.
General distribution: a pantropical weed.

Bidens prestinaria (Sch. Bip.) Cufod.
WICKENS 1976: 132; MESFIN 1984: 51.
Syn.: *Coreopsis prestinaria* Sch. Bip. ex Walp.: FTA 3: 391 (1877). *Bidens chaerodonta* Sherff: FPS 3: 12 (1956).
Imatong Mountains group, Sudan side: Talanga, 950 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 30.11. 1980, *Friis & Vollesen* 573 (C, K, KHF).
General habitat range: in lowland, medium-altitude and montane grassland, often in disturbed and secondary vegetation.
General distribution: Sudan and Ethiopia.

Bidens schimperi Sch. Bip.
FTA 3: 393 (1877); FS: 291 (1929); FPS 3: 11 (1956) {summit of Mt. Iro}; WICKENS 1976: 132; MESFIN 1984: 110; UKWF: 217 (1994).
Imatong Mountains group, Sudan side: Mt. Iro, on the Opari-Torit road, rocky summit, 5.10.1938, *Myers* 9516 (K); 4° 10' N, 32° 52' E, 12.11.1948, *Jackson* 528 (BM) [cited from Mesfin op. cit.].
Didinga Mountains: Chukudum Regional District Centre, along main road (4° 15 'N, 33° 27' E), 1100 m., 22.12.1983, *Kielland-Lund* 439 (C, NLH).
General habitat range: in medium-altitude and montane grassland, bushland and woodland.
General distribution: South Sudan and Ethiopia through eastern Africa to South Africa (Natal) and Namibia.

Bidens somaliensis Sherff
MESFIN 1984: 107.
Syn.: *Bidens imatongensis* Sherff: FPS 3: 13 (1956) {Imatong Mountains}.
Imatong Mountains group, Sudan side: Iribo (4° 02' N, 32° 50' E), no alt., 25.10.1949, *Jackson* 847 (BM); Katire to Gilo, near road to Itibol, 1500 m., secondary transitional forest with *Harungana madagascariensis*, forest edge, 12.11. 1980, *Friis & Vollesen* 175 (C, K); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 13.11.1980, *Friis & Vollesen* 188 (C); Itibol, 1940 m., in scrub, 17.12.1935, *Thomas* 1631 (K).
Imatong Mountains group, Uganda side: without further locality, 1830 m., no date, *Eggeling* 1195 (K, holotype of *Bidens imatongensis*); Agoro, 1990 m., 12.1932, *Eggeling* 820 (MHU); Lututuru, no alt., 5.6.1963, *Kertland* s.n. (MHU).
General habitat range: in medium-altitude and montane grassland, bushland, woodland and forest margins.
General distribution: Cameroon, South Sudan and Ethiopia.

Bidens ternata (Chiov.) Sherff
MESFIN 1984: 72; UKWF: 217 (1994).
Syn.: *Bidens dielsii* Sherff
Imatong Mountains group, Sudan side: mountain meadow above Lomuleng, 2650 m., 26.7.1939, *Myers* 11,598 (K); Kipia, 2680 m., in mountain meadow, 22.9.1940, *Myers* 13,494 (K); Lowiliwili (3° 58' N, 32° 53' E), no alt., 24.11.1949, *Jackson* 910 (BM).
General habitat range: in medium-altitude and montane grassland and bushland, often in disturbed and secondary vegetation.
General distribution: South Sudan, Ethiopia, Uganda and West Kenya.

Bidens ugandensis (S. Moore) Sherff
MESFIN 1984: 98; UKWF: 218 (1994).
Imatong Mountains group, Sudan side: Gilo, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 17.11.1980, *Friis & Vollesen* 278 (C, K, KHF).
General habitat range: in medium-altitude and montane grassland, bushland and woodland.
General distribution: Cameroon to South Sudan, Uganda and West Kenya, south to Burundi and North West Tanzania.

Bidens sp.
Didinga Mountains: Nagichot, 1980 m., 27.4. 1935, *Myers* 11,158 (?K, not traced).

Blainvillea Cass.

Blainvillea gayana Cass.
FTA 3: 375 (1877); FWTA 2: 237 (1963); UKWF: 215 (1994); HYF: 297 (1997).
Imatong Mountains group, Sudan side: Kinyeti Valley, hill 3 km. south of Hiliu, 700 m., stony hillside, 6.12.1983, *Kielland-Lund* 224 (C, NLH).
General habitat range: in lowland and medium-altitude grassland, sometimes in shade under rocks and in flooded areas.

General distribution: Cape Verde Islands and Senegal to Ethiopia, south to Tanzania, Zambia and Mozambique; also in tropical Arabia.

Blumea DC.

Blumea bovei (DC.) Vatke
RANDERIA 1960: 285; HYF: 291 (1997).
Syn.: *Blumea abyssinica* Sch. Bip. ex A. Rich.: FTA 3: 323 (1877).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, near bridge west of town, 700 m., 30.11.1983, *Kielland-Lund* 123 (C, NLH); Hiliu, south-east of compound, 700 m., in cultivation, 2.12.1983, *Kielland-Lund* 151 (C, NLH).
Lafit, Dongotona and Nangeya Mountains: Lafon Regional District Centre (5° 02' N, 32° 27-28' E), no alt., 29.12.1983, *Kielland-Lund* 519 (C, NLH).
General habitat range: in lowland and medium-altitude dry deciduous bushland, dry riverine bushland and on rocky outcrops, sometimes a weed of cultivations.
General distribution: Sudan to Ethiopia and Somalia; also in Egypt, Jordan, Afghanistan and tropical Arabia.

Bothriocline Oliv. ex Benth.

Bothriocline congesta (M.R.F. Taylor) Wechuysen
JEFFREY 1988: 264.
Syn.: *Erlangea congesta* M.R.F. Taylor.
Imatong Mountains group, Sudan side: Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 843 (C).
General habitat range: in montane grassland.
General distribution: South Sudan and North Uganda. First record from the Sudan.

Bothriocline imatongensis (M.R.F. Taylor) C. Jeffrey
JEFFREY 1988: 266.
Syn.: *Erlangea imatongensis* M.R.F. Taylor: FPS 3: 28 (1956) {Imatong Mountains}. *Bothriocline schimperi* Oliv. "var.": CHIPP 1929: 191.
Imatong Mountains group, Sudan side: without further locality, no alt., abundant in scrub, 1.1.1936, *Johnston* 1449 (K); Kipia, common in mountain ravines, no alt., 11.2.1929, *Chipp* 92 (K, holotype of *Bothriocline imatongensis*, WM, isotype); without further locality, 2130 m., 10.2.1936, *Johnston* 1485 (K); without further locality, 2290 m., in *Hagenia* forest, 13.2.1976, *Howard* IM 46 (KHF); without further locality, 2633 m., 10.2.1936, *Johnston* 1532 (K); without further locality, 3163 m., 12.2.1936, *Johnston* 1522 (K); along path from Bushbuck Hill to Mt. Konoro, 2400 m., upland forest with *Podocarpus latifolius*, *Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, rocky outcrop at forest edge, 23.2.1982, *Friis & Vollesen* 1006 (BR, C, K, KHF); Kipia, 2680 m., fringing forest, 12.1938, *MacDonald* 25 (BM); Kipia, 2680 m., montane forest mixed with bamboo, 1.1939, *MacDonald* 44 (BM); summit of Mt. Kinyeti, 3170 m., 21.9.1940, *Tothill* in *Myers* 13,510 (K); Mt. Kinyeti, 3000 m., ericaceous bushland, 28.3.1949, *Jackson* 648 (BM); Mt. Kinyeti, 3050 m., rocky summit, 30.12. 1935, *Thomas* 1836 (K); Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12. 1980, *Friis & Vollesen* 844 (BR, C, K, KHF); summit of Mt. Kinyeti, 3180 m., ericaceous bushland, 15.11.1949, *Jackson* 955 (BM).
General habitat range: in montane grassland.
General distribution: not found elsewhere.

Bothriocline monticola (M.R.F. Taylor) Wechuysen
JEFFREY 1988: 264.
Imatong Mountains group, Sudan side: along path

from Bushbuck Hill to Mt. Konoro, 2300 m., rocky outcrops in *Loudetia* grassland, 5.3.1982, *Friis & Vollesen* 1097 (BR, C, K, KHF); below summit of Dumuso Ridge, 2450 m., montane evergreen bushland with scattered *Protea gaguedi, Nuxia congesta* and stunted *Podocarpus latifolius*, rocky area, 8.3.1982, *Friis & Vollesen* 1130 (BR, C, K, KHF); near summit of Mt. Kinyeti, 2795 m., open rocky ground, 30.3.1950, *Jackson* 1335 (BM); ridge leading to the summit of Mt. Kinyeti, 3000 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 22.3.1982, *Friis & Vollesen* 1278 (C); summit of Mt. Kinyeti, 3100 m., ericaceous bushland, 15.11.1949, *Jackson* 951 (BM).

General habitat range: in montane grassland.

General distribution: South Sudan and North Uganda.

Carduus L.

Carduus chamaecephalus (Vatke) Oliv. & Hiern

FTA 3: 434 (1877); JEFFREY 1968: 124; UKWF: 227 (1994).

Syn.: *Carduus theodori* R.E. Fr.: CHIPP 1929: 192; FPS 3: 14 (1956) {Imatong Mountains, summit of Mt. Kinyeti}.

Imatong Mountains group, Sudan side: summit of Mt. Kinyeti, common, 3170 m., 11.2.1929, *Chipp* 65 (K, WM); summit of Mt. Kinyeti, 3180 m., rocky summit, 1.1.1939, *MacDonald* 33 (BM); summit of Mt. Kinyeti, 3170 m., 21.9.1940, *Tothill* in *Myers* 13,524 (K); Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 826 (C).

General habitat range: in montane grassland.

General distribution: South Sudan and Ethiopia through East Congo [previously Zaire], Uganda and Kenya to North Tanzania.

Carduus nyassanus (S. Moore) R.E. Fr.

FPNA 2: 591 (1947); FWTA 2: 291 (1963); JEFFREY 1968: 126; FZ 6,1: 51 (1992); UKWF: 227 (1994).

Syn.: *Carduus kikuyorum* R.E. Fr.: FPS 3: 14 (1956) {Imatong Mountains, Kipia}.

Imatong Mountains group, Sudan side: Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 8.11.1980, *Friis & Vollesen* 37 (C, K, KHF); Kipia, 2440 m., scrub, 29.12.1935, *Thomas* 1829 (BM, K).

Imatong Mountains group, Uganda side: Agoro, 1990 m., 12.1932, *Eggeling* 819 (K, MHU).

Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., peak of Mt. Lonyili, 1800 m., grassland, 4.12.1971, *Katende* 1394 (EA, MHU).

General habitat range: in medium-altitude and montane grassland, evergreen bushland and in forest clearings.

General distribution: Nigeria and Cameroon to Ethiopia, south to Zambia, Malawi and Tanzania.

Centaurea L.

Centaurea praecox Oliv. & Hiern

FTA 3: 438 (1877); FPS 3: 15 (1956); FWTA 2: 291 (1963); JEFFREY 1968: 134; FZ 6,1: 55 (1992); UKWF: 228 (1994).

Syn.: *Centaurea rhizocephala* Oliv. & Hiern, nom. illeg.: FTA 3: 438 (1877).

Imatong Mountains group, Uganda side: 2 km. north-east of Lututuru, at end of road, 1800 m., wooded grassland, 17.2.1969, *Lye* 2076 (MHU).

Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1830 m., mountain grassland, 4.1960, *Wilson* 1014 (EA).

Didinga Mountains: between Iwowa and Nagichot, 1920 m., grassland, 24.4.1939, *Myers* 11,091 (K).

General habitat range: in lowland and medium-altitude grassland.

General distribution: Mali to Ethiopia, south to Zambia, Zimbabwe, Malawi and Mozambique.

Chrysanthellum Rich.

Chrysanthellum indicum DC.
LISOWSKI 1991: 173.
var. **afroamericanum** B.L. Turner
LISOWSKI 1991: 173.
Syn.: *Chrysanthellum procumbens* Pers., nom illeg.: FTA 3: 395 (1877); FS: 291 (1929). [*Chrysanthellum americanum* auct., non (L.) Vatke: FPS 3: 17 (1956); FWTA 2: 234 (1963); WICKENS 1976: 133; UKWF: 217 (1994); HYF: 299 (1997).]
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), near guest-house, 800 m., 3.1.1984, *Kielland-Lund* 553 (C, NLH); Kinyeti Valley, Hiliu, south-east of compound, 700 m., in cultivation, 2.12.1983, *Kielland-Lund* 158 (C, NLH).
General habitat range: in lowland and medium-altitude waste places, roadsides and old cultivations, especially on sandy soil.
General distribution: Senegal to Ethiopia, south to Namibia and South Africa (Transvaal); also in tropical America; a widespread weed which originated in South America.

Cineraria L.

Cineraria deltoidea Sond.
JEFFREY 1986: 930; UKWF: 225 (1994).
Syn.: *Cineraria grandiflora* Vatke: FPS 3: 17 (1956) {Imatong Mountains}; HEDBERG 1957: 222. *Cineraria kilimandscharica* Engl.: CHIPP 1929: 192; FPNA 2: 549 (1947).
Imatong Mountains group, Sudan side: without further locality, 2740 m., 12.2.1936, *Johnston* 1478 (K); Dumuso Ridge, 2350 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum,* at forest edge towards *Hagenia abyssinica* woodland, 8.2.1982, *Friis & Vollesen* 1136 (BR, C, EA, K, KHF); Kipia, 2440 m., scrub, 29.12.1935, *Thomas* 1812 (BM, K); Kipia, 2660 m., common in ravines at 1520-3050 m., 11.2.1929, *Chipp* 86 (K, WM); below Kipia, 2440 m., 10.2.1936, *Johnston* 1475 (K); Kipia, 2680 m., scrub at forest edge, 1.1939, *MacDonald* 74 (BM); Kipia, 2680 m., *Podocarpus latifolius* forest, 26.7.1939, *Myers* 11,618 (K); Mt. Kinyeti, 2900 m., *Dombeya* woodland, 28.3.1949, *Jackson* 648 (BM); Mt. Kinyeti, 2900 m., *Podocarpus latifolius-Rapanea* forest, 15.11.1949, *Jackson* 977 (BM).
General habitat range: in montane forest and at forest edges.
General distribution: South Sudan and Ethiopia through eastern Africa to South Africa (Transvaal, Natal, East Cape Prov.).

Cirsium Mill.

Cirsium buchwaldii O. Hoffm.
JEFFREY 1968: 130; FZ 6,1: 51 (1992); UKWF: 228 (1994).
Syn.: *Cirsium sp.* sensu FPS: FPS 3: 18 (1956) {Imatong Mountains, summit of Mt. Kinyeti}.
Imatong Mountains group, Sudan side: Kipia, 2650 m., clearing in *Podocarpus latifolius* forest, 28.7.1939, *Myers* 11,698 (K); Mt. Kinyeti, 3050 m., rocky summit, 30.12.1935, *Thomas* 1854 (BM, K).
General habitat range: in medium-altitude and montane grassland.
General distribution: South Sudan south to Zambia, Malawi and Tanzania.

Conyza Less.

Conyza aegyptiaca (L.) Aiton
FTA 3: 314 (1877); FS: 281 (1929); FPNA 2: 477 (1947); FPS 3: 19 (1956); FWTA 2: 254 (1963);

WICKENS 1976: 133; UKWF: 207 (1994); HYF: 289 (1997).
Imatong Mountains group, Sudan side: between Magwe and Torit, near road builders camp (4° 18' N, 32° 25' E), no alt., 6.6.1984, *Kielland-Lund* 872 (C, NLH); Kinyeti Valley, Hiliu, 500 m. east of compound, no alt., in cultivation, 7.1.1984, *Kielland-Lund* 605 (C, NLH).
Imatong Mountains group, Uganda side: 2 km. east of Lututuru, near a rivulet, 1400 m., in open woodland, 17.2.1969, *Lye* 2091 (MHU).
Didinga Mountains: Mt. Lotuke, Char, 1830 m., grassland, 19.4.1939, *Myers* 10,933 (K).
General habitat range: in a wide range of habitats at low and medium-altitudes.
General distribution: Senegal to Ethiopia, Sudan and Egypt, south to South Africa (Transvaal, Natal); also in Madagascar and tropical Asia, including tropical Arabia.

Conyza bonariensis (L.) Cronquist
FWTA 2: 253 (1963); UKWF: 207 (1994); HYF: 289 (1997).
Syn.: *Conyza sumatrensis* (Retz.) E.H. Walker: UKWF: 206 (1994). *Conyza floribunda* (H.B.K.) Sch. Bip.: FWTA 2: 253 (1963).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., open woodland, 5.1.1979, *Shigeta* 10 (?EA, identified and listed by M.G. Gilbert, not traced); Katire, garden, 950 m., weed, 21.6. 1961, *Jackson* 4258 (K).
General habitat range: in a variety of lowland, medium-altitude and montane disturbed or secondary vegetation types.
General distribution: a pantropical weed.

Conyza gouanii (L.) Willd.
FTA 3: 316 (1877); UKWF: 207 (1994); HYF: 289 (1997).
Syn.: *Conyza hochstetteri* Sch. Bip. ex A. Rich.: FTA 3: 313 (1877); FS: 281 (1929); FPNA 2: 473 (1947); FPS 3: 18 (1956); HEDBERG 1957: 197.
Didinga Mountains: Mt. Lotuke, Char, 1830 m., grassland, 19.4.1939, *Myers* 10,934 (K).
General habitat range: in medium-altitude and montane grassland and bushland.
General distribution: Cameroon to Ethiopia, south to South Africa (Transvaal); also in tropical Arabia.

Conyza newii Oliv. & Hiern
FTA 3: 317 (1877); FPNA 2: 473 (1947); UKWF: 206 (1994).
Imatong Mountains group, Sudan side: Gilo, 1900 m., in colonising scrub with *Maesa*, 27.8.1957, *Jackson* 3813 (K); Bushbuck Hill, 2300 m., *Loudetia* grassland, in crevices of rocky outcrops, 21.2.1982, *Friis & Vollesen* 980 (BR, C, K, KHF); Dumuso, 2450 m., grassland at forest edge, 31.5.1950, *Jackson* 1515 (K, KHF); slope of Mt. Kinyeti, 2900 m., open *Dombeya torrida* forest, 15.11.1949, *Jackson* 974 (BM).
Didinga Mountains: summit of Mt. Lotuke, 2795 m., among rocks at summit, 30.3.1950, *Jackson* 1334 (BM).
General habitat range: in montane grassland and at forest margins.
General distribution: South Sudan and South Ethiopia through East Congo [previously Zaire], Rwanda, Burundi and eastern Africa, south to North Malawi.

Conyza pyrrhopappa Sch. Bip. ex A. Rich.
FTA 3: 318 (1877); FPNA 2: 475 (1947); WICKENS 1976: 133; HYF: 290 (1997).
subsp. **pyrrhopappa**
Didinga Mountains: Naligede, 1770 m., grassland, 21.4.1939, *Myers* 10,984 (K); between Nagichot and Duguru village (4° 16' N, 33° 35' E), in grassland, 2000 m., 17.12.1983, *Kielland-Lund* 351 (C, NLH).
General habitat range: in medium-altitude and montane grassland, often in disturbed or secondary vegetation.
General distribution: Nigeria to Ethiopia and North Somalia, south to Malawi; also in tropical Arabia.

Conyza ruwenzoriensis (S. Moore) R.E. Fr.
FPNA 2: 476 (1947); HEDBERG 1957: 198; UKWF: 207 (1994).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 13.11.1980, *Friis & Vollesen* 203 (C, K, KHF); Bushbuck Hill, 2300 m., *Loudetia arundinacea* grassland with scattered trees, 16.2.1982, *Friis & Vollesen* 920 (C, K); Tipo, 2100 m., colonising *Loudetia* grassland, 7.5.1954, *Jackson* 3148 (K, KHF); Tipo hill near Gilo, 2130 m., in grassland, 14.6.1953, *Prowse* 281 (KHU).
General habitat range: in montane grassland.
General distribution: South Sudan through Uganda and Kenya to North Tanzania. First record from the Sudan.

Conyza steudelii Sch. Bip.
FTA 3: 313 (1877); FPNA 2: 472 (1947); FWTA 2: 254 (1963); UKWF: 207 (1994); HYF: 290 (1997).
Imatong Mountains group, Sudan side: Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 16.11.1980, *Friis & Vollesen* 274 (BR, C, K, KHF).
General habitat range: in montane woodland and at forest edges.
General distribution: Cameroon to Ethiopia, south to East Congo [previously Zaire] and Tanzania; also in tropical Arabia. First record from the Sudan.

Conyza subscaposa O. Hoffm.
FPNA 2: 467 (1947); HEDBERG 1957: 197; FWTA 2: 254 (1963); UKWF: 207 (1994).
Imatong Mountains group, Sudan side: along path from Bushbuck Hill to Mt. Konoro, 2400 m., *Hagenia abyssinica* woodland with recently burnt ground cover, 23.2.1982, *Friis & Vollesen* 1004 (C, K, KHF).
Didinga Mountains: upland pasture near Nagichot, 2040 m., 24.4.1939, *Myers* 11,097 (K).
General habitat range: in montane grassland.
General distribution: Cameroon to Ethiopia, south to Tanzania and Zimbabwe.

Conyza tigrensis Oliv. & Hiern
FTA 3: 316 (1877); FPNA 2: 470 (1947); UKWF: 207 (1994); HYF: 290 (1997).
Imatong Mountains group, Sudan side: Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 21.11.1980, *Friis & Vollesen* 389 (C, K).
General habitat range: in montane grassland.
General distribution: South Sudan and Ethiopia through East Congo [previously Zaire], Burundi and eastern Africa to North Malawi; also in tropical Arabia.

Crassocephalum Moench.

Crassocephalum bauchiense (Hutch.) Milne-Redh.
FWTA 2: 248 (1963); JEFFREY 1986: 908.
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1750 m., *Loudetia arundinacea* grassland with scattered trees, 17.11.1980, *Friis & Vollesen* 293 (C, K, KHF); Gilo to Mt. Konoro, 2000 m., *Loudetia arundinacea* grassland with scattered trees, 16.11. 1980, *Friis & Vollesen* 256 (C, KHF).
General habitat range: in medium-altitude and montane wooded grassland, usually in rough, open places.
General distribution: North Nigeria and Cameroon to South Sudan and Uganda, also known from Zambia.

Crassocephalum crepidioides (Benth.) S. Moore
FPS 3: 21 (1956); FWTA 2: 246 (1963); JEFFREY 1986: 908; UKWF: 219 (1994); HYF: 300 (1997).
Syn.: *Gynura crepidioides* Benth.: FTA 3: 403 (1877); FS: 292 (1929).
Imatong Mountains group, Sudan side: Laboni,

no alt., 14.10.1938, *Myers* 9716 (K, WM); Palotaka, 1200 m., along stream, 22.2.1979, *Shigeta* 201 (EA); Kinyeti Valley, Hiliu, in compound, 700 m., 28.11.1983, *Kielland-Lund* 68 (C, NLH); Katire, 1000 m., at termite mound in *Combretum* woodland, 27.10.1949, *Jackson* 864 (BM); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 16.11.1980, *Friis & Vollesen* 276 (BR, C, FT, K, KHF).

General habitat range: in disturbed placed at low and medium-altitudes.

General distribution: Guinée to Ethiopia, south to South Africa (Transvaal, Natal); also in Madagascar and tropical Arabia, and widespread in tropical Asia to the Pacific and Australia.

Crassocephalum montuosum (S. Moore) Milne-Redh.

FPS 3: 21 (1956); FWTA 2: 248 (1963); JEFFREY 1986: 906; UKWF: 219 (1994).

Imatong Mountains group, Sudan side: Gilo Forest Project Centre, 1800 m., 26.12.1983, *Kielland-Lund* 476 (C, NLH); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 16.11.1980, *Friis & Vollesen* 277 (BR, C, K, KHF).

Didinga Mountains: near Nagichot, 1920 m., forest clearing, 28.4.1939, *Myers* 11,207 (K, WM).

General habitat range: in clearings and at forest edges at medium-altitudes.

General distribution: Nigeria and Cameroon to Ethiopia, south to Angola and Zimbabwe; also in Madagascar.

Crassocephalum sarcobasis (DC.) S. Moore

FPNA 2: 542 (1947); JEFFREY 1986: 907; UKWF: 219 (1994).

Syn.: *Crassocephalum rubens* (Juss. ex Jacq.) S. Moore: FPNA 2: 536 (1947); FPS 3: 21 (1956); FWTA 2: 248 (1963).

Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, south-east of compound, 700 m., in cultivation, 2.12.1983, *Kielland-Lund* 161 (C, NLH); Gilo, 1980 m., in burnt grassland, 12.7.1947, *MacLeay* 209 (BM).

Didinga Mountains: Chukudum Regional District Centre (4° 14' N, 33° 29' E), 1100 m., 16.12.1983, *Kielland-Lund* 330 (C, NLH).

General habitat range: in disturbed places at low and medium-altitudes.

General distribution: Mali to Ethiopia, south to South Africa (Natal); also in Madagascar and on Mauritius.

Crassocephalum vitellinum (Benth.) S. Moore

FPNA 2: 536 (1947); FPS 3: 21 (1956); FWTA 2: 248 (1963); JEFFREY 1986: 907; UKWF: 220 (1994).

Syn.: *Gynura vitellina* Benth.: FTA 3: 402 (1877); FS: 292 (1929).

Imatong Mountains group, Sudan side: Talanga, 950 m., on rocky outcrop with wet flushes and thin soil with *Selaginella njamnjamensis, Aeollanthus spp., Aloe sp.* and many annuals, 2.12.1980, *Friis & Vollesen* 628 (C); Katire to Itibol, near Itibol Camp, 1940 m., 17.12.1935, *Thomas* 1636 (BM, K); between Katire and Gilo, 1700 m., 26.12.1983, *Kielland-Lund* 470 (C, NLH); Gilo, 1900 m., in burnt grassland, 26.6.1947, *MacLeay* 65 (BM); Gilo, 1900 m., in forest, 18.10.1948, *Jackson* 427 (BM); Gilo to Itibol, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 11.11. 1980, *Friis & Vollesen* 141 (C, K, KHF); below Lomuleng, 2230 m., *Podocarpus latifolius* forest, 29.7.1939, *Myers* 11,710 (K, WM).

Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1990 m., damp places, 4.1960, *Wilson* 887 (EA).

Didinga Mountains: upland pasture near Nagichot, 2040 m., 24.4.1939, *Myers* 11,096 (K).

General habitat range: in disturbed areas in grassland, woodland and forest at low to (more frequently) montane altitudes.

General distribution: Nigeria to Ethiopia, south to Tanzania and Zambia.

Crepis L.

Crepis ruepellii Sch. Bip.
FTA 3: 450 (1877); FS: 296 (1929); FPNA 2: 607 (1947); JEFFREY 1966: 461; WICKENS 1976: 134; FAC, Compositae, 1: 21 (1986); UKWF: 231 (1994); HYF: 307 (1997).
Syn.: *Crepis ugandensis* Babc.: FPS 3: 22 (1956) {Imatong Mountains}.
Imatong Mountains group, Sudan side: without further locality, no alt., 2.1936, *Johnston* 1470 (K); slope of Mt. Lohocho (Ilungi), above the road Katire-Gilo, 1900 m., *Loudetia arundinacea* grassland with scattered trees, recently burnt, 7.3.1982, *Friis & Vollesen* 1124 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: without further locality, 2380 m., grassland, 4.1938, *Eggeling* 3553 (K); Langia, 2830 m., grassland, 4.1943, *Purseglove* 1426 (EA, K); Lomwaga, 2530 m., burnt grassland, 5.4.1945, *Greenway & Hummel* 7273 (EA, K); 2 km. north-east of Lututuru, near end of road, 1800 m., grassland, 17.2.1969, *Lye* 2062 (K, MHU, NLH); north of Okako, south of Mingaro, no alt., montane grassland, 10.6.1973, *Katende* 1877 (MHU).
Didinga Mountains: Mt. Lotuke, Char, 1830 m., wooded grassland, 19.4.1939, *Myers* 10,946 (K); Mt. Lotuke, 2000 m., in *Protea* grassland, 30.3. 1950, *Jackson* 1350 (BM).
General habitat range: in montane grassland.
General distribution: South Sudan and Ethiopia through Uganda and Kenya to North Tanzania; also in tropical Arabia.

Dichrocephala L'Hér. ex DC.

Dichrocephala chrysanthemifolia (Blume) DC.
FTA 3: 303 (1877); FPNA 2: 459 (1947); FPS 3: 23 (1956); FWTA 2: 256 (1963); WICKENS 1976: 134; UKWF: 204 (1994); HYF: 287 (1997).
Imatong Mountains group, Sudan side: Gilo to Mt. Konoro, 1850 m., *Loudetia arundinacea* grassland with scattered trees, 18.11.1980, *Friis & Vollesen* 306 (BR, C, K, KHF).
General habitat range: in medium-altitude and montane woodland and grassland, often in disturbed places.
General distribution: Cameroon to Ethiopia, south to Malawi; also in Madagascar and tropical Arabia, and widespread in tropical Asia.

Dichrocephala integrifolia (L. f.) Kuntze
FPS 3: 23 (1956); FWTA 2: 256 (1963); UKWF: 204 (1994); HYF: 288 (1997).
Syn.: *Dichrocephala latifolia* DC.: FTA 3: 303 (1877); FS: 280 (1929).
Didinga Mountains: Iwowa, 1620 m., 23.4.1939, *Myers* 11,083 (K); upland pasture near Nagichot, 2040 m., stream-side, 24.4.1939, *Myers* 11,105 (K).
General habitat range: in medium-altitude and montane woodland and grassland, often in disturbed places.
General distribution: Guinée to Ethiopia, south to South Africa (Transvaal, Natal); also in North Africa, South Europe and in tropical and subtropical Asia, including tropical Arabia.

Dicoma Cass.

Dicoma tomentosa Cass.
FTA 3: 443 (1877); FS: 296 (1929); FPS 3: 23 (1956); FWTA 2: 287 (1963); WICKENS 1976: 134; UKWF: 228 (1994); HYF: 306 (1997).
Imatong Mountains group, Sudan side: Kinyeti Valley, 5 km. north of Hiliu on road to Torit, 650 m., 6.12.1983, *Kielland-Lund* 236 (C, NLH).
General habitat range: in lowland and medium-altitude deciduous bushland and woodland, often on rocky ground.
General distribution: Senegal to Ethiopia, south

to Namibia and South Africa (Transvaal); also in Egypt, tropical Arabia, Socotra, Pakistan and northern India.

Echinops L.

Echinops amplexicaulis Oliv.
FTA 3: 431 (1877); FS: 294 (1929); FPS 3: 25 (1956); JEFFREY 1968: 115; FWTA 2: 291 (1963); UKWF: 227 (1994).
Imatong Mountains group, Sudan side: Mt. Lotti, 1680-1830 m., grassland, 8.10.1938, *Myers* 9604 (K); along path from Gilo to Mt. Garia, 2000 m., *Loudetia arundinacea* grassland on very shallow soil, 19.3.1982, *Friis & Vollesen* 1262 (C).
Didinga Mountains: between Nagichot and Duguru village (4° 16' N, 33° 35' E), 2000 m., 17.12.1983, *Kielland-Lund* 360 (C, NLH).
General habitat range: in medium-altitude and montane woodland and wooded grassland.
General distribution: Cameroon to Ethiopia, south to Tanzania.

Echinops giganteus A. Rich.
FTA 3: 342 (1877); FPS 3: 25 (1956) {Imatong Mountains, Laboni}; FWTA 2: 291 (1963) JEFFREY 1968: 117.
Imatong Mountains group, Sudan side: Laboni, no alt., 13.10.1938, *Myers* 9706 (K); Kinyeti Valley, Katire, near Ismail Forest (4° 02' N, 32° 43' E), no alt., 15.1.1984, *Kielland-Lund* 634A (C, NLH); Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 2.12.1980, *Friis & Vollesen* 646 (C, K); Katire, 1070 m., scrub, 15.12.1935, *Thomas* 1559 (BM, K); Katire, 1100 m., in old cultivations after fallow of one year, 8.2.1950, *Jackson* 1134 (BM).
General habitat range: in lowland, medium-altitude and montane woodland, often in rough or disturbed places.
General distribution: Nigeria and Cameroon to Ethiopia, south to Tanzania.

Echinops longifolius A. Rich.
FTA 3: 431 (1877); FS: 294 (1929); FPS 3: 25 (1956); FWTA 2: 290 (1963); JEFFREY 1968: 120; WICKENS 1976: 134; UKWF: 227 (1994).
Imatong Mountains group, Sudan side: Issore to Laboni, Kulubi, 1370 m., scrub, 21.12.1935, *Thomas* 1731 (BM, K).
Imatong Mountains group, Uganda side: north of Okako, south of Mingaro, no alt., montane grassland, 10.6.1973, *Katende* 1882 (MHU); 4 km. south-east of Lomwaga, no alt., tall-grass grassland with scattered trees, 18.7.1974, *Katende* 2148 (EA, MHU).
Didinga Mountains: Chukudum Regional District Centre (4° 14' N, 33° 29' E), 1100 m., 16.12.1983, *Kielland-Lund* 337 (C, NLH).
General habitat range: in lowland and medium-altitude woodland.
General distribution: Mali to Ethiopia, south to Tanzania.

Eclipta L.

Eclipta prostrata (L.) L.
FPS 3: 26 (1956); FWTA 2: 241 (1963); WICKENS 1976: 134; UKWF: 215 (1994); HYF: 297 (1997).
Syn.: *Eclipta alba* (L.) Hassk.: FTA 3: 373 (1877); FS: 288 (1929).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), edge of dam, 800 m., 6.1.1984, *Kielland-Lund* 595 (C, NLH).
General habitat range: a widely introduced weedy species, occurring in somewhat disturbed woodland and wooded grassland, and in forest along trails or roads.
General distribution: Senegal to Ethiopia and Somalia, also in Egypt, south to Namibia and

South Africa (Transvaal, Natal); widespread in tropical Asia and America.

Elephantopus L.

Elephantopus mollis H.B.K.
FPS 3: 26 (1956); FWTA 2: 269 (1963); JEFFREY 1988: 273.
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* at forest edge, 26.11.1980, *Friis & Vollesen* 476 (C, K, KHF).
General habitat range: a widely introduced weedy species, occurring in somewhat disturbed woodland and wooded grassland, and in forest along trails or roads.
General distribution: Senegal to Sudan, south to Angola; indigenous in tropical America.

Emilia (Cass.) Cass.

Emilia abyssinica (Sch. Bip. ex A. Rich.) C. Jeffrey
JEFFREY 1986: 911; UKWF: 223 (1994).
Syn.: *Senecio abyssinicus* A. Rich.: FS: 293 (1929); FPNA 2: 557 (1947); FPS 3: 48 (1956).
Imatong Mountains group, Sudan side: near Lotti rest house, 9.6.1939, Andrews 1764 (K); Katire, 900 m., along path, 10.1948, *Jackson* 397 (BM).
General habitat range: in lowland and medium-altitude grassland and bushland, often in disturbed places.
General distribution: Nigeria to Ethiopia, south to Zimbabwe.

Emilia coccinea (Sims) G. Don
FPS 3: 28 (1956); FWTA 2: 244 (1963); JEFFREY 1986: 913; UKWF: 224 (1994).
Syn.: [*Emilia saggittata* auct., non DC.: FTA 3: 405 (1877); FS: 292 (1929); JACKSON 1956: 363].
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, between compound and river, 700 m., 28.11.1983, *Kielland-Lund* 73 (C, NLH); Katire, on the bank of a tributary to Kinyeti River, 900 m., sandy river bank, 18.3.1982, *Friis & Vollesen* 1254 (BR, C, K, KHF).
Didinga Mountains: Nagichot, 1980 m., weed in rest house lawn, 25.4.1939, *Myers* 11,138 (K).
General habitat range: in lowland and medium-altitude woodland and grassland. According to JACKSON 1956 in *Acacia abyssinica* woodland on the Imatong Mountains.
General distribution: Guinée to Ethiopia, south to Angola and Zimbabwe.

Emilia discifolia (Oliv.) C. Jeffrey
JEFFREY 1986: 912; UKWF: 223 (1994).
Syn.: *Senecio discifolius* Oliv.: FTA 3: 410 (1877); FS: 293 (1929); FPNA 2: 557 (1947); FPS 3: 49 (1956).
Imatong Mountains group, Sudan side: Palotaka, 1200 m., open woodland, 16.2.1979, *Shigeta* 188 (EA).
General habitat range: in medium-altitude woodland, bushland and grassland.
General distribution: Sudan and Ethiopia through eastern Africa to Zimbabwe.

Emilia emilioides (Sch. Bip.) C. Jeffrey
JEFFREY 1986: 918.
Syn.: *Senecio emilioides* Sch. Bip.: FTA 3: 471 (1877); FS: 293 (1929).
Didinga Mountains: Lokwara (4° 30' N, 33° 27' E), weed, 29.9.1953, *Peers* "Lokwara 4" (K).
General habitat range: in lowland and medium-altitude grassland and bushland.
General distribution: Central African Republic and South Sudan.

Erlangea Sch. Bip.
See: **Bothriocline** Oliv. ex Benth.

Ethulia L.f.

Ethulia gracilis Del.
GILBERT & JEFFREY 1988: 178.
Imatong Mountains group, Sudan side: Kinyeti Valley, just west of Hiliu at dam on river, 700 m., 21.11.1983, *Kielland-Lund* 18 (C, NLH).
Imatong Mountains group, Sudan side/Lafit, Dongotona and Nangeya Mountains: Koss Valley, 26.10.1938, *Myers* 9899 (K).
General habitat range: in dry lowland woodland and bushland.
General distribution: From Chad and Central African Republic to Ethiopia, south to Uganda.

Eupatorium L.
See: **Stomatanthes** King & Robinson

Galinsoga Ruiz & Pavon

Galinsoga parviflora Cav.
FPNA 2: 532 (1947); FPS 3: 30 (1956); FWTA 2: 230 (1963); WICKENS 1976: 135; UKWF: 218 (1994); HYF: 299 (1997).
Imatong Mountains group, Sudan side: Mt. Itibol, 1960 m., 14.6.1939, *Andrews* 1998 (K); Katire, weed in garden, 9.6.1961, *Jackson* 4209 (K).
Didinga Mountains: Nagichot, 1990 m., forest edge in moist khor, 27.4.1939, *Myers* 11,158 (K).
General habitat range: in disturbed sites at medium elevations.
General distribution: Cameroon to Ethiopia, south to South Africa; widely naturalised and now nearly cosmopolitan, indigenous in South America.

Gerbera L.

Gerbera piloselloides (L.) Cass.
FTA 3: 445 (1877); FPNA 2: 593 (1947); FPS 3: 31 (1956); FWTA 2: 288 (1963); FZ 6,1: 48 (1992).
Syn.: *Piloselloides hirsuta* (Forssk.) C. Jeffrey: JEFFREY 1967: 218; UKWF: 229 (1994); HYF: 306 (1997).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, roadside, 17.11.1980, *Friis & Vollesen* 286 (C); Mt. Itibol, 14.6.1939, *Andrews* 1991 (K).
Imatong Mountains group, Uganda side: without further locality, 2230-2630 m., grassland, 4.1938, *Eggeling* 3601 (K); Langia, no alt., 4.1943, *Purseglove* 1425 (K); 2 km. north-east of Lututuru, near end of road, 1800 m., grassland, 17.2.1969, *Lye* 2064 (MHU).
General habitat range: in medium-altitude and montane grassland.
General distribution: Guinée, Ghana and Cameroon to Ethiopia, south to South Africa (all parts); also in Madagascar, tropical Arabia, and widespread in tropical Asia.

Gerbera viridifolia (DC.) Sch. Bip.
JEFFREY 1967: 216; FZ 6,1: 44 (1992); UKWF: 229 (1994).
subsp. **viridifolia**
JEFFREY 1967: 216.
Syn.: *Gerbera abyssinica* Sch. Bip.: FTA 3: 445 (1877); FS: 296 (1929); FPNA 2: 593 (1947). [*Gerbera pilloselloides* auct., non (L.) Cass.: FPS 3: 31 (1956)].
Imatong Mountains group, Uganda side: without further locality, 2140-2450 m., grassland, 4.1938, *Eggeling* 3611 (K).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., below peak of Mt. Lonyili, no alt., short-grass grassland, 4.12.1971, *Katende* 1386 (EA, MHU).
Didinga Mountains: Mt. Lotuke, Char, 1830 m.,

wooded grassland, 19.4.1939, *Myers* 10,927 (K); slope of Mt. Lotuke, 1890 m., *Protea* grassland, 29.3.1950, *Jackson* 1300 (BM).
General habitat range: in medium-altitude and montane grassland.
General distribution: Cameroon to Ethiopia, south to South Africa (all parts).

Guizotia Cass.

Guizotia arborescens Friis
BAAGOE 1974: 22.
Imatong Mountains group, Sudan side: Gomia, 1800 m., *Protea* grassland, 12.2.1951, *Jackson* 1710 (K); Itibol, 1940 m., in scrub, 17.12.1935, *Thomas* 1630 (BM, K); above Gilo Pool (4° 02' N, 32° 50' E), 15.1.1984, *Kielland-Lund* 651 (C, NLH); Gilo to Bushbuck Hill, east of Itibol, 2100 m., *Hagenia abyssinica-Gnidia glauca* woodland in ecotone between upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum* and *Loudetia arundinacea* grassland, 21.11.1980, *Friis & Vollesen* 391 (BR, C, K, KHF); Kipia, 2600 m., 2.1936, *Johnston* 1409 (K).
Imatong Mountains group, Uganda side: Lomwaga, 2700 m., *Hagenia abyssinica* woodland, 5.4.1945, *Greenway & Hummel* 7285 (EA).
General habitat range: in medium-altitude and montane evergreen bushland, forming clumps in grassland, and at forest edges; only known from South West Ethiopia and the Sudan- and Uganda-sides of the Imatong Mountains.

Guizotia scabra (Vis.) Chiov.
FPNA 2: 526 (1947); FPS 3: 32 (1956); FWTA 2: 230 (1963); BAAGOE 1974: 24; WICKENS 1976: 135; UKWF: 216 (1994); HYF: 298 (1997).
Syn.: *Guizotia schultzii* Hochst. ex Walp.: FTA 3: 385 (1877).
subsp. **scabra**
BAAGOE 1974: 25.
Imatong Mountains group, Sudan side: without further locality, no alt., 2.1936, *Johnston* 1428 (K), & *Johnston* 1472 (K); Laboni, no alt., secondary woodland, 14.10.1938, *Myers* 9710 (K); Palotaka, 1200 m., open woodland, 5.1.1979, *Shigeta* 4 (EA); Kinyeti Valley, near road 6 km. south of Hiliu, 700 m., 6.12.1983, *Kielland-Lund* 230 (C, NLH); near Kinyieti River 7 km. south of Hiliu, 700 m., 7.12.1983, *Kielland-Lund* 242 (C, NLH); Katire, 1000 m., near stream, 10.4.1950, *Jackson* 1392 (BM, K); Katire to Gilo, near road to Itibol, 1400 m., wooded grassland with *Combretum molle, C. collinum, Entada abyssinica* and *Erythrina abyssinica*, the grasses *Pennisetum purpureum* and *Hyparrhenia rufa* dominant, 12.11.1980, *Friis & Vollesen* 171 (C, K, KHF); Iribo (4° 2' N, 32° 50' E), 1600 m., *Acacia abyssinica* woodland with tangle of *Maesa lanceolata*, 25.10.1949, *Jackson* 846 (BM); Gilo, near Ngairigi River, 1700 m., secondary growth, 9.11.1949, *Jackson* 888 (BM, WM); Kipia, 2680 m., mountain meadow, 12.1938, *MacDonald* 8 (BM); Lowiliwili, 2700 m., cleared ground near rest house, 14.11.1949, *Jackson* 909 (BM, WM); Mt. Kinyeti, 3050 m., rocky summit, 30.12.1935, *Thomas* 1844 (BM, K).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., below peak of Mt. Lonyili, 1800 m., montane grassland, 4.12.1971, *Katende* 1392 (EA, MHU).
General habitat range: in lowland, medium-altitude and montane woodland and grassland.
General distribution: North Nigeria and Cameroon to Ethiopia, south to Zimbabwe; also in tropical Arabia. Species as a whole within the same area.

Gutenbergia Sch. Bip.

Gutenbergia cordifolia Oliv.
FTA: 265 (1877); FPS 3: 33 (1956); JEFFREY 1988: 251; UKWF: 199 (1994).
var. **cordifolia**
JEFFREY 1988: 252.

Syn.: *Erlangea cordifolia* (Oliv.) S. Moore: FS: 275 (1929).
Imatong Mountains group, Sudan side: above Molongori, no alt., in thin soil over rocks, 12.11.1949, *Jackson* 522 (BM).
General habitat range: in lowland and medium-altitude bushland or grassland.
General distribution: South Sudan through Uganda and Kenya to Burundi and Tanzania. Species as a whole within the same general area.

Gutenbergia rueppellii Sch. Bip.
FTA 3: 263 (1877); FPS 3: 33 (1956); FWTA 2: 284 (1963); JEFFREY 1988: 254; WICKENS 1976: 135; UKWF: 199 (1994).
var. **rueppellii**
JEFFREY 1988: 254.
Syn.: *Erlangea rueppellii* (Sch. Bip.) Broun & Massey: FS: 275 (1929).
Imatong Mountains group, Sudan side: Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 3.1.1984, *Kielland-Lund* 558 (C, NLH); south of Torit, dry grassland, 20.12.1938, *MacDonald* 3 (BM); 5 km. south-east of Torit, 630 m., *Acacia* bushland, 12.6.1961, *Jackson* 4238 (K).
Didinga Mountains: 34 km. south of Kapoeta on road to Nathilani, no alt., 27.8.1953, *Peers* KM12 (K, WM).
General habitat range: in lowland and medium-altitude deciduous bushland and open grassland, often in overgrazed places or along waysides.
General distribution: Sudan and Ethiopia, south to Burundi and Tanzania. Species as a whole within the same area.

Helichrysum Mill.

Helichrysum argyranthum O. Hoffm.
CHIPP 1929: 191; FPS 3: 35 (1956) {Imatong Mountains, Mt. Kinyeti}; HEDBERG 1957: 210; EL AMIN 1990: 415; FAC, Compositae 2: 153 (1989); UKWF: 213 (1994); KTSL: 557 (1994).
Imatong Mountains group, Sudan side: summit of Mt. Kinyeti, 3170 m., common in mountain meadows from 2740 m., 1929, *Chipp* 73 (K, WM); Mt. Kinyeti, 3050 m., rocky summit, 30.12.1935, *Thomas* 1841 (BM, K); near summit, 3050 m., 1932, *Johnston* 1527 (K); summit of Mt. Kinyeti, 3100 m., ericaceous shrub, 15.11.1949, *Jackson* 953 (BM); summit of Mt. Kinyeti, 3190 m., montane grassland, 17.6. 1953, *Prowse* 323 (KHU); Mt. Kinyeti, 3050 m., 21.2.1976, *Howard* IM 62 (K, KHF); Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub in rock crevices, 13.12.1980, *Friis & Vollesen* 842 (C).
General habitat range: in montane grassland and ericaceous scrub.
General distribution: South Sudan and South West Ethiopia through East Congo [previously Zaire], Uganda and West Kenya to North Tanzania.

Helichrysum coriaceum Harv.
Syn.: *Helichrysum velatum* Moeser: FPNA 2: 502 (1947).
Imatong Mountains group, Uganda side: Langia, 2840 m., montane grassland, 4.1943, *Purseglove* 1424 (EA, K); Lomwaga Mts., 2600 m., burn grassland, 5.4.1945, *Greenway & Hummel* 7294 (EA, K); below summit of Mt. Lomwaga, 2450 m., 1963, *Morrison* s.n. (MHU); 2 km. north-east of Lututuru, near end of road, 1800 m., burnt grassland, 17.2.1969, *Lye* 2074 (K, MHU, NLH).
General habitat range: in montane grassland.
General distribution: North Uganda through Kenya and East Congo [previously Zaire] (Ruwenzori) to South Tanzania.

Helichrysum foetidum (L.) Moench
FTA 3: 352 (1877); FPNA 2: 514 (1947); FPS 3: 35 (1956) {Imatong Mountains}; FWTA 2: 264

(1963); HYF: 293 (1997).
var. **microcephalum** A. Rich.
FPNA 2: 514 (1947).
Syn.: *Helichrysum glutinosum* A. Br.: FAC, Compositae 2: 182 (1989).
Imatong Mountains group, Sudan side: Katire to Itibol, near Itibol camp, 1940 m., scrub, 17.12.1935, *Thomas* 1633 (BM, K); Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 16.11.1980, *Friis & Vollesen* 275 (BR, C, K, KHF); Lomuleng, 2440 m., edge of forest, 29.12.1935, *Thomas* 1801 (BM, K).
General habitat range: in medium-altitude and montane grassland, bushland, ericaceous bushland and Afroalpine vegetation.
General distribution: South Sudan and Ethiopia through East Congo [previously Zaire], Burundi, Uganda, West Kenya to North Tanzania. Species as a whole from Nigeria and Cameroon to Ethiopia, south to Zambia and Malawi, and also in tropical Arabia.

Helichrysum formosissimum (Sch. Bip.) Sch. Bip. ex A. Rich.
FPNA 2: 512 (1947); FPS 3: 35 (1956) {Imatong Mountains, Mt. Kinyeti, summit}; HEDBERG 1957: 214; FAC, Compositae 2: 157 (1989); UKWF: 212 (1994).
Syn.: *Helichrysum elegantissimum* DC. var. *majus* DC.: FTA 3: 350 (1877).
Imatong Mountains group, Sudan side: Kipia, 2560 m., at stream in mountain grassland, 4.7.1947, *MacLeay* 150 (BM); Kipia, 2680 m., mountain grassland, 12.1938, *MacDonald* 22 (BM); between Mt. Kinyeti and Kipia, 2700 m., *Hypericum-Hagenia* scrub, 1.6.1950, *Jackson* 1538 (K); Mt. Kinyeti, 3050 m., rocky summit, 30.12.1935, *Thomas* 1850 (BM, K); Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 841 (C, K, KHF); summit of Mt. Kinyeti, 3160 m., 21.9.1940, *Tothill* in *Myers* 13,509 (K); Mt. Kinyeti, 3180 m., rocky summit, 1.1.1939, *MacDonald* 36 (BM); summit of Mt. Kinyeti, 3180 m., rocky summit, 15.11.1949, *Jackson* 925 (BM, WM).
General habitat range: in montane grassland and ericaceous bushland.
General distribution: South Sudan and Ethiopia through East Congo [previously Zaire], Uganda, Burundi and West Kenya to North Tanzania.

Helichrysum forskaohlii (J.F. Gmel.) Hilliard & Burtt
FAC, Compositae 2: 88 (1989); UKWF: 212 (1994); HYF: 294 (1997).
Syn.: *Helichrysum cymosum* (L.) Less.: FTA 3: 353 (1877); FWTA 2: 264 (1963). *Helichrysum fruticosum* (Forssk.) Vatke: CHIPP 1929: 191; FPNA 2: 496 (1947); FPS 3: 36 (1956) {Imatong Mountains, Mt. Kinyeti, summit}. *Helichrysum cymosum* (L.) Less. subsp. *fruticosum* (Forssk.) Hedb.: HEDBERG 1957: 203.
Imatong Mountains group, Sudan side: along path from Bushbuck Hill to Mt. Konoro, 2300 m., rocky outcrops in *Loudetia* grassland, 5.3.1982, *Friis & Vollesen* 1101 (BR, C, K, KHF); Kipia, 2620 m., montane grassland, 4.7.1947, *MacLeay* 160 (BM); slope of Mt. Kinyeti, 2440 m., rocky outcrop with grasses and ferns, 17.6.1953, *Prowse* 339 (KHU); Mt. Kinyeti, 3000 m., ericaceous scrub, 28.3.1949, *Jackson* 644 (BM); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 58' N, 32° 54' E), 3100 m., above timberline, 10.6.1984, *Kielland-Lund* 922 (C, NLH); Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 831 (C); Mt. Kinyeti, 3150 m., 30.12.1935, *Thomas* 1838 (K); summit of Mt. Kinyeti, 3170 m., 21.9.1940, *Tothill* in *Myers* 13,506 (K); summit of Mt. Kinyeti, 3170 m., 11.2.1929, *Chipp* 77 (K, WM).

General habitat range: in montane grassland and ericaceous evergreen bushland.
General distribution: Cameroon to Ethiopia, south to Angola and South Africa; also in tropical Arabia.

Helichrysum gerberifolium Sch. Bip. ex A. Rich.
FTA 3: 352 (1877); UKWF: 211 (1994).
Imatong Mountains group, Sudan side: above Gilo Pool (4° 02' N, 32° 50' E), no alt., 15.1.1984, *Kielland-Lund* 644 (C, NLH); hill above Gilo, 1900 m., montane grassland, 13.6.1953, *Prowse* 254 (KHU); Mt. Itibol, 1950 m., 14.6.1939, *Andrews* 1986 (K); lower southern slope of Mt. Konoro, 2300 m., *Loudetia arundinacea* grassland on shallow soil, recently burnt, 18.2.1982, *Friis & Vollesen* 941 (C, K, KHF).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 2140 m., montane grassland, 4.1960, *Wilson* 995 (EA).
Didinga Mountains: Mt. Lotuke, Char, 1830 m., wooded grassland, 19.4.1939, *Myers* 10,925 (K).
General habitat range: in medium-altitude and montane grassland and bushland.
General distribution: South Sudan and Ethiopia through East and South Congo [previously Zaire] and eastern Africa to Zambia and Malawi.

Helichrysum globosum Sch. Bip.
FTA 3: 354 (1877); FPNA 2: 500 (1947); FWTA 2: 264 (1963); FAC, Compositae 2: 103 (1989); UKWF: 211 (1994).
Syn.: *Gnaphalium schultzii* Mendonca: WICKENS 1976: 135.
Imatong Mountains group, Sudan side: along path from Bushbuck Hill to Mt. Konoro, 2300 m., rocky outcrops in *Loudetia* grassland, 5.3.1982, *Friis & Vollesen* 1102 (BR, C, K, KHF); Dumuso, 2330 m., *Hagenia* grassland, no date, *Jackson* 1507 (K); summit of Mt. Kinyeti, 3190 m., 27.7.1939, *Myers* 11,639 (K).
Imatong Mountains group, Uganda side: without further locality, no alt., 1943, *Purseglove* 1418 (?K, not traced).
General habitat range: in montane grassland and ericaceous evergreen bushland.
General distribution: Guinée and Cameroon to Ethiopia, south to Angola, Zimbabwe and Mozambique.

Helichrysum maranguense O. Hoffm.
FPNA 2: 494 (1947); FAC, Compositae 2: 101 (1989); UKWF: 212 (1994).
Imatong Mountains group, Sudan side: Dumuso, 2350 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, on rocky outcrop at forest edge towards *Hagenia abyssinica* woodland, 8.3.1982, *Friis & Vollesen* 1133 (BR, C, EA, K).
Imatong Mountains group, Uganda side: near Agoro, 1980 m., 12.1932, *Eggeling* 814 (K, MHU).
General habitat range: in montane grassland, bushland and at forest margins.
General distribution: South Sudan, East Congo [previously Zaire], Uganda, Kenya, and North West Tanzania. First record from the Sudan.

Helichrysum nudifolium (L.) Less.
FPNA 2: 502 (1947); FAC, Compositae 2: 109 (1989); UKWF: 211 (1994); HYF: 294 (1997).
Imatong Mountains group, Sudan side: without further locality, 3000 m., no date, *Phyllis Cosper* 294 (EA).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1650 m., burnt grassland, 15.5.1972, *Synnott* 989 (EA, MHU).
General habitat range: in medium-altitude and montane grassland.
General distribution: Sierra Leone to South Sudan, south to South Africa; also in tropical Arabia.

Helichrysum odoratissimum (L.) Less.
FPS 3: 35 (1956) {Imatong Mountains, Itibol};

HEDBERG 1957: 201 & 338; FWTA 2: 264 (1963); FAC, Compositae 2: 76 (1989); UKWF: 211 (1994).
Syn.: *Achyrocline hochstetteri* Sch. Bip.: FTA 3: 339 (1877). *Helichrysum hochstetteri* (Sch. Bip.) Hook. f.: FPNA 2: 491 (1947).
Imatong Mountains group, Sudan side: without further locality, 2130 m., 10.2.1936, *Johnston* 1490 (K); upper Kinyeti Valley, above Gilo Pool (4° 02' N, 32° 50' E), no alt., 15.1.1984, *Kielland-Lund* 650 (C, NLH); Iribo (4° 2' N, 32° 50' E), 1600 m., *Acacia abyssinica* woodland, following cultivation, 25.10.1949, *Jackson* 862 (BM); Itibol, 1830 m., in scrub, 17.12.1935, *Thomas* 1625 (BM); near summit, 3100 m., 2.1936, *Johnston* 1426 (K); Itibol to Issore, near bridge on Kinyeti River, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 11.11.1980, *Friis & Vollesen* 149 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: Langia, 2840 m., montane grassland, 4.1943, *Purseglove* 1414 (K).
General habitat range: in medium-altitude and montane woodland, evergreen bushland and Afroalpine vegetation.
General distribution: Nigeria and Cameroon to Ethiopia, south to Angola and South Africa (Transvaal).

Helichrysum oxyphyllum DC.
FAC, Compositae 2: 115 (1989).
Syn.: *Helichrysum undatum* (J.F. Gmel.) Less.: FS: 285 (1929); FTA 3: 353 (1877). *Helichrysum rhodolepis* Bak.: FWTA 2: 264 (1963).
Imatong Mountains group, Sudan side: lower southern slope of Mt. Konoro, 2100 m., *Loudetia arundinacea* grassland with scattered trees on shallow soil, 2.3.1982, *Friis & Vollesen* 1070 (C); Bushbuck Hill, 2300 m., *Loudetia arundinacea* grassland with scattered trees, recently burnt, 14.3.1982, *Friis & Vollesen* 1203 (C); slope of Mt. Kinyeti, 3150 m., 17.6.1953, *Prowse* 325 (KHU).
General habitat range: in montane grassland and ericaceous evergreen bushland.
General distribution: Cameroon to South Sudan, Uganda and Kenya, south to Tanzania and Malawi.

Helichrysum quartinianum A. Rich.
FTA 3: 348 (1877); FAC, Compositae 2: 148 (1989).
Syn.: [*Helichrysum antunesii* auct., non Volkens & O. Hoffm.: VERDCOURT 1956: 446].
Imatong Mountains group, Sudan side: Bushbuck Hill, 2300 m., *Loudetia arundinacea* grassland with scattered trees, recently burnt, 16.2.1982, *Friis & Vollesen* 915 (BR, C, EA, K); Lolibai Mountain south of Gilo, towards Ingwok (Kinyeti) peak (3° 58' N, 32° 54' E), 3150 m., in upper elfin forest belt, 10.6.1984, *Kielland-Lund* 911 (C, NLH); Mt. Kinyeti, summit, 3180 m., in grassy patches on the summit plateau, 17.6.1953, *Prowse* 331 (KHU).
Imatong Mountains group, Uganda side: 2620 m., grassland, 4.1938, *Eggeling* 3605 (K); Langia, 2830 m., mountain grassland, 4.1943, *Purseglove* 1422 (EA, K); Lomwaga Mt., 2590 m., in burnt *Exotheca abyssinica-Elionurus muticus* grassland with *Vernonia smithii* and *Gladiolus dalenii,* 5.4.1945, *Greenway & Hummel* 7287 (EA, K).
General habitat range: in montane grassland and ericaceous bushland.
General distribution: Nigeria and Cameroon and from South Sudan and Ethiopia through East Congo [previously Zaire], Uganda and West Tanzania to Angola, Zambia and Malawi.

Helichrysum schimperi (Sch. Bip. ex A. Rich.) Moeser
FPNA 2: 493 (1947); FPS 3: 35 (1956) {Imatong Mountains, Lomuleng}; FAC, Compositae 2: 79 (1989); EL AMIN 1990: 415 {Imatong Mountains}; UKWF: 211 (1994).
Syn.: *Achyrocline schimperi* Sch. Bip. ex A. Rich.: FTA 3: 340 (1877); HYF: 294 (1997).
Imatong Mountains group, Sudan side: without

further locality, no alt., 2.1936, *Johnston* 1424 (K); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 17.11.1980, *Friis & Vollesen* 281 (BR, C, EA, K, KHF); Itibol, 1830 m., scrub, 17.12. 1935, *Thomas* 1626 (BM, K); Lomuleng, 2440 m., scrub, 29.12.1935, *Thomas* 1789 (BM, K); summit [of Mt. Kinyeti], 3170 m., 21.2.1976, *Howard* IM 56 (K, KHF).

General habitat range: in montane grassland, bushland and ericaceous bushland.

General distribution: South Sudan and Ethiopia through East Congo [previously Zaire], Rwanda, Uganda, Kenya and Tanzania to Malawi, Zimbabwe and Mozambique; also in tropical Arabia.

Helichrysum splendidum (Thunb.) Less.
HEDBERG 1957: 204.
Syn.: *Helichrysum abyssinicum* Sch. Bip. ex A. Rich.: FTA 3: 351 (1877).

Imatong Mountains group, Sudan side: Kipia, 2680 m., among rocks near mountain stream, 27.12.1938, *MacDonald* 11 (BM).

General habitat range: in montane grassland, bushland and ericaceous bushland.

General distribution: South Sudan and Ethiopia, and from Tanzania to South Africa.

Note. The synonym *Helichrysum abyssinicum* has been misapplied in the literature on the flora of the Sudan: [*Helichrysum abyssinicum* auct., non Sch. Bip. ex A. Rich.: FS: 285 (1929); this record is *Gnaphalium marranum* Philipson: FPS 3: 32 (1956), an endemic of Jebel Marra in western Sudan (see WICKENS 1976: 135)].

Inula L.

Inula paniculata (Klatt) Burtt-Davy
FAC, Compositae 2: 42 (1989).
Syn.: *Inula decipiens* E.A. Bruce: FPS 3: 37 (1956); UKWF: 213 (1994). *Inula macrophylla* (Sch. Bip.) Sch. Bip., nom. illeg., non Kar. & Kir.: FTA 3: 358 (1877); FPNA 2: 516 (1947).

Imatong Mountains group, Sudan side: Talanga, 950 m., wooded grassland with *Combretum molle, C. collinum, Stereospermum kunthianum* and *Acacia hockii,* tall grass cover of *Cymbopogon giganteum* and *Hyparrhenia spp.*, 4.12.1980, *Friis & Vollesen* 673 (C); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 13.11.1980, *Friis & Vollesen* 190 (BR, C, K, KHF).

General habitat range: in lowland and medium-altitude grassland and wooded grassland.

General distribution: South Sudan, Ethiopia, Uganda and North East Congo [previously Zaire], south to Zimbabwe and South Africa (Transvaal).

Kleinia Mill.

Kleinia abyssinica (A. Rich.) A. Berger
FPS 3: 38 (1956) {Imatong Mountains, Ibahin}; FWTA 2: 243 (1963); JEFFREY 1986: 928.
var. **abyssinica**

Imatong Mountains group, Sudan side: Ibahin, 1980 m., rocky hillside, 18.12.1935, *Thomas* 1673 A (K); between Katire and Gilo, 1700 m., 26.12.1983, *Kielland-Lund* 474 (C, NLH); Gilo, near bridge on Ngairigi River, 1750 m., *Loudetia arundinacea* grassland with scattered trees, 9.11.1980, *Friis & Vollesen* 106 (C, K, KHF).

General habitat range: in lowland and medium-altitude woodland and grassland, often among rocks.

General distribution: Central African Republic to Ethiopia, south to Zambia and Malawi. Species as a whole also in Congo [previously Zaire].

Kleinia schweinfurthii (Oliv. & Hiern) A. Berger
JEFFREY 1986: 926.

Imatong Mountains group, Sudan side: south of Torit, 650 m., at base of *Boscia salicifolia,* 27.5.1949, *Jackson* 776 (BM).

General habitat range: in lowland bushland and woodland.

General distribution: Nigeria, Sudan, Kenya, Tanzania and Malawi.

Lactuca L.

Lactuca glandulifera Hook. f.
FTA 3: 454 (1877); FPNA 2: 606 (1947); FWTA 2: 293 (1963); JEFFREY 1966: 456; FAC, Compositae, 1: 43 (1986); FZ 6,1: 208 (1992); UKWF: 230 (1994).
Imatong Mountains group, Sudan side: Itibol to Issore, near bridge on Kinyeti River, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 11.11.1980, *Friis & Vollesen* 151 (C, K, KHF).
General habitat range: in medium-altitude and montane grassland and evergreen bushland.
General distribution: Sierra Leone and Cameroon to Ethiopia, south to Tanzania, Malawi and Mozambique. First record from the Sudan.

Lactuca inermis Forssk.
FAC, Compositae, 1: 62 (1986); FZ 6,1: 205 (1992); UKWF: 230 (1994); HYF: 308 (1997).
Syn.: *Lactuca capensis* Thunb.: FTA 3: 452 (1877); FS: 297 (1929); CHIPP 1929: 192; FPNA 2: 601 (1947); FPS 3: 38 (1956); FWTA 2: 293 (1963); JEFFREY 1966: 450; WICKENS 1976: 136. *Lactuca abyssinica* Fresen.: FTA 3: 453 (1877). *Lactuca capensis* Thunb. subsp. *parva* Stebbins.
Imatong Mountains group, Sudan side: without further locality, above 2740 m., 12.2.1936, *Johnston* 1508 (K); Palotaka, 1200 m., open woodland, 16.2.1979, *Shigeta* 184 (EA); Hiliu, 700 m., in agricultural land, 28.11.1983, *Kielland-Lund* 60 (C, NLH); Gilo, 1980 m., grassland, 26.6.1947, *MacLeay* 81 (KHU); Mt. Itibol, 1950 m., 14.6.1939, *Andrews* 1964 (K); on the Itibol-Issore path, 2070 m., 2.8.1939, *Myers* 11,764 (K); lower southern slope of Mt. Konoro, 2100 m., *Loudetia* grassland with scattered trees on thin, skeletal soil, 2.3.1982, *Friis & Vollesen* 1072 (BR, C, K, KHF); Itibol to Issore path, 2070 m., forest edge, 2.8.1939, *Myers* 11,764 (K); Gilo to Mt. Konoro, 2000 m., *Loudetia arundinacea* grassland with scattered trees, 16.11.1980, *Friis & Vollesen* 253 (C, K, KHF); Mt. Kinyeti, summit area, 3150 m., rocky area with montane grassland and scattered, low ericaceous scrub, low subshrubs and herbs in rock crevices, 13.12.1980, *Friis & Vollesen* 849 (C, K); Ras Logoforok, 2440 m., mountain meadow, 12.2.1929, *Chipp* 102 (K); Lomuleng, no alt., 2.1936, *Johnston* 1444 (K); summit [of Mt. Kinyeti], no alt., 12.2.1936, *Johnston* 1504 (K); Mt. Kinyeti, 2440-3050 m., ravines in forest, 11.2.1929, *Chipp* 72 (K); Mt. Kinyeti, 3170 m., scrub on mountain top, 11.2.1929, *Chipp* 69 (K, WM); summit of Mt. Kinyeti, 3180 m., rocky ground at summit, 1.1.1939, *MacDonald* 32 (BM); summit of Mt. Kinyeti, 3180 m., rocky ground near summit, 14.11.1949, *Jackson* 917 (BM).
Imatong Mountains group, Uganda side: without further locality, 2630 m., grassland, 4.1938, *Eggeling* 3567 (K); Agoro, 1830 m., 12.1932, *Eggeling* 823 (K, MHU); Langia, 2740 m., mountain grassland, 4.1943, *Purseglove* 1407 (K); 2 km. north-east of Lututuru, near end of road, 1800 m., grassland, 17.2.1969, *Lye* 2071 (MHU).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1830 m., grassland, 4.1960, *Wilson* 1008 (EA).
Didinga Mountains: near Nagichot, 2040 m., pasture, 24.4.1939, *Myers* 11,095 (K).
General habitat range: in a wide range of habitats and altitudes.
General distribution: Mali and Guinée to Ethiopia, south to South Africa; also in tropical Arabia and on the Mascarene Islands.

Laggera Sch. Bip. ex Benth.

Laggera crassifolia (A. Rich.) Sch. Bip. ex Oliv. & Hiern

FTA 3: 325 (1877); FPS 3: 39 (1956).
Syn: *Blumea crassifolia* A. Rich.: FAC, Compositae 2: 17 (1989).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 19.11.1980, *Friis & Vollesen* 333 (C, K).
General habitat range: in medium-altitude and montane grassland.
General distribution: South Sudan, Ethiopia and North East Congo [previously Zaire].

Laggera crispata (Vahl) Hepper & Wood
HYF: 291 (1997).
Syn.: *Blumea crispata* (Vahl) Merxm.: FAC, Compositae 2: 13 (1989). *Laggera pterodonta* Sch. Bip.: FTA 3: 324 (1877); FS: 282 (1929); FPNA 2: 479 (1947); FPS 3: 39 (1956); FWTA 2: 262 (1963); WICKENS 1976: 136; UKWF: 208 (1994). *Laggera alata* (D. Don) Sch. Bip. ex Oliv.: FTA 3: 326 (1877); FS: 282 (1929); FPNA 2: 480 (1947); FPS 3: 39 (1956); FWTA 2: 262 (1963); UKWF: 208 (1994). *Blumea alata* (D. Don) DC.
Imatong Mountains group, Sudan side: Palotaka, no alt., 1979, *Shigeta* 15 (?EA, identified and listed by M.G. Gilbert, not traced); Kinyeti Valley, Hiliu, south of compound, 700 m., 5.12. 1983, *Kielland-Lund* 206 (C, NLH); above Katire, near Lofoha forest ranger post, 1400 m., wooded grassland with *Combretum molle, Cussonia arborea, Stereospermum kunthianum, Erythrina abyssinica, Entada abyssinica,* etc., grass cover with *Hyparrhenia* and *Pennisetum purpureum,* 21.3.1982, *Friis & Vollesen* 1268 (C); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 13.11.1980, *Friis & Vollesen* 205 (C); Upper Kinyeti Valley, near Gilo Pool (4° 02' N, 32° 50' E), no alt., 15.1.1984, *Kielland-Lund* 654 (C, NLH); Loyaru, 1920 m., scrub, 28.12.1935, *Thomas* 1774 (K).
Imatong Mountains group, Uganda side: 2 km. east of Lututuru, near rivulet, 1400 m., scrub, 17.2.1969, *Lye* 2097 (MHU).
General habitat range: in a wide range of habitats and altitudes.
General distribution: Senegal to Ethiopia, south to South Africa; also in Madagascar, in tropical Arabia and in tropical Asia.

Laggera elatior R.E. Fr.
FPS 3: 40 (1956) {Imatong Mountains, Kipia}; UKWF: 208 (1994).
Syn.: *Blumea elatior* (R.E. Fr.) Lisowski: FAC, Compositae 2: 12 (1989).
Imatong Mountains group, Sudan side: Bushbuck Hill, 2300 m., *Loudetia arundinacea* grassland, in crevices of rocky outcrops, 21.2.1982, *Friis & Vollesen* 979 (BR, C, K, KHF); Kipia, 2440 m., scrub, 29.12.1935, *Thomas* 1830 (K).
General habitat range: in montane grassland and bushland.
General distribution: South Sudan and South West Ethiopia through Uganda and Kenya to North Tanzania and Burundi.

Launaea Cass.

Launaea cornuta (Oliv. & Hiern) C. Jeffrey
JEFFREY 1966: 468; FZ 6,1: 219 (1992); UKWF: 229 (1994).
Syn.: *Sonchus cornutus* Oliv. & Hiern: FTA 3: 459 (1877); FS: 298 (1929); FPS 3: 51 (1956). *Sonchus exauriculatus* (Oliv. & Hiern) O. Hoffm.: FPNA 2: 598 (1947); FPS 3:51 (1956); FWTA 2: 296 (1963).
Imatong Mountains group, Sudan side: Loa, Molitokoro village north of Kerepi (3° 55' N, 31° 55' E), no alt., 5.6.1984, *Kielland-Lund* 857 (C, NLH); Loa, Arapi Regional District Centre (3° 48' N, 31° 59' E), 800 m., 3.1.1984, *Kielland-Lund* 542 (C, NLH); Palotaka, 1200 m., open woodland, 5.1.1979, *Shigeta* 24 (EA); Kinyeti Valley, above Katire, 1250 m., woodland with *Combretum molle, Cussonia arborea, Stereospermum kunthianum, Erythrina abyssinica, Entada abyssinica,* etc., 27.2.1982, *Friis & Vollesen* 1049 (C, K, KHF).

General habitat range: in medium-altitude and montane grassland, often in disturbed ground.
General distribution: Cameroon to Ethiopia and Somalia, south to Zambia, Zimbabwe, Malawi and Mozambique.

Launaea nana (Bak.) Chiov.
JEFFREY 1966: 466; FAC, COMPOSITAE, 1: 18 (1986); FZ 6,1: 217 (1992); UKWF: 229 (1994).
Syn.: *Sonchus elliotianus* Hiern: CHIPP 1929: 192; FPS 3: 53 (1956) {Laboni}; FWTA 2: 296 (1963).
Imatong Mountains group, Sudan side: near Laboni, 1220 m., in fire-swept grassland, flowering after grass fires, 8.2-1929, *Chipp* 35 (K); Kinyeti Valley, above Katire (4° 02' N, 32° 50' E), no alt., 15.1.1984, *Kielland-Lund* 635 (C, NLH).
Imatong Mountains group, Uganda side: above Lututuru, 1830 m., recently burnt grassland, 2.1938, *Eggeling* 3496 (K).
General habitat range: in lowland and medium-altitude grassland.
General distribution: Guinée and Sierra Leone to Ethiopia, south to South Africa (where widespread).

Melanthera Rohr

Melanthera pungens Oliv. & Hiern
FTA 3: 382 (1877); FS: 289 (1929); FPS 3: 43 (1956); WICKENS 1976: 136.
Imatong Mountains group, Sudan side: without further locality, no alt., 1947, *Maxwell Forbes* 132 (K); Talanga to Upper Talanga, 1000 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* scrambler in forest, 7.12.1980, *Friis & Vollesen* 757 (BR, C, EA, K, KHF).
General habitat range: in lowland and medium-altitude bushland, bushland and forest.
General distribution: South Sudan through Uganda and West Kenya to North West Tanzania.

Melanthera scandens (Schumach.) Roberty
FPS 3: 40 (1956); UKWF: 216 (1994).
subsp. **madagascariensis** (Bak.) Wild
Imatong Mountains group, Sudan side: Talanga, 950 m., lowland rain forest with *Chrysophyllum albidum, Cola gigantea, Erythrophleum suaveolens, Alstonia boonei, Parinari excelsa* and *Milicia excelsa,* at forest edges and in clearings, 3.12.1980, *Friis & Vollesen* 656 (C, K).
Imatong Mountains group, Uganda side: 4 km. south-east of Lomwaga, no alt., tall-grass grassland, 18.7.1974, *Katende* 2142 (EA, MHU).
General habitat range: in lowland and medium-altitude grassland, bushland and at forest margins.
General distribution: Nigeria to Ethiopia, south to South Africa (Transvaal, Natal); also in Madagascar. Species as a whole west to Sierra Leone.

Micractis DC.

Micractis bojeri DC.
Syn.: *Sigesbeckia abyssinica* (Sch. Bip.) Oliv. & Hiern: FPNA 2: 519 (1947); FWTA 2: 242 (1963); UKWF: 215 (1994).
Imatong Mountains group, Sudan side: at Ngairigi River, 1600 m., alluvial ground along the river, 8.1.1950, *Jackson* 1040 (BM); Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* in grassy swamp with stagnant water along the river, 21.11.1980, *Friis & Vollesen* 369 (BR, C, EA, K, KHF).
General habitat range: in medium-altitude and montane grass swamps and montane grassland.
General distribution: Nigeria to Ethiopia, south to Tanzania; also in Madagascar.

Microglossa DC.

Microglossa pyrifolia (Lam.) O. Kuntze
FPS 3: 43 (1956); FWTA 2: 251 (1963); EL AMIN 1990: 416 {Imatong Mountains}; UKWF: 205 (1994); KTSL: 558 (1994).
Syn.: *Microglossa volubilis* DC.: FTA 3: 309 (1877); FS: 281 (1929); FPNA 2: 461 (1947). *Conyza heudelotii* Oliv. & Hiern: FTA 3: 317 (1877).
Imatong Mountains group, Sudan side: without further locality, no alt., 1947, *Maxwell Forbes* 55 (K); Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 8.12.1980, *Friis & Vollesen* 770 (BR, C, K, KHF); Bushbuck Hill, 2200 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, at forest edge, 16.2.1982, *Friis & Vollesen* 906 (C, K).
General habitat range: in a wide range of lowland, medium-altitude and montane habitats, often in disturbed places.
General distribution: Senegal to Ethiopia and Kenya, south to Zimbabwe; also in tropical Asia.

Mikania Willd.

Mikania chenopodifolia Willd.
HOLMES 1982: 221.
Syn.: *Mikania capensis* DC.: HOLMES 1982: 214.
[*Mikania scandens* auct., non (L.) Willd.: FTA 3: 301 (1877); FS: 280 (1929); FPNA 2: 458 (1947).
Mikania cordata auct., non (Burm. f.) B.L. Robinson: FPS 3: 43 (1956): FWTA 2: 286 (1963); UKWF: 204 (1994).]
Imatong Mountains group, Sudan side: near Gilo Pool (4° 02' N, 32° 50' E), no alt., 15.1.1984, *Kielland-Lund* 649 (C, NLH); Issore, 1400 m., edge of forest, 16.11.1948, *Jackson* 538 (BM).
General habitat range: in lowland, medium altitude and montane forest, especially along edges and in clearings, and in montane evergreen bushland.
General distribution: Senegal to Ethiopia, south to South Africa (Natal, Cape Prov.); also in Madagascar.
Note: According to HOLMES 1982, most material of *Mikania* from East Africa, Sudan and Ethiopia belongs to either *M. capensis* or *M. chenopodifolia*. However, we follow Ms. Sarah Smith's unpublished revision of Homes' taxonomic treatment for the FTEA, according to which there is a continuous range of variation between *M. chenopodifolia* and *M. capensis*.

Nidorella Cass.

Nidorella spartioides (O. Hoffm.) Cronquist
UKWF: 205 (1994).
Syn.: *Nidorella stricta* O. Hoffm.
Imatong Mountains group, Sudan side: lower southern slope of Mt. Konoro, 2300 m., *Loudetia arundinacea* grassland on shallow soil, recently burnt, 18.2.1982, *Friis & Vollesen* 943 (C, K, KHF).
Imatong Mountains group, Uganda side: without further locality, 2440 m., grassland, 4.1938, *Eggeling* 3534 (K); Langia, 2130 m., montane grassland, 4.1943, *Purseglove* 1395 (EA, K).
General habitat range: in medium-altitude and montane grassland, bushland and woodland.
General distribution: Nigeria to South Sudan, south to Angola, Zambia and Malawi. First record from the Sudan.

Ochrocephala Dittrich
Syn.: *Rhaponticum* Ludw., pro parte.

Ochrocephala imatongensis (Philipson) Dittrich
Syn.: *Rhaponticum imatongense* (Philipson) Soják. *Centaurea imatongensis* Philipson: FPS 3: 17 (1956) {Imatong Mountains}.
Imatong Mountains group, Sudan side: Laboni, 1160 m., grassland and scrub at forest edge, 21.12.1935, *Thomas* 1737 (BM, K, holotype of *O. imatongensis*); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 19.11.1980, *Friis & Vollesen* 336 (BR, C, K, KHF).
Didinga Mountains: north of Naperatang Valley (4° 19' N, 33° 30' E), 1900 m., 18.12.1983, *Kielland-Lund* 381 (NLH).
General habitat range: in medium-altitude grassland.
General distribution: only known from the study area, from North East Uganda, documented by *Synnott* 1369, from Ethiopia, Wellega and Gonder provinces, documented by *Friis* et al. 7847 and *Pichi Sermolli* 2411, and from North East Congo [previously Zaire], documented by *Taton* 1059.

Pseudognaphalium Kirp.

Pseudognaphalium richardianum (Cufod.) Hilliard & Burtt
Hilliard & Burtt 1981: 204.
Syn.: *Gnaphalium auriculatum* A. Rich. (1847), non Lam. (1788). *Gnaphalium richardianum* Cufod.
Imatong Mountains group, Sudan side: Bushbuck Hill, 2150 m., *Loudetia arundinacea* grassland with scattered trees, 10.11.1980, *Friis & Vollesen* 133 (C, KHF).
General habitat range: evergreen montane bushland, ericaceous bushland and montane grassland at forest edges.
General distribution: Ethiopia, South Sudan.

Senecio L.

Senecio myriocephala Sch. Bip. ex A. Rich.
FTA 3: 417 (1877); FPS 3: 49 (1956) {Imatong Mountains, Lomuleng}.
Imatong Mountains group, Sudan side: without further locality, 3170 m., 21.2.1976, *Howard* IM 58 (K, KHF); Dumuso Ridge, 2350 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum*, at forest edge towards *Hagenia abyssinica* woodland, 8.3.1982, *Friis & Vollesen* 1135 (BR, C, K, KHF); Lomuleng, 2440 m., in swamp, 29.12.1935, *Thomas* 1802 (BM, K); Mt. Kinyeti, 2500 m., upland rain forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri, Syzygium guineense* subsp. *afromontanum* and *Dombeya torrida*, 12.12.1980, *Friis & Vollesen* 851 (C).
General habitat range: in montane grassland, bushland and ericaceous bushland.
General distribution: South Sudan and Ethiopia.

Senecio pachyrhizus O. Hoffm.
Jeffrey 1986: 887.
Imatong Mountains group, Uganda side: without further locality, 2140 m., 4.1938, *Eggeling* 3610 (K).
General habitat range: in medium-altitude and montane woodland.
General distribution: Cameroon, North and West Uganda, West Tanzania, Angola, Zambia and Malawi.

Senecio ragazzii Chiov.
Chiovenda 1904: 190.
Syn.: [*Senecio trichopterygius* auct., non Muschl.: FPNA 2: 565 (1947); FPS 3: 49 (1956) {Imatong Mountains, Lomuleng}. *Senecio denticulatus* auct., non Engl., nom. illeg.: Jackson 1956: 370 {Imatong Mountains, ericaceous zone}].

Imatong Mountains group, Sudan side: without further locality, 2130 m., 10.2.1936, *Johnston* 1486 (K); Lomuleng, 2440 m., forest, 29.12.1935, *Thomas* 1790 (BM, K); Mt. Kinyeti, 3180 m., ericaceous bushland, 15.11.1949, *Jackson* 930 (BM).
General habitat range: in montane bushland and ericaceous bushland.
General distribution: South Sudan and Ethiopia.

Senecio ruwenzoriensis S. Moore
FPNA 2: 559 (1947); FWTA 2: 250 (1963); JEFFREY 1986: 897; UKWF: 222 (1994).
Imatong Mountains group, Uganda side: Langia, 1220-2740 m., grassland, 4.1943, *Purseglove* 1382 (EA, K).
General habitat range: in montane grassland.
General distribution: Nigeria to Sudan, south to South Africa.

Senecio subsessilis Oliv. & Hiern
FTA 3: 415 (1877); FPNA 2: 564 (1947); JEFFREY 1986: 892; UKWF: 222 (1994).
Imatong Mountains group, Sudan side: Bushbuck Hill, 2150 m., edge of *Hagenia abyssinica* woodland in *Loudetia arundinacea* grassland with scattered trees, much *Agauria* and *Nuxia*, 10.11.1980, *Friis & Vollesen* 130 (BR, C, K, KHF) & 131 (C, K, KHF); Kipia, 2440 m., grassland, 29.12.1935, *Thomas* 1827 (BM, K); Kipia, 2680 m., edge of mountain meadow, 1.1939, *MacDonald* 76 (BM).
Imatong Mountains group, Uganda side: 2 km. north-east of Lututuru, near the end of the road, 1800 m., grassland, 17.2.1969, *Lye* 2073 (MHU).
General habitat range: in medium-altitude and montane grassland and woodland.
General distribution: South Sudan through East Congo [previously Zaire], Rwanda, Burundi to Tanzania.

Sigesbeckia L. See **Micractis** DC.

Solanecio (Sch. Bip.) Walp.

Solanecio angulatus (Vahl) C. Jeffrey
JEFFREY 1986: 922; UKWF: 220 (1994); KTSL: 562 (1994).
Syn.: *Cacalia angulata* Vahl. *Senecio subscandens* Hochst. ex A. Rich.: FTA 3: 421 (1877). *Senecio bojeri* DC.: HYF: 301 (1997). *Crassocephalum bojeri* (DC.) Robyns: FPNA 2: 544 (1947). *Senecio gabonicus* Oliv. & Hiern: FTA 3: 421 (1877).
Didinga Mountains: rocks north-east of Chukudum (4° 15' N, 33° 27' E), 1100 m., 21.12.1983, *Kielland-Lund* 423 (C, NLH).
General habitat range: at medium-altitude and montane habitats, especially in clearings and at edges of forest, and in evergreen bushland on steep, rocky slopes and along streams.
General distribution: Cameroon, Equatorial Guinea and Gabon to Ethiopia, south to Angola, Zimbabwe and South Africa; also in Madagascar and tropical Arabia.

Solanecio mannii (Hook. f.) C. Jeffrey
JEFFREY 1986: 922; UKWF: 220 (1994); KTSL: 563 (1994).
Syn.: *Senecio mannii* Hook. f.: FTA 3: 418 (1877). *Crassocephalum mannii* (Hook. f.) Milne-Redh.: ITU: 95 (1952); FPS 3: 22 (1956); FWTA 2: 246 (1963). *Senecio multicorymbosus* Klatt.: CHIPP 1929: 191; EL AMIN 1990: 417 {Imatong Mountains}. *Crassocephalum multicorymbosum* (Klatt) S. Moore: FPNA 2: 545 (1947).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., dense *Combretum* woodland at edge between upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea* and *Loudetia arundinacea* grassland with scattered trees, 19.11.1980, *Friis & Vollesen* 341 (C, K, KHF); near Issore, no alt., in fringing forest, 9.2.1929, *Chipp* 52 (K, WM); below Lomuleng, 2010 m., *Podocarpus latifolius* forest, 29.7.1939, *Myers* 11,713 (K, WM).

Imatong Mountains group, Uganda side: Agoro, 1990 m., 12.1932, *Eggeling* 801 (MHU); Agoro, 1980 m., no date, *Eggeling* 1182 (EA, K).
Didinga Mountains: Chukudum, 1110 m., on rocks beside waterfall, 28.3.1950, *Jackson* 1288 (BM).
General habitat range: in evergreen bushland, clearings and at edges of montane forest.
General distribution: Nigeria and Cameroon to Sudan, Ethiopia and Kenya; south to Angola and Zimbabwe.

Sonchus L.

Sonchus angustissimus Hook. f.
FTA 3: 458 (1877); FWTA 2: 296 (1963); FAC, Compositae, 1: 33 (1986).
Syn.: *Sonchus schweinfurthii* Oliv. & Hiern: FTA 3: 458 (1877); FPNA 2: 595 (1947); FPS 3: 51 (1956); JEFFREY 1966: 479; FAC, Compositae, 1: 38 (1986); FZ 6,1: 224 (1992); UKWF: 230 (1994).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1750 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 13.11.1980, *Friis & Vollesen* 213 (C, K); Loyaru, 1920 m., in scrub, 28.12.1935, *Thomas* 1773 (BM).
General habitat range: in lowland and medium-altitude grassland and evergreen bushland, often in disturbed sites.
General distribution: Nigeria to Ethiopia, south to Angola, Zambia, Zimbabwe, Malawi and Mozambique.
Note. We do not find consistent differences between *S. angustissimus* and *S. schweinfurthii,* and have decided to treat them as conspecific. The latest monographic flora, FZ from 1992, has accepted *S. schweinfurthii.*

Sonchus bipontini Asch.
FTA 3: 458 (1877); FS: 298 (1929); JEFFREY 1966: 479; FAC, Compositae, 1: 34 (1986); FZ 6,1: 226 (1992); UKWF: 230 (1994).
Syn.: *Sonchus bipontini* Asch. var. *glanduligerus* (R.E. Fr.) Robyns: FPNA 2: 596 (1947).
Imatong Mountains group, Sudan side: Gilo, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 8.11.1980, *Friis & Vollesen* 43 (BR, C, K, KHF); slope of Mt. Lohocho (Ilungi), above the Katire-Gilo road, 1900 m., *Loudetia arundinacea* grassland with scattered trees, recently burnt, 7.3.1982, *Friis & Vollesen* 1125 (C, K, KHF); Lomuleng to Kipia, no alt., 2.1936, *Johnston* 1423 (K).
Imatong Mountains group, Uganda side: Langia, 2740 m., montane grassland, 4.1943, *Purseglove* 1406 (EA, K).
General habitat range: in medium-altitude and montane grassland.
General distribution: East Congo [previously Zaire] to Ethiopia, south to Tanzania and Malawi.

Sphaeranthus L.

Sphaeranthus randii S. Moore
FPS 3: 53 (1956); FAC, Compositae 2: 225 (1989).
var. **randii**
ROSS-CRAIG 1954: 67, Tab. 3517A.
Didinga Mountains: Nagichot, 1980 m., at muddy stream bank, 25.4.1939, *Myers* 11,118 (K, WM).
General habitat range: in lowland, medium-altitude and montane grassland.
General distribution: South Sudan through eastern Africa to Zimbabwe. Species as a whole within the same general area.

Sphaeranthus suaveolens (Forssk.) DC.
FTA 3: 333 (1877); FS: 283 (1929); FPNA 2: 484 (1947); FPS 3: 53 (1956); ROSS-CRAIG 1954: 42; FAC, Compositae 2: 222 (1989); UKWF: 209 (1994).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 2000 m., damp valley in

grassland on upper slope of mountain, 17.5. 1972, *Synnott* 1058 (EA, MHU).
General habitat range: in lowland, medium-altitude and montane grassland.
General distribution: Egypt through eastern Africa to North Malawi.
Note. It has not been possible to refer the material from the study area to any of the varieties proposed by ROSS-CRAIG.

Sphaeranthus ukambensis Vatke & O. Hoffm.
ROSS-CRAIG 1954: Tab. 3504; UKWF: 209 (1994).
Didinga Mountains: at rocks north-east of Chukudum (4° 15' N, 33° 27' E), 1100 m., 21.12.1983, *Kielland-Lund* 428 (C, NLH).
General habitat range: in wet or flooded areas in low to intermediate altitude grassland.
General distribution: South Sudan and Uganda to Ethiopia, south to Tanzania.

Spilanthes Jacq., pro parte.
See: **Acmella** L.C. Rich. ex Pers.

Stomatanthes King & Robinson

Stomatanthes africana (Oliv. & Hiern) King & Robinson
UKWF: 204 (1994).
Syn.: *Eupatorium africanum* Oliv. & Hiern: FTA 3: 301 (1877); FS: 278 (1929); FPNA 2: 456 (1947); FPS 3: 29 (1956); FPNA 2: 457 (1947); FWTA 2: 285 (1963).
Imatong Mountains group, Sudan side: Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, especially *Combretum, Faurea,* etc., 26.3.1982, *Friis & Vollesen* 1322 (C); lower southern slope of Mt. Konoro, 2300 m., *Loudetia arundinacea* grassland on shallow soil, recently burnt, 18.2.1982, *Friis & Vollesen* 938 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: without further locality, 2630 m., grassland, 4.1938, *Eggeling* 3561 (K).
Didinga Mountains: Mt. Loka, 1650 m., burnt grassland among rocks, 29.1.1938, *Myers* 8391 (K).
General habitat range: in lowland and medium-altitude woodland and montane grassland.
General distribution: Guinée to Ethiopia, south to South Africa.

Tagetes L.

Tagetes minuta L.
UKWF: 218 (1994); HYF: 300 (1997).
Didinga Mountains: Longumu River north of Chukudum (4° 21' N, 33° 21' E), 900 m., 20.12.1983, *Kielland-Lund* 402 (C, NLH).
General habitat range: in lowland, medium-altitude and montane cultivations, often as a troublesome weed persisting in old cultivations and waste places and spreading to roadsides and bare places in natural vegetation.
General distribution: Now almost pantropical; originated in America.

Tolpis Adans.

Tolpis capensis (L.) Sch. Bip.
JEFFREY 1966: 432; FAC, Compositae, 1: 7 (1986); FZ 6,1: 190 (1992); UKWF: 229 (1994).
Imatong Mountains group, Sudan side: lower southern slope of Mt. Konoro, 2300 m., *Loudetia arundinacea* grassland on shallow soil, recently burnt, 18.2.1982, *Friis & Vollesen* 939 (BR, C, K, KHF); along path from Bushbuck Hill to Mt. Konoro, 2400 m., *Hagenia abyssinica* woodland, 23.2.1982, *Friis & Vollesen* 1008 (C); summit of Mt. Kinyeti, 3190 m., 27.7.1939, *Myers* 11,642 (K).
General habitat range: in medium-altitude and montane grassland and woodland.
General distribution: East Congo [previously

Zaire] to Ethiopia, south to South Africa (Transvaal, Natal, Cape Prov.); also in Madagascar.

Tridax L.

Tridax procumbens L.
FPS 3: 55 (1956); FWTA 2: 230 (1963); WICKENS 1976: 138; UKWF: 218 (1994); HYF: 298 (1997).
Imatong Mountains group, Sudan side: Kinyeti Valley, Hiliu, 700 m., waste ground near building, 21.11.1983, *Kielland-Lund* 1 (C, NLH); Katire, 950 m., weed in garden, 21.6.1961, *Jackson* 4257 (K);.
General habitat range: in disturbed sites at low and medium elevations, at least in its range in Africa.
General distribution: Senegal to Ethiopia, south to South Africa; widely naturalised in the tropics, indigenous in tropical America.

Vernonia Schreb.

Vernonia adoensis Sch. Bip. ex Walp.
FTA 3: 291 (1877); FPNA 2: 439 (1947); WICKENS 1976: 138; JEFFREY 1988: 240; FZ 6,1: 124 (1992); UKWF: 201 (1994); KTSL: 565 (1994).
Imatong Mountains group, Sudan side: Kinyeti Valley, near Hiliu, 650 m., roadside, 21.11. 1983, *Kielland-Lund* 20 (K, NLH); near Kinyieti River 7 km. south of Hiliu towards Katire, 700 m., 7.12.1983, *Kielland-Lund* 239 (C, NLH); Katire, 1000 m., *Albizia zygia* woodland, 10.48, *Jackson* 384 B (BM); Mt. Itibol, 1950 m., 14.6.1939, *Andrews* 1968 (K, WM); Gilo to Mt. Konoro, 2000 m., *Loudetia arundinacea* grassland with scattered trees, 16.11.1980, *Friis & Vollesen* 263 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: Lututuru, no alt., 1992, *Katende* (sight record).
Lafit, Dongotona and Nangeya Mountains: Lafon Regional District Centre, no alt., 29.12.1983, *Kielland-Lund* 530 (C, NLH).
General habitat range: in lowland and medium-altitude woodland.
General distribution: Senegal to Ethiopia and West Kenya, south to South Africa (Transvaal, Natal).

Vernonia amygdalina Del.
FTA 3: 284 (1877); FS: 277 (1929); FPNA 2: 452 (1947); ITU: 99 (1952); FPS 3: 59 (1956); JACKSON 1956: 350; FWTA 2: 277 (1963); WICKENS 1976: 138; JEFFREY 1988: 212; EL AMIN 1990: 419; FZ 6,1: 70 (1992); UKWF: 202 (1994); KTSL: 566 (1994); HYF: 286 (1997).
Imatong Mountains group, Sudan side: without further locality, 1530-1830 m., 12.6.1939, *Andrews* 1833 (K) & *Andrews* 1854 (K); 30 km. south of Hiliu along Katire road, 26.12.1983, *Kielland-Lund* 455 (C, NLH); Imeila, 700 m., edge of gallery forest, 27.1.1949, *Jackson* 581 (KHF); Katire, 1000 m., in *Albizia* woodland, 3.3.1950, *Jackson* 1181 (KHF); Gilo, at bridge on Ngairigi River, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* at forest edge, 17.2.1982, *Friis & Vollesen* 930 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: above Lututuru, 1830 m., 2.1938, *Eggeling* 3492 (K, MHU).
Didinga Mountains: Longumu Valley north of Chukudum (4° 20' N, 33° 23' E), 900 m., 20.12.1983, *Kielland-Lund* 398 (C, NLH).
General habitat range: in a wide range of lowland, medium-altitude and montane habitats. According to JACKSON 1956 it occurs at the Imatong Mountains in moist woodland west and north of the mountains.
General distribution: Guinée and Mali to Ethiopia and West Kenya, south to Botswana and South Africa (Natal); also in tropical Arabia.

Vernonia biafrae Oliv. & Hiern
FTA 3: 270 (1877); FPNA 2: 448 (1947); FWTA 2: 276 (1963); FZ 6,1: 80 (1992); JEFFREY 1988: 216; UKWF: 202 (1994); KTSL: 566 (1994).
Syn.: *Vernonia tufnelliae* S. Moore: FWTA 2: 276 (1963). *Vernonia leptolepis* O. Hoffm.
Imatong Mountains group, Sudan side: Gilo, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* in forest, 19.2.1982, *Friis & Vollesen* 957 (BR, C, K, KHF).
General habitat range: in medium-altitude and montane forest, especially along margins.
General distribution: Guinée to Ethiopia and Kenya, south to Zambia and Malawi.

Vernonia hochstetteri Sch. Bip.
FTA 3: 287 (1877); FPS 3: 61 (1956) {Imatong Mountains, Loyaru}; JEFFREY 1988: 226; EL AMIN 1990: 419 {Imatong Mountains, Loyaru, Yambio}; UKWF: 202 (1994); KTSL: 567 (1994).
var. **hochstetteri**
JEFFREY 1988: 226.
Syn.: *Vernonia jugalis* Oliv. & Hiern: FPS 3: 56 (1956).
Imatong Mountains group, Sudan side: Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 29.11.1980, *Friis & Vollesen* 534 (BR, C, K, KHF); Talanga, 1000 m., *Combretum* woodland, 25.2.1950, *Jackson* 1157 (BM); Loyaru, 1920 m., in scrub, 28.12.1935, *Thomas* 1770 (BM, K); above Gilo Pool (4° 02' N, 32° 50' E), no alt., 15.1.1984, *Kielland-Lund* 636 (C, NLH); between Gilo and Bushbuck Hill, 2000 m., clearing in *Cupressus lusitanica* plantation, with regrowth of *Albizia-Croton-Macaranga* forest, 10.11.1980, *Friis & Vollesen* 126 (C, K, KHF).
General habitat range: in lowland and medium-altitude woodland, bushland and at forest margins.
General distribution: South Sudan, Ethiopia and Kenya to East Congo [previously Zaire] and North Tanzania. Species as a whole west to Cameroon and South to Angola.

Vernonia ituriensis Muschl.
JEFFREY 1988: 231; UKWF: 202 (1994).
Syn.: *Vernonia glabra* (Steetz) Vatke var. *hillii* (Hutch. & Dalziel) D. Adams: FWTA 2: 281 (1963).
Imatong Mountains group, Sudan side: at Ngairigi River, 1600 m., in *Rubus* scrub near river, 8.1. 1950, *Jackson* 1031 (BM); Gilo to Mt. Konoro, 1850 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 24.11.1980, *Friis & Vollesen* 439 (BR, C, FT, K, KHF).
General habitat range: in medium-altitude end montane moist woodland and riverine vegetation.
General distribution: Cameroon to Congo [previously Zaire] and Ethiopia, south to Tanzania. Species as a whole also in Nigeria.

Vernonia karaguensis Oliv. & Hiern
FTA 3: 280 (1877); FPNA 2: 447 (1947); JEFFREY 1988: 221; FZ 6,1: 103 (1992); UKWF: 203 (1994).
Syn.: *Vernonia cistifolia* O. Hoffm.: FWTA 2: 282 (1963). *Vernonia campanea* S. Moore.
Imatong Mountains group, Sudan side: Talanga, 950 m., wooded grassland with *Combretum molle, C. collinum, Stereospermum kunthianum* and *Acacia hockii,* tall grass cover of *Cymbopogon giganteum* and *Hyparrhenia spp.*, 4.12.1980, *Friis & Vollesen* 672 (BR, C, K, KHF); Kinyeti Valley, above Katire, near Lofoha forest ranger post, 1400 m., wooded grassland with *Combretum molle, Cussonia arborea, Stereospermum kunthianum, Erythrina abyssinica, Entada abyssinica,* etc., grass cover with *Hyparrhenia spp.* and *Pennisetum purpureum,* 21.3.1982, *Friis & Vollesen* 1267 (C, K); Gilo, at bridge across Ngairigi River, 1750 m., *Loudetia arundinacea* grassland with scattered trees, 9.11.1980, *Friis & Vollesen* 104 (BR, C, K, KHF); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scat-

tered trees, 13.11.1980, *Friis & Vollesen* 207 (BR, C, K, KHF); Gilo to Itibol, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 11.11.1980, *Friis & Vollesen* 143 (C, K).

Imatong Mountains group, Uganda side: 5 km. south-east of Lomwaga, 1800 m., tall-grass grassland with scattered trees, 18.7.1974, *Katende* 2185 (MHU).

Didinga Mountains: between Nagichot and Duguru village (4° 16' N, 33° 35' E), 2000 m., 17.12.1983, *Kielland-Lund* 356 (C, NLH).

General habitat range: in medium-altitude and montane grassland.

General distribution: Nigeria to Ethiopia, south to Angola, Zambia, Zimbabwe, Malawi and Mozambique.

Vernonia lasiopus O. Hoffm.
FPNA 2: 441 (1947); JEFFREY 1988: 238; UKWF: 202 (1994); KTSL: 568 (1994).
var. **lasiopus**

Imatong Mountains group, Sudan side: Palotaka, 1200 m., open woodland, 1979, *Shigeta* 54 (EA, incomplete material tentatively named by M.G. Gilbert).

General habitat range: in lowland and medium-altitude woodland, bushland and grassland.

General distribution: Sudan and Ethiopia to North Tanzania. Species as a whole through East Congo [previously Zaire], Rwanda, Burundi and eastern Africa south to Central Tanzania.

Vernonia myriantha Hook. f.
FTA 3: 297 (1877); JEFFREY 1988: 219; FZ 6,1: 82 (1992); UKWF: 200 (1994); KTSL: 568 (1994).
Syn.: *Vernonia ampla* O. Hoffm.: FWTA 2: 277 (1963); EL AMIN 1990: 419 {Imatong Mountains}. *Vernonia subuligera* O. Hoffm.: FWTA 2: 279 (1963); SOMMERLATTE 1990: 294. *Vernonia stipulacea* Klatt. *Vernonia podocoma* Sch. Bip. ex Vatke.

Imatong Mountains group, Sudan side: without further locality [probably near Gilo], 1990 m., edge of forest, 30.1.1976, *Howard* IM19 (EA, K, KHF); Acholi Mts. [probably Upper Talanga], 1900 m., on rocks at edge of grassland, 9.2.1948, *Jackson* 254 (FHO); Bushbuck Hill, 2200 m., upland forest with *Podocarpus latifolius, Olea capensis* subsp. *hochstetteri* and *Syzygium guineense* subsp. *afromontanum,* at edge of forest, 16.2.1982, *Friis & Vollesen* 907 (C, K, KHF).

Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1800 m., edge of old high forest, 17.5.1972, *Synnott* 986 (EA, MHU).

General habitat range: in lowland, medium-altitude and montane moist woodland, moist grassland and forest margins. According to SOMMERLATTE 1990 it occurs at the Imatong Mountains as a dominant shrub or small tree in *Vernonia* thicket.

General distribution: Guinée to Ethiopia and Kenya, south to South Africa (Transvaal, Natal).

Vernonia perrottetii Sch. Bip. ex Walp.
FTA 3: 272 (1877); FS: 276 (1929); FPS 3: 57 (1956); FWTA 2: 281 (1963); WICKENS 1976: 139; JEFFREY 1988: 243; UKWF: 201 (1994).

Imatong Mountains group, Sudan side: 3 km. south of Torit (4° 23' N, 32° 36' E), 650 m., abandoned fields, 13.12.1983, *Kielland-Lund* 314 (C, K, NLH); Kinyeti Valley, Hiliu, near compound, 700 m., open sandy soil, 3.12.1983, *Kielland-Lund* 197 (C, NLH).

Imatong Mountains group, Uganda side: 5 km. east of Lututuru rest house, 1500 m., shallow soil over rock, 19.7.1974, *Katende* 2196 (EA, MHU).

General habitat range: in lowland and medium-altitude woodland and wooded grassland.

General distribution: Senegal to Sudan, south to Angola, Zambia and Malawi.

Vernonia pumila Kotschy & Peyr.
FTA 3: 292 (1877); FS: 278 (1929); FPS 3: 61

(1956); FWTA 2: 282 (1963); JEFFREY 1988: 241; UKWF: 201 (1994).
Imatong Mountains group, Sudan side: Kinyeti Valley, 18 km. north of Katire, 750 m., woodland with *Combretum collinum, C. molle, Annona senegalensis,* etc., 18.3.1982, *Friis & Vollesen* 1246 (BR, C, K, KHF).
General habitat range: in lowland woodland, especially in sandy or rocky soil.
General distribution: Senegal to Sudan, south to Uganda and Kenya.

Vernonia purpurea Sch. Bip. ex Walp.
FTA 3: 281 (1877); FS: 276 (1929); FPNA 2: 439 (1947); FPS 3: 59 (1956); FWTA 2: 280 (1963); WICKENS 1976: 139; JEFFREY 1988: 227; FZ 6,1: 109 (1992); UKWF: 203 (1994).
Syn.: *Vernonia inulifolia* Steud.: FS: 277 (1929); FPS 3: 61 (1956). *Vernonia duemmeri* S. Moore.
Imatong Mountains group, Sudan side: Palotaka, 1200 m., open woodland, 25.1.1979, *Shigeta* 115 (EA); near Hiliu, 660 m., old cultivations, 8.1.1984, *Kielland-Lund* 607 (K); Kinyeti Valley, Hiliu, 500 m. east of compound (4° 17' N, 32° 39' E), no alt., in cultivation, 7.1.1984, *Kielland-Lund* 607 (C, NLH); near Lotelele village west of Katire, 900 m., wooded grassland, 23.8.1957, *Jackson* 3803 (K); Gilo, at bridge on Ngairigi River, 1800 m., *Loudetia arundinacea* grassland with scattered trees, 13.11.1980, *Friis & Vollesen* 191 (C); Gilo to Itibol, 1900 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* forest edge, 11.11.1980, *Friis & Vollesen* 138 (C, K, KHF); Mt. Itibol, 1950 m., 14.6.1939, *Andrews* 1963 (K).
Imatong Mountains group, Uganda side: Lututuru, no alt., 5.6.1963, *Kertland* s.n. (MHU); 4 km. south-east of Lomwaga, no alt., tall-grass grassland with scattered trees, 18.7.1974, *Katende* 2144 (MHU).
General habitat range: in medium-altitude and montane grassland and woodland.
General distribution: Senegal to Ethiopia, south to Zambia, Malawi and Mozambique.

Vernonia schweinfurthii Oliv. & Hiern
FTA 3: 285 (1877); FS: 277 (1929); FPNA 2: 450 (1947); FPS 3: 60 (1956); JEFFREY 1988: 228; UKWF: 203 (1994).
Imatong Mountains group, Uganda side: 3 km. south-west of Lututuru, near Patika, 1600 m., scrub along road, 17.2.1969, *Lye* 2039 (MHU).
Lafit, Dongotona and Nangeya Mountains: Nangeya Mts., Mt. Lonyili, 1990 m., montane grassland, 4.1960, *Wilson* 985 (EA).
General habitat range: in medium-altitude and montane grassland and bushland.
General distribution: Ivory Coast to Sudan, south to Angola, Zambia and Malawi.

Vernonia smithiana Less.
FTA 3: 276 (1877); FS: 276 (1929); FPNA 2: 450 (1947); FPS 3: 58 (1956); FWTA 2: 282 (1963); JEFFREY 1988: 223; UKWF: 202 (1994).
Imatong Mountains group, Sudan side: Kinyeti Valley, 16 km. north of Katire, 900 m., woodland with *Combretum collinum, C. molle* and *Annona senegalensis,* 22.2.1982, *Friis & Vollesen* 990 (BR, C, EA, K, KHF); Kinyeti Valley, above Katire, along road to Gilo, at the turn off to Itibol, 1650 m., wooded grassland with *Combretum molle, Cussonia arborea, Stereospermum kunthianum, Erythrina abyssinica, Entada abyssinica,* etc., 7.3.1982, *Friis & Vollesen* 1118 (BR, C, EA, K, KHF); Mt. Baghanj, 1830-2130 m., 13.6.1939, *Andrews* 1920 (K); lower southern slope of Mt. Konoro, 2300 m., *Loudetia arundinacea* grassland on shallow soil, recently burnt, 18.2.1982, *Friis & Vollesen* 951 (BR, C, K, KHF).
Imatong Mountains group, Uganda side: without further locality, no alt., 1943, *Purseglove* 1432 (EA); Langia, 1830 m., grassland, 1943, *Purseglove* 1391 (EA); Aringa river, upper waterhead, 2740 m., 7.4.1945, *Greenway & Hummel* 7311 (EA); near summit of Mt. Lomwaga, 2440 m., 1963, *Morrison* s.n. (MHU); 2 km. north-east of Lututuru, near end of road, 1800 m., grassland, 17.2.1969, *Lye* 2068 (MHU).
Lafit, Dongotona and Nangeya Mountains: Nan-

geya Mts., Mt. Lonyili, 1830 m., montane grassland, 4.1960, *Wilson* 889 (EA).
Didinga Mountains: slope of Mt. Lotuke, 2000 m., in *Protea* grassland, 30.3.1950, *Jackson* 1352 (BM).
General habitat range: in lowland and medium-altitude woodland and wooded grassland.
General distribution: Guinée and Mali to South Sudan, south to Angola and Tanzania.

Vernonia syringifolia O. Hoffm.
FPS 3: 57 (1956) {Imatong Mountains, Loyaru}; JEFFREY 1988: 217; EL AMIN 1990: 420 {Imatong Mountains, Loyaru}; FZ 6,1: 78 (1992); UKWF: 202 (1994); KTSL: 569 (1994).
Imatong Mountains group, Sudan side: Mt. Loyaru, 2320 m., edge of forest, 29.12.1935, *Thomas* 1782 (BM, K).
General habitat range: in medium-altitude and montane forest, especially along margins.
General distribution: East Congo [previously Zaire] to South Sudan, Uganda and West Kenya, south to Tanzania, Zambia, and Malawi.

Vernonia theophrastifolia Schweinf. ex Oliv. & Hiern
FTA 3: 294 (1877); FS: 278 (1929); FPS 3: 62 (1956); FWTA 2: 279 (1963); JEFFREY 1988: 218; UKWF: 200 (1994); KTSL: 569 (1994).
Syn.: *Vernonia richardiana* (Kuntze.) Pichi Serm.: FPS 3: 62 (1956) {Imatong Mountains}; FWTA 2: 279 (1963). *Vernonia seretii* De Wild. [*Vernonia myriocephala* A. Rich. (1847), non DC. (1836): FTA 3: 296 (1877); FPNA 2: 443 (1947)].
Imatong Mountains group, Sudan side: Laboni, 1160 m., dry grassland on outcrop, 21.12.1935, *Thomas* 1736 (BM, K); Palotaka, 1200 m., open woodland, 9.1.1979, *Shigeta* 74 (EA); Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 8.12.1980, *Friis & Vollesen* 771 (C, K, KHF); 30 km. south of Hiliu along Katire road, no alt., 26.12.1983, *Kielland-Lund* 459 (C, NLH); lower southern slope of Mt. Konoro, 2100 m., *Loudetia* grassland in area protected from fire at forest edge, 18.2.1982, *Friis & Vollesen* 953 (C, K, KHF).
General habitat range: in medium-altitude and montane woodland and wooded grassland.
General distribution: Nigeria to Ethiopia and West Kenya, south to Congo [previously Zaire].

Vernonia thomsoniana Oliv. & Hiern. ex Oliv.
FTA 3: 295 (1877); FS: 278 (1929); FPS 3: 62 (1956); FWTA 2: 277 (1963); JEFFREY 1988: 217; EL AMIN 1990: 420; FZ 6,1: 83 (1992).
Imatong Mountains group, Sudan side: Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with rocky outcrops, 8.12.1980, *Friis & Vollesen* 775 (BR, C, K, KHF); Kinyeti Valley, above Katire, near Lofoha forest ranger post, 1400 m., wooded grassland with *Combretum molle, Cussonia arborea, Stereospermum kunthianum, Erythrina abyssinica, Entada abyssinica,* etc., grass cover with *Hyparrhenia spp.* and *Pennisetum purpureum,* 21.3.1982, *Friis & Vollesen* 1270 (BR, C, K, KHF).
General habitat range: in lowland and medium-altitude grassland and woodland and along forest margins.
General distribution: Guinée to Ethiopia, south to Angola, Zambia, Zimbabwe, Malawi and Mozambique.

Vernonia turbinata Oliv. & Hiern
FTA 3: 271 (1877); FS: 275 (1929); FPNA 2: 446 (1947); JEFFREY 1988: 222; UKWF: 202 (1994).
Imatong Mountains group, Sudan side: Talanga, 950 m., neglected *Cedrela* plantation with regenerating mixed woodland of *Combretum collinum, Stereospermum kunthianum, Acacia hockii* and *Albizia grandibracteata* on ground with

rocky outcrops, 29.11.1980, *Friis & Vollesen* 541 (BR, C, K, KHF).
Didinga Hills: Chukudum Regional District Centre (4° 14' N, 33° 29' E), 1100 m., 16.12. 1983, *Kielland-Lund* 335 (C, NLH).
General habitat range: in lowland and medium-altitude woodland and wooded grassland.
General distribution: South Sudan and Ethiopia to East Congo [previously Zaire], Uganda and Kenya.

Vernonia wollastonii S. Moore
JEFFREY 1988: 224; FZ 6,1: 80 (1992); UKWF: 202 (1994); KTSL: 570 (1994).
Imatong Mountains group, Sudan side: Gilo, 1800 m., upland rain forest with *Albizia, Macaranga, Croton,* and *Ocotea,* 15.11.1980, *Friis & Vollesen* 237 (BR, C, EA, K, KHF); Gilo, 1800 m., upland rain forest, 19.2.1982, *Friis & Vollesen* 958 (BR, C, K, KHF); Gilo, 1900 m., *Podocarpus latifolius-Olea capensis* forest, 10.1948, *Jackson* 420 (BM).
General habitat range: in medium-altitude and montane grassland, evergreen bushland and along forest margins.
General distribution: East Congo [previously Zaire] to Ethiopia and West Kenya, south to South Africa (Transvaal, Natal).

Vernonia sp.
Didinga Mountains: Naligede, 1770 m., 21.4.1939, *Myers* 10,984 (?K, not traced).

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