

# By whom and when was the flora of Ethiopia and Eritrea named?

IB FRIIS & SUE EDWARDS

FRIIS, I. & EDWARDS, S. 2001. By whom and when was the flora of Ethiopia and Eritrea named? *Biol. Skr.* **54**: 103-136. ISSN 0366-3612. ISBN 87-7876-246-4.

Over 300 botanists have during the last 218 years named over 2700 taxa of flowering plants based on material from Ethiopia and Eritrea. The record of these in the Index Kewensis on CD-ROM forms an easily analysed sample, which documents the history of scientific study of the Ethiopian and Eritrean flora. This is supported by the available written accounts for the Flora. Characteristic features of that history are an early start and a massive early contribution by A. Richard ("Tentamen Florae Abyssinicae"; 1847-51), based on the collections of the ill-fated Quartin-Dillon and Petit, and on the extensive collections made by G.H.W. Schimper. The widely distributed Schimper material also encouraged studies elsewhere in Europe. Later in the 19<sup>th</sup> century, and in the first decades of the 20<sup>th</sup>, British, German and Italian contributions were strong, partly based on new collections. The founding of the National Herbarium for Ethiopia in Addis Ababa in 1958, and the beginning of the Ethiopian Flora Project in 1980 mark the entrance of Ethiopian and Eritrean scientists on the scene, together with other African and Asian botanists. There has been good correlation between collecting activity and naming of new taxa, particularly where the duplicates from collections are well distributed.

*Ib Friis, Botanical Museum and Library, University of Copenhagen, Gothersgade 130, DK-1123 Copenhagen, K, Denmark. E-mail: ibf@bot.ku.dk*

*Sue Edwards, Ethiopian Flora Project, National Herbarium of Ethiopia, Addis Ababa University, P.O. Box 3434, Addis Ababa, Ethiopia. E-mail: sustain@telecom.net.et*

## Introduction

The two co-authors are involved with the editorial process of producing the *Flora of Ethiopia and Eritrea* (FEE). Thus they have frequently discussed matters relating to the naming of plants from the Flora area. Who were the botanists behind the scientific names in the Flora? Sorting out the scientific names based on material from the Flora area is a special responsibility of the Flora project, as such names need to be well documented in the

printed volumes. So focussing for a while on the botanists rather than the plants is not really drifting away from the subject of a *Flora of Ethiopia and Eritrea* Symposium.

International scientific knowledge of the plants from the Flora area started with the works of Linné f. (Linné 1781) and James Bruce (1790, 1804). The history up to 1800 has been sorted out by Hulton *et al.* (1991), preliminary reviews of the work of Schimper and Richard were available (Gillett 1972; Stearn

1982), and some observations on the names proposed by Hochstetter and adopted by A. Richard have also been published (Friis 1993). Many older authorities have been dealt with in the second edition of "Taxonomic Literature" (Stafleu & Cowan 1976-1988), and most of the newer ones have been at least mentioned in the index of author abbreviations by Brummitt & Powell (1992). The main source of information is the second edition of Index Kewensis (IK) on CD-ROM, 2. Ed. (Index Kewensis 1997) that could be searched for certain types of data. The result is a sequence of 9 tables with names of more than 300 people who have named over 2700 plants based on material from the Flora area. These people are arranged into groups, which serve to illustrate the activities with the study of the flora of Ethiopia and Eritrea in various geographical areas, and during different historical periods. In connection with that, we have tried to extract information about the available herbarium material from the lists of collectors compiled by Cufodontis (1962) and Friis. Cufodontis attempted to cover the period up to *c.* 1960, while Friis has attempted to complete Cufodontis' list and cover the period after 1960. Friis' list is maintained in electronic form in Copenhagen, but was given a limited distribution on paper as Friis (1981a). An extract of the information relating to collectors after 1962 is enclosed here as an Appendix entitled *List of Collectors and their Collections since 1960*.

#### Materials and methods; sources of error

We originally attempted to compile a critical list of names based on material collected from the Flora area found in the published volumes of FEE, supplemented by data from Cufodontis (1953-1972) and the IK on CD-ROM, which contains all records published up to June 1996.

The first aim was to produce a searchable database from which various information could be extracted. However, this exercise turned out to be too time-consuming to be finished in time for the Symposium.

Almost all data for this paper have, therefore, been extracted from the IK on CD-ROM. It is easy, but sometimes slightly tricky, to do searches for taxa described from particular parts of the world by specified authorities in this version of the IK. The ease of use is improved by the inclusion of the file used for the production of a standard set of author abbreviations (Brummitt & Powell 1992). However, the IK file and the Brummitt & Powell file often do not correspond with regard to author abbreviations, making exact identification of certain authors difficult. We have used combined searches for truncated names of authorities in the "Author" field and a sequence of truncated place-names in the field marked "Anywhere". Unfortunately, one cannot make a search with Boolean operators in the "Notes" field where the geographical information is placed. After experimentation, we decided to use the following truncated geographical names in the searches: "Abys\* or Galla\* or Eth\* or Aethiop\* or Erit\* or Eryt\*" This combination found most taxa from the Flora area in genera where we knew exactly which taxa should be found. Some of the truncated geographical terms, especially "Aethiop\*", "Galla\*" and "Eryt\*" have been commonly used in generic names, epithets and book-titles. When these key terms were used for searches "Anywhere", we retrieve a large number of unwanted records of plant names or literature references, such as all species names published under *Erythraea*, *Erythrina* and *Erythroxyllum*. The output has, therefore, always had to be inspected and sorted manually.

There are also considerable problems with the precise locality of taxa described from the eastern part of the Flora area (BA and HA).



Taxa described from these areas can under Notes in the older volumes of IK be stated to come from "Somaliland", "Afr. Trop.", "Reg. Somal", or some other similar geographical indication. This has meant checking, as far as possible, the exact location of the collection. Cufodontis (1953-1972) is no help until after 1964, as, up to that date, he used the geographical system from the Italian occupation where most of the Ogaden was placed together with southern Italian Somaliland. But even if one consults the original place of publication, there can be difficulties. The names based on types collected by Robecchi-Bricchetti from the region "Merehan" are an example of this; Merehan spans the modern border between Ethiopia and Somalia, and is an area where a nomadic group of that name moves. If there was any doubt, the record has been omitted from this review.

Changing the rules of botanical nomenclature is another complication. The original volumes of the IK and its Supplements 1-3 follow the special "Kew rules" of botanical nomenclature. Therefore searches of the CD-ROM IK produce results that are sometimes incorrect with regard to modern nomenclature. Thus, too many records represent the early authors, because some of these records in fact represent new combinations rather than new taxa. Until 1970, the IK did not record infraspecific taxa; thus these are not represented in this review. Another problem in the early volumes of the IK is that *nomina nuda* are frequently recorded as published names. We have also encountered the complication that cultivated plants described from the Flora area (grasses, Leguminosae, etc.) do not always have an indication of their origin in the original volumes and early supplements of the IK.

These sources of error tend to balance each other; some, especially the Kew rule, increase the number of records for a particular author, while other sources of error tend to decrease

the figure. We hope that authors of taxa from the FEE area who see these tables will forgive us if we have not picked up all their taxa. The purpose of this paper is to point out some general trends, not to provide a work of reference where one can look up the production of individual authors. This can only be done when a database, as described earlier, has been made.

A complication in identifying the nationality of the people who named plants from the Flora area is that the concept of nationality in the 18<sup>th</sup> and 19<sup>th</sup> centuries was not identical with the present as the states, particularly in Central Europe, were very different from the present ones. So we can say little of nationalities, but the tables show the best national affiliation that the authors of this paper can give. Where authors have not been mentioned by Stafleu & Cowan (1976-1988) or Brummitt & Powell (1992), we have consulted Barnhart (1965), or occasionally, but only where other sources were inadequate, we have gone to obituaries etc., cited in these works.

### Names based on Ethiopian and Eritrean material

The latest version of our list of names based on material from the Flora area contains over 2700 entries. These names were proposed by over 300 authors, based on the list extracted from IK on CD-ROM and printed copies of FEE. These figures will almost certainly not agree exactly if compared carefully, but they are in our opinion a reasonable estimate.

The names are found in 129 families, but are unevenly represented among them. The family with most such names is the Poaceae with 357 names, followed by the Asteraceae with 284 names, Fabaceae with 228 names, Lamiaceae with 113, and Cyperaceae and Euphorbiaceae, each with 102 names. Orchidaceae, Asclepiadaceae, Acanthaceae, Rubiaceae, Scrophulariaceae and Convolvulaceae follow closely with

between 40 and 100 names; 15 more families have between 20 and 40 names, 19 families have between 20 and 10 names, 66 families have 2-10 names, and 15 have only one name established on material from the Flora area.

*Early contacts between Ethiopia and Europe; the results of James Bruce's and Luigi Balugani's journey*

International scientific studies of plants began early in Ethiopia and Eritrea when compared with other parts of tropical Africa. The first names proposed for plants of the Flora area were based on material collected by Bruce and Balugani who arrived in Mitsiwa on 19 September 1769. They reached Gonder on 14 February 1770 where Balugani died in late 1770 or early 1771. Bruce left western Ethiopia for the Sudan in March 1772.

This early start into a scientific study of the plants of the Flora area is not surprising considering the early contacts there had been between this ancient Christian kingdom and Europe. Firstly, there has been a long and strong tradition, including written records, for using a wide variety of cultivated and wild plants for herbal medicine in Ethiopia and Eritrea, as there has been in Europe (see a number of essays in Mercier & Marchal 1992). Secondly, the contact between Eritrea and Ethiopia, and the Mediterranean part of Europe and the Middle East has existed for a very long time. It is interesting to note that there are records of an Ethiopian mission of about 30 people to Western Europe in 1306 (R.A Skelton in Crawford 1958: 212-215). This mission visited the important centres of Avignon, Genoa and Rome, but unfortunately we know very little for certain about this mission, only that it stayed for some months in Genoa. Shortly before 1524 Alessandro Zorzi of Venice compiled a work on the itineraries between Alexandria and Ethiopia, as well as itineraries within Ethiopia (Crawford 1958); the sources

of these itineraries were chiefly Ethiopian monks in Italy. The visits of Ethiopian orthodox clergy to Rome continued in the seventeenth century. In 1649 the German scholar Job Ludolf met at the church of Santo Stefano dei Mori in Rome the Ethiopian monk Abba Gregory from the monastery of Mekane Selassie in the Amhara Region of Ethiopia. Until 1652 they worked together in Rome and Germany publishing works on Ethiopian language and history (Ullendorf 1960).

Thus, by the beginning of the 18<sup>th</sup> century, Ethiopians and Europeans had definitely much better knowledge of each other's countries and religion than was the case with most other parts of Africa. But the systematic knowledge of natural history was limited. In this respect, Bruce's and Balugani's journey in Ethiopia was breaking new ground, providing the first possibilities for applying the new comparative Linnaean methods, and provide the plants with scientific names according to the Linnaean rules for nomenclature. The material which Bruce and Balugani collected in Ethiopia, and which Bruce subsequently brought back to Europe, resulted in a significant number of taxa from the Flora area being described by 18<sup>th</sup> century Linnaean botanists. Table 1 summarises the results: 19 botanists from Austria, Britain, France, German states, Italian states, Russia, Sweden and Switzerland published 39 species on the rather limited material of seeds and bulbs given to botanical gardens in southern and western Europe and the drawings published in Bruce's "Travels". Altogether Bruce and Balugani had recorded 160 plant species from their journey in drawings and notes, most of those from Eritrea and Ethiopia. However, the largest part of these 160 species did not come to the knowledge of scientists because Bruce did not give access to the original drawings in his possession: Hulton *et al.* (1991) only identified these drawings in the 1980s.



**Table 1.** Botanists and the number of plants they named based on material from the FEE region brought to Europe by J. Bruce (Hulton *et al.* 1991). Years of birth and death of the botanists have been indicated where known; otherwise the year(s) when the botanist published name(s) for plants from the FEE-region is given between rules.

Botanist (dates)	Number of names
J.F. Gmelin (1748-1804)	12
J.N.J. Jacquin (1727-1817)	4
C.L. L'Héritier (1746-1800)	4
C. Linné filius (1741-1783)	2
A.P. De Candolle (1778-1841)	2
J. Bruce (1730-1794)	2
A. Murray (-1805-) <sup>1</sup>	1
W. Aiton (1731-1793)	1
N.A. Desveaux (1784-1856)	1 <sup>2</sup>
G. Picci[v]oli (-1818) <sup>3</sup>	1
G. Schweinfurth (1836-1925)	1 <sup>4</sup>
J.F. Miller (1715-1794)	1
J.B. Lamarck (1744-1829)	1
J.A. Murray (1740-1791)	1
J.L.M. Poiret (1755-1804)	1
C.L. Willdenow (1765-1812)	1 var. name
A. Zuccagni (1754-1807)	1
G.F. Hoffmann (1761-1826)	1
J.A. Schultes (1773-1831)	1

1. The editor of the 2nd and 3rd editions of James Bruce's Travels; apparently not identical with any of the people named A. Murray by Barnhart (1965).
2. This is *Bauhinia farek*, a name demonstrated by Thulin (1990) to be based on a fake.
3. This is the author of *Panciatia purpurea* Picc. (*Cadia purpurea* (Picc.) Ait); not to be confused with the more well known A. Piccioli, curator of the Florence Botanical Garden and stated by Stafleu & Cowan (1976-1988) to have lived 1741-1842.
4. This is *Erythrina brucei*, demonstrated by Gillett (1962a) to have been confused with *Erythrina abyssinica* by Balugani when he drew a plate with flowers and fruits of the two species.

By contrast, the flora of inland East Africa (Uganda, Kenya and Tanzania) was not studied scientifically for another 100 years. Gillett (1962b) characterised the period of botanical exploration in East Africa between 1860 and 1888 as "the Heroic Period". According to Mendonça (1962), very little scientific material was collected in Angola before F. Welwitsch arrived in 1853. White (1962) mentions the collections made by J. Kirk on Livingstone's Zambezi expedition in 1858-1863 as the first substantial botanical collecting in Zambia. Keay (1962) has pointed out that, apart from Michel Adanson's collections from Senegal, very little was known about the rich West African flora before Palisot de Beauvois (1803-1820) and Schumacher (1827), and intensive collecting activities began much later. Thus Bruce's material from the Flora area had a much wider impact that might be expected from the size of the sample.

#### *Botanical work before the Tentamen Florae Abyssinicae*

The next botanical collections that left Ethiopia and Eritrea for Europe were those made by Henry Salt in 1804-1806 and 1809-1810. These small collections were given to the British Museum (now in the herbarium of the Natural History Museum, London), and were studied by Robert Brown, who published them as a list of *nomina nuda* (Salt 1814). Other authors later took up some of these names.

The next collector in the Flora area was the German naturalist Eduard Rüppell who travelled in Ethiopia in 1832-1833; his collections were studied by J.B.G.W. Fresenius at the Senckenberg Institution in Frankfurt am Main, Germany, where the small collection can still be found (Fresenius 1836-1839). The study resulted in the description of 50 new taxa from the Flora area (Table 2).

Shortly after, in early 1837, Wilhelm Georg Schimper entered Ethiopia. Schimper came

**Table 2.** Botanists from various European countries and the number of plants they named from the FEE-area working before or contemporarily with the *Tentamen Florae Abyssinicae* (period ending 1847-1851). Due to the sources of error mentioned in the chapter “Materials and methods; sources of error” the list of people and the new names they have proposed is not to be regarded as complete.

Botanist (dates)	Number of names	Botanist (dates)	Number of names
A. Richard (1794-1852)	1018	P.K.N.S. Turczaninow (1796-1863)	3
J.B.G.W. Fresenius (1808-1866)	50	C.A. Meyer (1795-1855)	3
T.F.L. Nees (1776-1858)	32	F.E.L. Fischer (1782-1854)	3
H.G. Reichenbach (f.) (1824-1889)	25	C.V. Naudin (1815-1899)	3
A.P. De Candolle (1778-1841)	25	R. Brown (1773-1858)	2 <sup>6</sup>
W.G. Walpers (1816-1856)	25	M.F. Dunal (1789-1856)	2
C.G. Ehrenberg (1801-1849)	25 <sup>5</sup>	E.A. Regel (1815-1892)	2
A.R. Delile (1778-1850)	24	J. Lindley (1799-1865)	2
P.E. Boissier (1810-1885)	13	S.F.L. Endlicher (1804-1849)	2
H.F. Jaubert (with Spach) (1798-1874)	12	F.W. Sieber (1789-1844)	2
E. Spach (1801-1879)	12	H.W. Schott (1794-1865)	2
A. Braun (1805-1877)	10	K.L. Blume (1796-1862)	2
F.A.W. Miquel (1811-1871)	10	O.K. Berg (1815-1866)	2
K.S. Kunth (1788-1850)	9	J.F. Klotzsch (1805-1860)	2
C.B. Trinius (1778-1844)	9	F.G.C. Alefeld (1820-1872)	1
J.D. Choisy (1799-1859)	8	C.A.F. Garcke (1819-1904)	1
F.J. Ruprecht (1814-1870)	8	H.C. Andrews (1794-1830)	1
P.B. Webb (1793-1854)	7	A. Courbon (-1862-) <sup>7</sup>	1
A.L.P.P. De Candolle (1806-1893)	5	E. Fenzl (1808-1879)	1
K. Sprengel (1766-1833)	5	A.A. Bunge (1803-1890)	1
A.T. Brongniart (1801-1876)	5	E.H.F. Meyer (1791-1858)	1
H.A. Weddell (1819-1877)	5	G.H.A. Scheele (1808-1864)	1
C.H.B.A Moquin-Tandon (1804-1863)	5	O.N. Hammar (1821-1875)	1
T. Kotschy (1813-1866)	4	J.L. Schönlein (1793-1864)	1
E. Fournier (1834-1884)	4	G. Savi (1769-1844)	1
J. Müller Argoviensis (1828-1896)	3	K.F.W. Wallroth (1792-1857)	1
		R. Visiani (1800-1878)	1
		R.L. Desfontaine (1750-1833)	1

5. Most of C.G. Ehrenberg's names for Eritrean or Ethiopian plants are *nomina nuda*.

6. Nearly all Robert Brown's names for Eritrean or Ethiopian plants, based on the collections by H. Salt 1805-1810, are *nomina nuda*.

7. According to Barnhart (1965) born 1829; year of death not ascertainable according to our sources.



from the small German State of Baden, situated on the east bank of the upper River Rhine and in the valley of the River Neckar. The West Bank of the River Rhine belongs to Alsace in France. Baden is now part of the Baden-Württemberg Land, a constituent state of modern Germany.

The Schimper family produced several famous botanists, and was closely associated with the state of Baden and surroundings (one became a botanist and geologist in Strasbourg in Alsace, a second a botanist in Basle in the nearby part of Switzerland and a third a botanist in Munich and Mannheim). The Ethiopian Schimper seems to have been close to his contemporary cousin, the bryologist and geologist Wilhelm Phillip Schimper, who lived in Alsace and became director of the Strasbourg Natural History Museum and professor at the University of Strasbourg.

After arriving in Ethiopia, Schimper soon settled at Adua, at that time the capital of Tigre, which was ruled by Dejazmach Wube Haile Mariam. Schimper had since 1831 worked as a collector for the Esslinger Reiseverein ("The Esslingen Travel Society"), a botanical society that sent out travellers to collect scientific material for its members and for exchange. Esslingen is a small town on the Neckar River just south-east of Stuttgart. The Esslinger Reiseverein, founded in 1825 and active to 1842, was led by Christian Ferdinand Hochstetter, vicar and professor at the teachers' training college in Esslingen, and Ernst Gottlieb Steudel, medical doctor in the same town. The main activities of the Esslinger Reiseverein seems to have been to send Schimper to remote places, first to Algeria, Egypt and Arabia, and from 1837 to Ethiopia, where he was in fact going to spend the rest of his life. He made collections with many duplicates, first for the Esslinger Reiseverein, and after its dissolution in 1842 for Rudolf Friedrich Hohenacker in Esslingen, who also organised

distribution and exchange of specimens. As a result, the early Schimper collections were widely distributed to scientific institutions and learned amateur botanists throughout Europe. Also seeds from Ethiopia were distributed in that way, and Schimper's original collections, or specimens made from plants grown from seeds he had sent, can now be found in more than 60 different herbaria (Hettie Vegter 1986).

Hochstetter and Steudel published a considerable number of scientific names based on Schimper's collections. Quite a few of these names, but not all, were *nomina nuda* validated by others (Friis 1993). Most of these validations, but again not all, were made by A. Richard in *Tentamen Florae Abyssinicae*. Apart from Richard, who is dealt with in the next section, 54 botanists proposed 479 names. Schimper had collected the type material of most of these new names.

The list in Table 2 shows how widely distributed the duplicates from Schimper's collections were. Among the botanists are people from Austria, Britain, France, a number of German states, the Netherlands, a number of Italian states, Russia, Sweden and Switzerland. The country of residence and nationality can be confusing: P.B. Webb and H.A. Weddell were both born in England but spent most of their working life in Paris. Ruprecht was of German extraction, born in Prague, and spent his working life in St. Petersburg, Russia.

Table 2 includes names based on other collectors' material including that of Rochét d'Hericourt who collected in central Ethiopia in 1842-1844 and 1850. Other collectors were d'Arnaud, Ferret & Galinier, and Roth, who collected in 1841-1842, and Plowden, who collected in 1848. These collections are not very widespread, many of them being unicates in British or French herbaria, chiefly the Museum d'Histoire Naturelle, Paris (P), and the Natural History Museum, London (BM).

*Tentamen Florae Abyssinicae*

In 1838 the French government sent a group of scientist to Ethiopia. The group consisted of the naval officer Théophile Lefebvre, and the naturalists Richard Quartin-Dillon and Antoine Petit, and had, as many other groups or individuals from big European countries, been given a political as well as a scientific role to play (Rubenson 1976: 84-92). Especially Lefebvre negotiated with Ethiopian authorities on behalf of France. It is notable that there is overlap between the collecting localities of Schimper, Quartin-Dillon and Petit during the following five years, during which they all frequently stayed at Adua. The exact relationship between Schimper and Quartin-Dillon and Petit in Ethiopia is not known to us, but it is hard to avoid thinking like Gillett (pers. comm.) that the French botanists would have been shown round by the pro-French and more experienced traveller Schimper.

Both the two French naturalists met an unfortunate end in Ethiopia. Quartin-Dillon died of illness 1840, and a crocodile in the Tacazze River drowned Petit in 1843. However, their collections of approximately 1500 plants reached the Museum d'Histoire Naturelle (P) in Paris; very few of these collections have duplicates elsewhere. Richard commemorated the work of the French collectors by dedicating the *Tentamen* to their memory. In all he provided descriptions for 1018 taxa, some of which had already appeared as *nomina nuda*. A comparison between the tables 1-9 shows clearly that this was the largest single contribution to names for the plants from Ethiopia and Eritrea, the second highest being Chiovenda's 268 names (Table 6). The result of Richard's work with the *Tentamen* is the well-known combinations of authorities: "Hochst. ex A. Rich." for 369 species; "Steud. ex A. Rich." for 67 species and "Schultz-Bip. ex A. Rich." for 51 species names. Richard described in the introduction to *Tentamen* how he tried to adopt the

*nomina nuda* of Hochstetter and Steudel, but he took no notice of names on material distributed later than with the Esslingen Reiseverein's third series of Schimper's *exsiccata*. Undoubtedly, the *Tentamen Florae Abyssinicae* represents the largest single contribution to our stock of scientific names for the *Flora of Ethiopia and Eritrea*.

Although Schimper plays an important part also in the next section, it seems appropriate to continue with the description of his activities in Ethiopia here. Fairly early during his stay in Ethiopia, he became mixed up in Ethiopian and European politics (Rubenson 1976). The travellers from the larger European countries at that time had almost all a side activity in trying to further the interest of their country, while the Ethiopian rulers had interests in securing arms and support against their immediate enemies, chiefly the expanding influence of Egypt along the Red Sea. The Ethiopians were not naive, and did not immediately believe that the Europeans came just because of scientific interests. Rubenson (1976) quotes a story about how Dejazmach Wube Haile Mariam, the ruler of Tigre, wanted to have Quartin-Dillon and Petit questioned in order to check their knowledge of medicinal herbs when they arrived in 1838 under the pretence of being naturalists! Schimper married a daughter of Dejazmach Wube, probably in 1841. During the years 1841-1855 Schimper was given the responsibility by his father-in-law for the administration of the district of Entitcho, northeast of Adua.

In 1845 Schimper was deeply involved in negotiations which Dejazmach Wube had with the French government for an agreement to deliver arms against concessions to the French, and he assisted (and influenced) correspondence which Dejazmach Wube had with France. Although Schimper came from a small German state, he seems to have felt so close to France that he supported links with that coun-



**Table 3.** Mostly German botanists mainly of the “Engler period” (c. 1875-1925) and the number of plants they named from the FEE-area. Due to the sources of error mentioned in the chapter “Materials and methods; sources of error” the list of people and the new names they have proposed is not to be regarded as complete.

Botanist (dates)	Number of names	Botanist (dates)	Number of names
A. Engler (1844-1930)	91	L.A.T. Radlkofer (1829-1927)	3
G. Schweinfurth (1836-1925)	79	K.F.A.H. Wolff (1866-1929)	3
G.C.W. Vatke (1849-1889)	43	J.R. Perkins (1853-1933)	3
J.O. Böckeler (1803-1899)	26	P. Rohrbach (1846-1871)	3
F.A. Pax (1858-1942)	21	A. Berger (1871-1931)	3
O. Kuntze (1843-1907)	21	F.E. Wimmer (1881-1961)	2
O. Penzig (1856-1929)	21	F.W. Klatt (1825-1987)	2
H.L.F. Solms-Laubach (1842-1915)	18	R. Muschler (1883-1957)	2 <sup>9</sup>
K.M. Schumann (1851-1904)	15	A. Brand (1863-1930)	2
E.G. Gilg (1867-1933)	13	C.G.O. Drude (1852-1933)	2
E. Hackel (1850-1926)	10	H.G. Hallier (Hall. f.) (1868-1932)	2
R.L.A.M. Gürke (1854-1911)	9	G.W.J. Mildbraed (1879-1954)	1
C.L.U. Dammer (1860-1920)	8	J.C. Huber (1830-1913)	1
O.E. Ulbrich (1879-1952)	8	R.E. Kunze (1838-1919)	1
P.H.W. Taubert (1862-1897)	7	O. Warburg (1859-1938)	1
F.W.L. Kränzlin (1847-1934)	6	W.G.B.A. Brehmer (1883-?) <sup>10</sup>	1
K. von Pölnitz (1896-1945)	6	W.O.E. Ruhland (1878-1960)	1
P.F. Ascherson (1834-1913)	5	F.A.G. Bitter (1873-1927)	1
H.A.T. Harms (1870-1942)	5	F. Markgraf (1897-1987)	1
C. Gilg-Benedict (-1915-) <sup>8</sup>	5	K.A.O. Hoffmann (1853-1909)	1
J.F. Brandt (1802-1879)	4	F.K.J. Vaupel (1876-1927)	1
J.C. Hasskarl (1811-1894)	3	H.A.R. Grisebach (1814-1879)	1
L.E.T. Loesener (1865-1941)	3	H. Dammann (-1892-) <sup>11</sup>	1
F.R. Schlechter (1872-1925)	3	E.F. Knoblauch (1864-1936)	1
P.E.O.W. Knuth (1854-1899)	3	K. Lewin (-1922-) <sup>12</sup>	2
K. Hoffmann (1802-1883)	3	O.E. Schulz (1874-1936)	1
G. Lindau (1866-1923)	3		

8. Charlotte Gilg-Benedict, for many years assistant to E.G. Gilg and joint author (Gilg & Benedict) of many species in Capparaceae, later Gilg's wife as Gilg-Benedict.

9. Only two of R. Muschler's names are recorded as representing Eritrean or Ethiopian plants if the methods defined in this paper are used; for a more in-depth discussion, see Ryding (2001).

10. Barnhart (1965) indicates only year of birth.

11. Name mentioned without further information by Barnhart (1965).

12. According to Barnhart (1965) K. Lewin was born in Berlin in 1892, but there is no mentioning of him among Berlin botanists. Year of death is not ascertainable. He was author of a large paper on *Haplocarpha* and *Arctotis* (Asteraceae) in 1922, but the paper does not contain any biographical information.

try. Had closer connections with France been established, it would have counterbalanced the pressure from Egypt. However, the French government decided not to follow the proposals through. Schimper did not collect much during this time. His political and administrative duties probably restricted his possibilities for travelling and plant collecting. Gillett (1972) has, however, recorded plant collecting activities by Schimper in 1842, 1847-1848 and 1850. In 1855, his father-in-law, Dejazmach Wube, was killed in a battle with Ras Tewodros, who later became emperor. In February of the same year, Schimper's house in Adua was looted and his specimens and manuscripts were destroyed. Tewodros ordered that he should be confined to the surroundings of Adua, and not be allowed to travel or collect in other areas. Specimens exist from the Adua region for the years 1856, 1861, 1862, and 1863. Most of these specimens went to the Botanical Museum in Berlin (B), where the original set of most of these collections, including many types, was held. Unfortunately many of these were destroyed in the Second World War and the duplicates that were distributed often had very scanty labels. A certain Captain Pullen brought an original set of some of the collections from this period to England; most of these plants are at Kew. In 1868, Schimper was imprisoned at Tewodros' fortification at Magdala together with other Europeans. He was released in that same year by the British expedition led by Napier. An original set of specimens went to the Natural History Museum, London (BM), in gratitude for his release. There is no record of collecting activity by Schimper after 1868. He died at Adua in 1878. Many duplicates and perhaps also first sets of his collections were stored at the Natural History Museum in Strasbourg, where they were destroyed by the bombardment of Strasbourg in 1870.

The great diffusion of Schimper material collected from both Ethiopia and Eritrea

became widely available to almost anyone interested. Botanists carrying out taxonomic revisions of broader groups would have had Schimper material available, and a large number of specialist studies were carried out.

#### *German botanists of the Engler period*

As described above, Schimper continued to collect until 1863 and sent collections to Berlin, London and Strasbourg at least until that date. Many of these later collections were used in Berlin for the description of new taxa (Table 3), for example in A. Engler's *Hochgebirgsflora* (Engler 1892). However, material from other collectors was also received at Berlin. Throughout the Engler-period there was a small number of other German (or German speaking) collectors who visited northern and central Ethiopia as well as the Harar region (Harege). The best known of these collectors are H. Steudner, who collected in northern Ethiopia and Eritrea in 1861-1862, G. Rohlf's & A. Stecker, who collected in years 1880-1883, J.M. Hildebrandt, who collected in 1872, G. Schweinfurth, who collected, especially in Eritrea and in the border area between Sudan and Ethiopia, in the years 1863-1866, and again in 1891-1894. Kammel von Hardegger & P. Paulitschke, who were in eastern Ethiopia in 1884-1885, were Austrian, and their collections are only in Vienna. A. Keller was Swiss and took part in the big game hunting expedition of the Italian Count Ruspoli in 1891; Keller's collections are at Zurich with very few duplicates found elsewhere.

The most important German field work, apart from Schweinfurth's, was the trips to southern Ethiopia by H. Ellenbeck in 1900-1901, O. Neumann in 1900-1901 and F. von Rosen in 1905-1906. F.J. Bieber, who went to Kefa in 1904-1905, was an Austrian envoy and his collections, which are unicates, are in Vienna where Cufodontis (1948) as the first studied them nearly 50 years later. Kew has



some duplicates of Steudner's collections, but only the collections of Schweinfurth were much distributed to institutions outside Berlin: Index Herbariorum reports 20 herbaria holding his collections (Hettie Vegter 1986). Later in the period the collections made by a number of Italian collectors were studied by German botanists, especially collections from eastern Ethiopia, such as the plants from the trips made by Robecchi-Bricchetti in 1888-1889 and 1891 and Ruspoli & Riva in 1892-1893 in Harar and Sidamo. Collections from royal or noble big-game hunting expeditions also entered the Berlin herbarium. Schweinfurth, for example, identified the collections made by the Romanian princes D. & N. Ghika-Comanesti in eastern Ethiopia and Somalia during the years 1895-1896, and the Ruspoli & Riva expedition was also a big game expedition.

A special problem is presented by a number of new names proposed and validated by L. Buscalioni and R. Muschler said to be collected by the Duchess Helene of Aosta. The types of these names are stated to come from localities in modern Tanzania, Zambia and Zimbabwe, but in fact the descriptions of at least some of these taxa are based on material collected by Schweinfurth in Eritrea (Ryding 2001).

At Berlin there was a group of botanists interested in floristics, systematics and plant geography. Africa, South America and the Pacific were important areas of interest, as can be seen from the series *Die Vegetation der Erde*, of which 5 volumes are dedicated to Africa. The flora of Ethiopia was just one of many interests. Engler was the leading exponent of this school; he was from 1889 to 1921 the director of the Berlin Botanical Garden. Not surprisingly, he was also the most productive in the naming of material from the Flora area with a production of 91 names.

Schweinfurth was a private botanist associated with the Berlin Botanical Garden; he was the only herbarium botanist who also did field

**Table 4.** Mostly British botanists associated with the Flora of Tropical Africa-period (1868-1932), or at least the period before the Flora of Tropical East Africa, and the number of plants they named from the FEE-area. Due to the sources of error mentioned in the chapter "Materials and methods; sources of error" the list of people and the new names they have proposed is not to be regarded as complete.

Botanist (dates)	Number of names
G. Bentham (1800-1884)	61
J.G. Baker (1834-1920)	41
N.E. Brown (1849-1934)	30
C.B. Clarke (1832-1906)	21
D. Oliver (1830-1916)	20
J.D. Hooker (1817-1911)	18
O. Stapf (1857-1933)	16
W.P. Hiern (1839-1925)	15
T. Anderson (1832-1870)	10
E.G. Baker (1864-1949)	9
J. Hutchinson (1884-1972)	7
H.N. Ridley (1855-1956)	6
M.T. Masters (1833-1907)	3
A.B. Rendle (1865-1938)	3
S. Moore (1850-1931)	3
C.H. Wright (1864-1941)	3
H.B. Christian (1871-1950)	3
J. Britten (1846-1924)	2
C.E. Hubbard (1900-1980)	2
T.A. Sprague (1877-1958)	2
M. Ashby (1923-)	1

work in the Flora area and had a dedicated personal interest in northeastern tropical Africa. Table 3 shows that 54 German botanists named 483 plants from the Flora area. There are some slight complications with nationality: The only information we have traced about K. Lewin is that he was born in Berlin and published in Berlin, but is not mentioned among the Berlin botanists; we have therefore considered him

German. J. Perkins was an American lady, but she was a student of the Engler-school and worked in Germany; she is therefore listed under German botanists. Penzig was a German, who became an Italian citizen and was for many years professor and director of the Botanical Garden at Genoa; he is, a bit arbitrarily, counted here.

*Flora of Tropical Africa and associated British publications*

The major work dealt with in this section is the *Flora of Tropical Africa* (1868-1937). The editor of the first three volumes of this work (FTA) was D. Oliver, followed by W. T. Thiselton Dyer, D. Prain, and A. W. Hill. Several taxa based on material collected in the Flora area were first described in FTA or in papers associated with it, see Table 4. This Flora was part of the series of "colonial floras" to be published by the Royal Botanic Gardens, Kew. However, there were rather few British collectors who went to Eritrea and Ethiopia; most British collecting was a side product of other activities in Ethiopia. The collections, which W.C. Plowden made from northern Ethiopia in 1848-1860, were a side product of his activities as a British Consul in Ethiopia. The collections, which Capt. M.S. Welby made in eastern and southern Ethiopia in 1894 and in 1898-1899, were a side product of his big game hunting. The same was the case with the collections made by F.L. and W.D. James and J.G. Thrupp in Harerge in 1885, and the collections of Lord Delamere made in eastern and southern Ethiopia in 1896-1897. A surprisingly large number of the previously undescribed taxa from Ethiopia and Eritrea in the FTA were still based on the material from Schimper and other collectors from the middle of the 19<sup>th</sup> century.

The number of new names based on material from Eritrea and Ethiopia described in the early volumes of the FTA is slightly smaller than the contemporary output from Berlin: 21

botanists named 276 plants. Not all were born British: Stapf lived in Austria until 1890, when the Royal Botanic Gardens, Kew, employed him. An important factor behind the lower British level of activity was that the British focused their interest elsewhere in Africa. An example can illustrate this: Spencer Moore is a well known authority in a number of families of African plants, but his species are mainly described from East Africa, the *Flora Zambesiaca* area, or what is currently the *Flora of Somalia* area.

*The period 1860-1940 elsewhere with the exception of Italy*

The interest in the Flora area outside the German countries and Britain was rather limited in this period, especially when compared with the previous period. Table 5 lists 21 continental European, but non-German botanists who named 96 plants. The list of national affiliations is rather mixed, including Belgian, Danish, Dutch, French, Swedish, Swiss and Russian botanists. The Schimper collections seem to have dried out as a source of undescribed taxa, and the new German and Italian collections were not nearly as widespread as the Schimper material.

Even after the beginning of the 20<sup>th</sup> century there was still limited interest in the Flora area in botanical centres outside Europe. An American collector, E.A. Mearns, passed through Ethiopia with the Th. Roosevelt expedition to hunt big game. The rather few collections are, as far as we know, at the Smithsonian Institution in Washington DC. An American traveller, A. Donaldson-Smith, travelled through eastern and southern Ethiopia in 1894-1895 and brought back material from southern Ethiopia, but this was worked on at the British Museum in London. E.B. Babcock and E.E. Sherff, both American monographers of large genera of composites, published 5 names in this period. The only other American botanist active on Ethiopia was Perkins, who worked in Berlin.



**Table 5.** Botanists from various European countries outside Britain, Germany and Italy, and the number of plants they named from the FEE-area in the period 1860-1940. Due to the sources of error mentioned in the chapter "Materials and methods; sources of error" the list of people and the new names they have proposed is not to be regarded as complete.

Botanist (dates)	Number of names
H. Schinz (1858-1941)	13 (nearly all with Th. Durand)
Th. Durand (1855-1912)	11 (all with H. Schinz)
C.E.B. Bremekamp (1888-1984)	10
M. Gandoger (1850-1926)	10
C.A. Cogniaux (1841-1916)	9
J.I. Briquet (1870-1931)	5
R.E. Fries (1876-1966)	5
R.H. Chodat (1865-1934)	4
H.E. Baillon (1827-1895)	4
C. Sacleux (1856-1943)	3
T.C.E. Fries (1886-1930)	3
P.E.L. van Tieghem (1839-1914)	3
S.S. Murbeck (1859-1946)	3
C.E. Gustafsson (1868-1939)	3
J.E. Planchon (1823-1888)	3
B.P.G. Hochreutiner (1873-1959)	1
P. Aellen (1896-1973)	1 sp. & 1 var. name
C. von Friesen (-1933-) <sup>13</sup>	1
A. Thellung (1881-1928)	1
E. Warming (1841-1924)	1
A.I. Malzev (1879-1948)	1

13. Not mentioned by Barnhart (1965).

### *Italian interests and collections*

With the annexation of Venice in 1866 and of papal Rome in 1870, Italy had united into one nation under a constitutional monarchy. At the same time the new nation began to take an

interest in establishing colonies. In 1869, the Italian government purchased the Red Sea town of Assab to be used as a port and in 1885, the government occupied the harbour of Massawa. Then in 1889, the Italian government and the new emperor of Ethiopia, Menelik II, acknowledging the Italian possessions along the Red Sea, signed the treaty of Uchali. Shortly after, the Italian Red Sea possessions were proclaimed the Colony of Eritrea from 1 January 1890. However, already in March 1890, Italy broke the treaty and invaded Ethiopia, but was defeated by Menelik II at Adua. At the subsequent peace treaty *status quo* was confirmed. The Italian botanical studies were part of this political development. At the Colonial Botanical Institute in Rome an attempt was made to write a *Flora della Colonia Eritrea* (Pirota 1903-1908). It is notable at those early days of women's admission to the world of science that four of the six botanists contributing to this work were women: Dr. Riccarda Almagia, Dr. Beatrice Armari, Dr. Eva Boselli, and Dr. Ernesta di Capua.

The first Italian botanical collectors that came into Ethiopia were O. Antinori and V. Ragazzi who were directors of the Italian Geographical Research Station based near Ankober in Shewa: Antinori collected from 1876 to 1882 and Ragazzi from 1884 to 1890). L. Traversi travelled with Nakari and Antonelli in the Rift Valley region in 1885-1888 (Nakari was apparently Finnish by birth, but nothing more is known about him). L. Robecchi-Bricchetti travelled in eastern Ethiopia in 1888-1889 and 1891, G. Ostini travelled with E. Chiovenda in Gonder and Gojam in 1908, G. Negri travelled partly with E. Chiovenda in central Shewa and Arsi in 1909-1910 and L. Buscalioni chiefly in Gojam, Shewa and Harar in 1916. A much longer list, although with some overlap, can be enumerated for Italian collectors in Eritrea. A very prolific example is A. Pappi who collected throughout Eritrea in

1892 and between 1902 and 1934. After the Italian fascist government had occupied Ethiopia in 1936, over 30 botanical collectors studied the flora. In southern Ethiopia, in what the Italians called “Galla-Sidama”, the Italian field work was sometimes organised in large, multidisciplinary field trips with lorries, camps and porters. The result of this intensive collecting activity was preserved in a limited number of herbaria in Italy, including the Colonial Institute in Rome and the Colonial Botanical Garden in Palermo. Now, the Italian collections from Ethiopia, Eritrea and Somalia are almost all found in two institutions in Florence, the Erbario Tropicale (FT) and the Museo Botanico (FI), while some specimens remain in the herbaria of the botanical garden of Palermo (PAL), Catania (CAT), Bologna (BOLO), Turin (TO) and Modena (MOD). Very few of the collections have duplicates distributed outside Italy. A notable exception is the more widely distributed material of R.E.G. Pichi-Sermolli.

As can be seen in Table 6, 16 Italian botanists have named 470 plants. However, E. Chiovenda proposed more than half of these names and there is, therefore, no doubt that he is by far the most prolific Italian authority for taxa described from Ethiopia and Eritrea. Unfortunately, some of his work was done hastily. Moreover, he was too isolated from his botanical colleagues in other countries, as can be seen from a number of cases where he described species in wrong families (de Wilde 1968; Friis 1981b, 1985a, 1985b, 1987, 2001; Friis & Vollesen 1980; Vollesen 1985).

This list in Table 6 contains almost exclusively botanists of Italian origin. However, G. Cufodontis was born of Greek parents in Trieste, and he spent the last half of his life in Austria working in Vienna. He kept his keen interest in the flora of the Horn of Africa and produced the impressive *Enumeratio Plantarum Aethiopiae Spermatophyta* (Cufodontis 1953-

**Table 6.** Mostly Italian botanists and the number of plants they named from the FEE-area mainly before the Second World War. Due to the sources of error mentioned in the chapter “Materials and methods; sources of error” the list of people and the new names they have proposed is not to be regarded as complete.

Botanist (dates)	Number of names
E. Chiovenda (1871-1941)	268
G. Cufodontis (1896-1974)	74
R.E.G. Pichi-Sermolli (1912-)	31
D. Lanza (1868-1940)	23
A. Fiori (1865-1950)	23
U. Martelli (1860-1934)	18
G.E. Mattei (1865-1943)	12
O. Beccari (1843-1920)	6
A. Todaro (1818-1892)	4
A. Terraciano (1861-1914)	2
F. Parlatore (1816-1877)	2
G. Lusina (1893-1963)	2
B. Armari (-1904) <sup>14</sup>	1
E di Capua (-1904-) <sup>15</sup>	2
C. Avetta (1861-1941)	1
R. Pirotta (1853-1936)	1
T. Caruel (1830-1898)	1

14. This is Beatrice Armari, author of a number of families in *Flora della Colonia Eritrea*, and not mentioned in Barnhart (1965).

15. This is Ernesta di Capua, author of a number of families in *Flora della Colonia Eritrea*, and not mentioned in Barnhart (1965). According to the IK on CD-ROM there are no taxa described by Riccarda Almagia and Eva Boselli.

1972). He also named new taxa based on modern collections made by German collectors from Gojam, Sidamo and Arsi (Cufodontis 1958a, 1958b, 1960, 1962, 1965, 1966 and 1969).

Penzig, who was professor at Genoa, is listed under German botanists of the Engler period.

There is no doubt that the table underestim-



ates the production of infraspecific names by Italian botanists, as can be seen from the *Enumeratio*.

### *The beginning of the Flora of Tropical East Africa*

According to the Foreword to the *Flora of Tropical East Africa* (Turrill & Milne-Redhead 1952), the project to prepare this Flora stemmed from meetings almost immediately after the Second World War, when a committee recommended that a Flora of Uganda, Kenya and Tanzania should be prepared at the Royal Botanic Gardens, Kew. To this should be connected an expansion of collecting activities in East Africa and the building of a new wing to the Coryndon Museum in Nairobi, now the East African Herbarium (EA), part of the National Museums of Kenya. The botanists engaged in the writing of the Flora of Tropical East Africa had no immediate responsibility for the flora in Ethiopia and Eritrea, but since many of the taxa that occur in the Flora of Tropical East Africa area were first described from Ethiopia and Eritrea, there was some common interest. One of these sources of common interest was the boundary commission demarcating the borders between British Somaliland and Ethiopia in 1931-1933 (Gillett 1941), and another commission demarcating the border between Kenya and Ethiopia in 1952-1953.

The new group of British botanists was almost entirely based at Kew, spending extended periods collecting in East Africa, and most of them appear in Table 7. Undoubtedly, the Ethiopian Flora Project would not have fared as well as is the case had there not been a much bigger flora project already based at the Royal Botanic Gardens, Kew, dealing with the more species-rich flora of a neighbouring area. Since there was no obligation comparable to that of the FTA team to describe new species from Ethiopia, the list in Table 7 is not very long: 14 British botanists named 39 plants from

**Table 7.** Mostly British botanists, who were associated with the Flora of Tropical East Africa during 1952 to 1980 and the number of plants they named from the FEE-area. Due to the sources of error mentioned in the chapter "Materials and methods; sources of error" the list of people and the new names they have proposed is not to be regarded as complete.

Botanist (dates)	Number of names
G.W. Reynolds (1895-1967)	8
E.A. Bruce (1905-1955)	6
J.B. Gillett (1911-1995)	5 sp. & infrasp. names
F.G. Davies (1944-)	3
A. Radcliffe-Smith (1938-)	1 sp. & 2 var. names
J.P.M. Brennan (1917-1985)	2
V.S. Summerhayes (1987-1974)	2
W.B. Turrill (1890-1961)	2
P.R.O. Bally (1895-1980)	1
W.D. Clayton (1926-)	1
E.W.B.H. Milne-Redhead (1906-1996)	1
G.E. Wickens (1927-)	1 var. name
R.A. Graham (1915-1958)	1
J.D. Snowdon (1886-1973)	1

the Flora area over 25 years. There was, however, a renewed interest in botanical collecting in Ethiopia and Eritrea during this period. This is first of all reflected in the collections of H.F. Mooney who founded the National Herbarium (ETH) in Addis Ababa (Mesfin Tadesse 1991). Mooney also encouraged Ethiopian collectors, e.g. Tekle H. Hagos.

### *The Flora of Ethiopia and Eritrea; the beginning of scientific botany in Ethiopia and Eritrea*

The history of the start of the Ethiopian Flora Project is given in the Preface to Volume 3 of the Flora of Ethiopia (Hedberg & Tewolde 1989). The collecting activity and the start of involvement of Ethiopian botanists are as follows.

**Table 8.** Botanists associated with the Flora of Ethiopia and Eritrea and the number of plants they named from the FEE-area up to 1996. The position of some, who has contributed both to the Flora of Tropical East Africa before 1980 and the Flora of Ethiopia and Eritrea, is of necessity somewhat arbitrary. Due to the sources of error mentioned in the chapter "Materials and methods; sources of error" the list of people and the new names they have proposed is not to be regarded as complete.

Botanist (dates)	Number of names
M.G. Gilbert (1943-)	68 sp. & infras. names
M. Thulin (1948-)	25 sp. & infras. names
K. Vollesen (1946-)	24 sp. & infras. names
S.M. Phillips (1945-)	19 sp. & infras. names
B. Verdcourt (1925-)	16 sp. & infras. names
S. Carter (1933-)	15 sp. & infras. names
R.M. Polhill (1937-)	14 sp. & infras. names
P.J. Cribb (1946-)	8 sp. & infras. names
I. Friis (1945-)	7 sp. & infras. names
A.G. Miller (1951-)	6 sp. & infras. names
P. Goldblatt (1943-)	6 sp. & infras. names
R.B. Faden (1942-)	6 sp. & infras. names
B. Jonsell (1936-)	5 sp. & infras. names
H. Riedl (1936-)	5
O. Sebald (1929-)	2 sp. & 3 var. names
S. Thomas (-1996)	5 sp. & infras. names
I. Nordal [I. Bjørnstad] (1942-)	4 sp. & infras. names
K.A. Lye (1940-)	4 sp. & infras. names
O. Ryding (1951-)	2
C. Jeffrey (1934)	3 sp. & infras. names
L.E. Kers (1931-)	2 sp. & 1 var. name

Botanist (dates)	Number of names
S. Liede (1957-)	2 sp. & 1 subsp. name
O. Hedberg (1923-)	3 infras. names
B. Stedje (1956-)	2 sp. & infras. names
J.J.F. de Wilde (1932-)	2 sp. and infras. names
M.N. Hadidi (1934-)	2 sp. & var. names
R.D. Meikle (1923-)	1 sp. & 1 var. name
B. Stannard (1944)	1
C. Grey-Wilson (1944)	1
C. Puff (1944)	1
C.M. Wilmot-Dear (1952-)	1
D. Bridson (1942-)	1
G. Moggi (1927-)	1
H.J. Venter (1938-)	1
I. Hedberg (1927-)	1
M.J.S. Sands (1938-)	1 var. name
Sebsebe Demissew (1953-)	20 sp. & infras. names
Mesfin Tadesse (1951-)	14 sp. & infras. names
Dawit Abebe (-1989-)	4
Ensermu Kelbessa (1952-)	3 sp. & infras. names
Asfaw Hunde (1940-)	2 sp. & infras. names
Getachew Aweke (1937-)	1

A number of European and American collectors, worked in the 1960s and 1970s. Following the foundation collection of Mooney, particularly large collections with duplicates associated with the National Herbarium have been made by J. Ash, M.G. Gilbert, O. Hedberg, I. Friis, K. Vollesen, M. Thulin, C. Puff, and about 15 more. There is now a long list of Ethiopian collectors of whom Ensermu Kelbessa, Getachew Aweke, Mesfin Tadesse and Sebsebe Demissew each have made over 1000 collections, mostly more. The other important col-

lections in Ethiopia are those based in Alemaya University of Agriculture (ACD). W. Burger collected in Ethiopia in 1961-1965 and he was followed by a group of Dutch botanists mainly from Wageningen. These include J.J. Bos, E. Westphal, P.C.M. Jansen, J.J.F. de Wilde, and W.J.J.O. de Wilde. Burger and the Dutch at Alemaya University encouraged the early Ethiopian collectors, Tadesse Ebba and Amare Getahun. A few other European collectors (*e.g.* A. Ambjörn who collected in Shewa 1946-1947, and H. Smeds who collected in central and



**Table 9.** Botanists not directly contributing accounts to the Flora of Ethiopia and Eritrea and the number of plants they have named from the FEE-area up to 1996. Due to the sources of error mentioned in the chapter “Materials and methods; sources of error” the list of people and the new names they have proposed is not to be regarded as complete.

Botanist (dates)	Number of names	Botanist (dates)	Number of names
J.P. Lebrun (1932-)	7	H.W. Lack (1949-)	1
M. Hedrén (1956-)	5 sp. & subsp. names	H.Y. Liu (-1989-)	1
J.O. Kokwaro (1940-)	4 sp. & infrasp. names	J. Raynal (1933-1979)	1
A. Stork (1937-)	3	J. Shah (1948-)	1
D.C.H. Plowes (-1986-)	3	J.H. Seyani (1948-)	1
E. Gamal-Eldin (1943-)	3 subsp. name	J.M. Lock (1942-)	1 subsp. name
L.E. Newton (1936-)	3	J.N. Brunken (-1977-)	1 subsp. name
N. Hepper (1929-)	3	K. Balkwill (1958-)	1
R.B. Fernandes (1916-)	2 subsp. & 1 var. name	K. Mtotomwema (-1990-)	1 subsp. name
A. Anderberg (1954-)	2	L. Boulos (1932-)	1
D. Wiens (1932-)	2	L.B. Smith (1904-)	1
E.B. Alexeev (1946-1976)	2	L.C. Leach (-1971-)	1
G.R. Michelozzi (1928-)	2 sp. & 2 var. names	M.J. Musselmann (1943-)	1
H. Scholz (1928-)	1 sp. & 1 subsp. name	M. Hjertson (1961-)	1
I.C. Hedge (1928-)	2	M.N. Chaudhri (1932-)	1
J.H. Kirkbride (1943-)	2	P. Bruyns (1957-)	1
J.R.I. Wood (1944-)	2	P. Goetghebeur (1952-)	1
O.M. Hilliard (1926-)	2	P. König (-1988-)	1
P.E. Brandham (1937-)	2	P. Vorster (1945-)	1
P.S. Masinde (-1993-)	2	P.A. Fryxell (1927-)	1
R.H. Willemse (-1979-)	2	R.K. Brummitt (1937-)	1
S. Wattimah [now S. Simiyu] (-1994)	2 var. names	R.M. Harley (1936-)	1
T. Reilly (-1995-)	2	R.M. King (1930-)	1
H. Heiniger (-1953-)	2	C.X. Furtado (1897-1980)	1
A. Gilli (1904)	1	S. Abedin (-1986-)	1 var. name
A. Lourteig (1913-)	1 subsp. name	S. Ousted (1948-)	1 subsp. name
A.J. Paton (1963-)	1	G.S. Serrato-Valenti (-1971-)	1 var. name
B. Mathew (1936-)	1	T.A. Cope (1949-)	1
C. Baden (1952-)	1 subsp. name	T.G.J. Rayner (1963-)	1
D. Field (1937-)	1	V. Marais (1929-)	1 var. name
D.R. Hunt (1938-)	1	V.P. Botchantsev (1910-1990)	1
E. Benvenuto (1947-)	1 var. name	J.A.R. Paiva (1933-)	1
F.N. Rasmussen (1948-)	1	H. Wild (1917-1982)	1
F.X. Ayobangira (-1987-)	1 var. name	R. Wilczek (1903-1984)	1
G. Wagenitz (1927-)	1 subsp. name	S.M.A. Kazmi (1926-)	1
H. Freitag (1932-)	1 subsp. name	J.H. Ross (1941-)	1
H. Robinson (1932-)	1	S.J. Mayo (1949-)	1
H.D. Schotsman (1921-)	1	U. Meve (-1994-)	1 subsp. name

southern Ethiopia 1953-1954 and again 1957-1958) have kept their specimens in their home herbaria in Europe without distributing duplicates. A preliminary survey of collectors since the beginning of the 1960s can be found in an Appendix entitled *List of Collectors and their Collections since 1960*.

The start of the Flora Project relied on European taxonomists because the Ethiopian scientists were mostly away on training. Thus, as shown in Table 8, 36 non-Ethiopian botanists named 257 plants, many of them in the 1980s. The people on the list are American, Austrian, British, Danish, Dutch, Egyptian, German, Norwegian, South African and Swedish. By 1999, there were six Ethiopian taxonomists in the National Herbarium, one associated with agricultural research in Ethiopia, and one in Asmara University. Of these, six have named 44 plants, which is 15% of all the newly described taxa which we here associate with the Flora Project. We think this is impressive.

The Flora Project is closely connected with the growth of the National Herbarium in Addis Ababa, which now has over 70,000 specimens, including a number of types for new taxa described for the Flora. The collection of types includes duplicates made by Schimper over 100 years ago.

#### *Other botanical activity in the recent years*

We have also accumulated the names of botanists who have not contributed family accounts or parts of family accounts to the Flora project, but who have named plants from the Flora area. These are listed in Table 9, which is the longest of all lists in this paper: 76 botanists have named 118 plants. These botanists include Americans, Belgians, British, Chinese, Danes, Germans, Italians, Kenyans, Malawis, Pakistanis, Portuguese, Russians, South Africans, Swedes and Swiss. There are some for whom we have been unable to detect the nationality.

Without the collecting of Mooney and the others from the 1960s onwards, this naming activity would not have been possible. In some ways the situation resembles the situation just after 1838-1850. Around that time Schimper's collections provided the new material and the flora was *Tentamen Florae Aethiopiae*. Now it is largely the scientific material collected in association with the Flora Project, and the flora is called *Flora of Ethiopia and Eritrea*.

## Conclusions

Overall, our impressions are that in the first half of the 19<sup>th</sup> century naming activities occurred in a number of British, French and German centres, with some in smaller countries like Switzerland. Then in the second half of the 19<sup>th</sup> century, naming was dominated by Britain, particularly Kew, and Germany, particularly Berlin. At the same time there was a decline in the French interest. Italian interests corresponded with the beginning of colonial interests on the Red Sea coast and were particularly strong in the first half of the 20<sup>th</sup> century. After 1950 there was a renewed British interest, partly connected with the beginning of writing of the *Flora of Tropical East Africa*, and a growing interest elsewhere, for example in Germany and several smaller European countries, especially the Netherlands and in Scandinavia. This period has also seen the emergence of scientific taxonomic botany in Ethiopia and Eritrea.

The long perspective in this development shows the importance of two types of activity for progress:

1. Active and competent field work, the collections from which are made widely available to those seriously interested in studying them, and
2. International collaboration and open contact between botanists across institutions and political borders.



Schimper became so important because he knew the country and the people, and because his material, especially the early material, became so widespread. To work in isolation, as happened increasingly in Italy towards the start of the Second World War, meant lack of mutual inspiration and constructive criticism from colleagues. The Flora Project has attempted both to support growth of science in Ethiopia and to foster friendly international collaboration. Perhaps this was due to an unrecognised lesson from the history that we have just outlined here.

## References

- Barnhart, J.H. 1965. *Biographical Notes upon Botanists. Vol. 1-3*. Hall & Co., Boston.
- Brummitt, R.K. & Powell, C.E. (eds.) 1992. *Authors of plant names*. Royal Botanic Gardens, Kew.
- Bruce, J. 1790. *Select specimens of natural history, collected in Travels to discover the source of the Nile, in Egypt, Arabia, Abyssinia and Nubia. Vol. 5*. Edinburgh.
- Bruce, J. 1804. *Select specimens of natural history, collected in Travels to discover the source of the Nile, in Egypt, Arabia, Abyssinia and Nubia. 2. Ed. by Alexander Murray. Vol. 9 & 10*. Edinburgh.
- Clayton, W.D. 1974. The logarithmic distribution of Angiosperm families. *Kew Bull.* **29**: 271-279.
- Crawford, O.G.S. 1958. *Ethiopian Itineraries, circa 1400-1524, including those collected by Alessandro Zorzi at Venice in the Years 1519-24*. Hakluyt Society, Second Series, No. CIX, Cambridge.
- Cufodontis, G. 1948. Die botanischen Ergebnisse von Fr. J. Bieber's Reisen in Aethiopien. *Berichte Oesterr. Akad. Wiss., Mat.-Nat. Kl., Abth. I*, **156**: 461-498.
- Cufodontis, G. 1953-1972. *Enumeratio plantarum Aethiopiae. Spermatophyta*. Jardin botanique national de Belgique. [Originally published as an independently paginated appendix to *Bull. Jard. Bot. Brux., Bull. Jard. Bot. Nat. Belg.*, but reissued in two volumes.]
- Cufodontis, G. 1962. A preliminary contribution to the knowledge of botanical exploration of northeastern tropical Africa. In: Fernandes, A. (ed.), *Comptes Rendus de la IV<sup>e</sup> Réunion Plénière de l'Association pour l'Étude Taxonomique de la Flore d'Afrique Tropicale (Lisbonne et Coïmbre, 16-23 septembre, 1960)*. Lisboa. Pp. 233-248.
- de Wilde, J.J.F.E. 1968. A revision of the species of *Trichilia* P. Browne (Meliaceae) on the African continent. *Meded. Landbouwhoogeschool Wageningen* **68-2**: 1-207.
- Engler, A. 1892. Über die Hochgebirgsflora des tropischen Afrika. *Abh. k. preuss. Akad. Wiss. Berlin* **1891**.
- Fresenius, J.B.G.W. 1836-1839. Beiträge zur Flora von Abyssinien. *Mus. Senckenberg.* **2(1)**: 103-168, 1836, **2(3)**: 267-286, 1837, **3(1)**: 61-78 (1839).
- Friis, I. 1981a. *Botanical collectors in Ethiopia*. Univ. of Copenhagen, cyclostyled.
- Friis, I. 1981b. Notes on Somalian Sapindaceae. *Kew Bull.* **36**: 139-141.
- Friis, I. 1985a. The identity of E. Chiovenda's Somalian Sapotaceae. *Kew Bull.* **40**: 395-398.
- Friis, I. 1985b. *Garcinia buxifolia* Chiov. is *Buxus hildebrandtii* Baill. (Buxaceae). *Nordic Journ. Bot.* **4**: 747-748
- Friis, I. 1987. The identity of Chiovenda's species of *Olea* (Oleaceae). *Kew Bull.* **42**: 586.
- Friis, I. 1993. C.F. Hochstetter's scientific names for G.W. Schimper's early collections of African plants. In: R. Ochyra & L. Stuchlik (eds.), *Botanistephane Kornasiana – Botanical Contributions presented to Jan Kornas in Celebration of his 70<sup>th</sup> birthday. Fragmenta Floristica et Geobotanica Supplementum 2, Pars I*. W. Szafer Institute of Botany, Polish Academy of Sciences, Krakow. Pp.: 183-202.
- Friis, I. 2001. The identity of *Polyscias lepidota* Chiov. (1940) – a name missing in Vol. 3 of the Flora of Ethiopia. *Biol. Skr.* **54**: 49-54.
- Friis, I. & Vollesen, K. 1980. The identity of the Ethiopian monotypic genus *Tzellemtinia* Chiov. *Bot. Notiser* **133**: 347-349.
- Gillet, J.B. 1941. The plant formations of Western British Somaliland and the Harar Province of Abyssinia. *Bull. Misc. Inf. Kew* **1941**: 37-75.
- Gillet, J.B. 1962a. The fruits and seeds of *Erythrina brucei* and the identity of *E. abyssinica*. *Kew Bull.* **15**: 425-429.
- Gillet, J.B. 1962b. The botanical exploration of the area of the F.T.E.A. In: Fernandes, A. (ed.), *Comptes Rendus de la IV<sup>e</sup> Réunion plénière de l'Association pour l'Étude taxonomique de la Flore d'Afrique tropicale. Lisbonne et Coïmbre, 16-23 septembre, 1960*. Lisboa. Pp. 205-229.
- Gillet, J.B. 1972. W.G. Schimper's botanical collecting localities in Ethiopia. *Kew Bull.* **27**: 115-128.
- Hedberg, O. & Tewolde Berhan G. Egziabher, 1989. Preface. In: Hedberg, I. & Edwards, S. (eds.), *Flora of Ethiopia. Vol. 3*. Addis Ababa, Asmara and Uppsala. Pp. ix-xiii.
- Hettie Vegter, I. 1986. *Index Herbariorum, Part II (6): Collectors*. The Hague/Boston.
- Hulton, P., Hepper, F.N. & Friis, I. 1991. *Luigi Balugani's drawings of African plants. From the collections made by James Bruce of Kinnaird on his travels to discover the Source of the Nile 1767-1773*. Yale Centre for British Art, New Haven, and Balkema, Rotterdam.
- Index Kewensis on Compact Disc*. 1997. Version 2.0 for the IBM PC. Oxford.

- Keay, R.W.J. 1962. Botanical collectors in West Africa prior to 1860. In: Fernandes, A. (ed.), *Comptes Rendus de la I<sup>ve</sup> Réunion plénière de l'Association pour l'Étude taxonomique de la Flore d'Afrique tropicale. Lisbonne et Coïmbre, 16-23 septembre, 1960*. Lisboa. Pp. 55-68.
- Linné filius, C. von 1781. *Supplementum plantarum systematis vegetabilium editionis decimae tertiae, generum plantarum editionis sextae, et specierum plantarum editionis secundae*. Brunsvigiae.
- Mendonça, F.A. 1962. Botanical collectors in Angola. In: Fernandes, A. (ed.), *Comptes Rendus de la I<sup>ve</sup> Réunion plénière de l'Association pour l'Étude taxonomique de la Flore d'Afrique tropicale. Lisbonne et Coïmbre, 16-23 septembre, 1960*. Lisboa. Pp. 111-121.
- Mercier, J. & Marchal, H. (eds.) 1992. *Le roi Salomon et les maîtres du regard. Art et médecine en Éthiopie*. Réunion des Musées Nationaux, Paris.
- Mesfin Tadesse 1991. Dr. Herbert F. Mooney, founder of the National Herbarium of Ethiopia (ETH). *Taxon* **40**: 267-272.
- Oliver, D. (ed.) 1868. *Flora of tropical Africa. Vol. 1*. L. Reeve & Co., London.
- Palisot de Beauvois, A.M.F.J. 1803-1820. *Flore d'Oware et de Bénin, en Afrique*. Paris.
- Pirotta, R. (ed.) 1903-1908. Flora della Colonia Eritrea. I. *Ann. R. Ist. Bot. Roma* **8**: 14-464.
- Richard, A. 1847-1851. *Tentamen florae Abyssinicae, seu enumeratio plantarum hucusque in plerisque Abyssiniae provinciis detectarum et praecipue a betaïis doctoribus Richardo Quartino Dillon et Antonio Petis (annis 1838-1843) lectarum. Vol. 1-2*. Athus Bertrand, Paris.
- Rubenson, S. 1976. *The Survival of Ethiopian Independence*. Addis Ababa University Press, Stockholm & Addis Ababa.
- Ryding, O. 2001. Reno Muschler and the identity of his African labiates. *Biol. Skr.* **54**: 165-172.
- Salt, H. 1814. *A voyage to Abyssinia*. F.C. & J. Revington, London.
- Schumacher, H.C.F. 1827. *Beskrivelse af Guineiske planter*. Det Kongelige Danske Videnskabernes Selskab, Kjøbenhavn. (also in *Vid. Selsk. Skr.* **3**: 21-248, 1828, and **4**: 1-236, 1829)
- Staffleu, F.A. & Cowan, R.S. 1976-1988. *Taxonomic Literature. A selective guide to botanical publications and collections with dates, commentaries and types. Vol. 1-7*. Bohn, Scheltema & Holkema, Utrecht.
- Stearn, W.T. 1982. Preface. In: A. Richard, *Tentamen Florae Abyssinicae. Facsimile edition*, Uppsala University. Uppsala.
- Thulin, M. 1990. The identity of Bruce's "Farek" (*Bauhinia farek*) – the solution of a 200 year old mystery. *Mitt. Inst. Allg. Bot. Hamburg* **23b**: 749-753.
- Turrill, W.B. & Milne-Redhead, E., 1952. Forward and Preface. In: Turrill, W.B. & Milne-Redhead, E. (eds.), *Flora of tropical East Africa*. Crown Agent, London.
- Ullendorf, E. 1960. *The Ethiopians – An introduction to the country and the people*. Oxford University Press, London.
- Vollesen, K. 1985. Studies in Burseraceae of Northeastern Africa. *Kew Bull.* **40**: 39-76.
- White, F. 1962. A history of plant collecting in Northern Rhodesia. In: Fernandes, A. (ed.), *Comptes Rendus de la I<sup>ve</sup> Réunion plénière de l'Association pour l'Étude taxonomique de la Flore d'Afrique tropicale. Lisbonne et Coïmbre, 16-23 septembre, 1960*. Lisboa. Pp. 175-203.



## Appendix: List of Collectors and their Collections since 1960

In connection with the preparation of family accounts for the Flora, and through searches in Ethiopian herbaria, the present authors have recorded names of collectors, together with information about their year(s) of collection, the floristic regions in which they collected, and the whereabouts of their collections. The information is preserved in an alphabetically arranged text file, which is being continuously updated. It is hoped that readers that have additions or corrections will contact us. We are aware that the information in this list cannot be fully correct or complete, so please help us to improve it.

The information is presented in this order: Name of collector. Nationality and employment (where known). The designation "Ethiopian students" also refers to students at Asmara University up to Eritrean independence. Floristic provinces in which the collector is known to have been active. Herbaria (abbreviations according to Index Herbariorum) in which collections are known to have been deposited. Collections made by multiple collectors are recorded and reference made to the person responsible for the numbering series. Collectors who have worked before 1960, but are not fully treated by the previous review of Ethiopian collectors by Cufodontis (1962) are included in square parentheses.

Abeba T. – Ethiopian student. 1975. GD Coll. at ETH.

Abdurahman Ab. – Ethiopian student. 1972. HA. Coll. at ACD (4 nos.).

Aberu Dagnew – Ethiopian student. 1974. HA. Coll. at ACD (48 nos.).

Abiya Eshtu – Ethiopian student. 1974. HA. Coll. at ACD, ETH.

Abraham Woubshet – Ethiopian student. 1974. Coll. at ACD (2 nos.).

[Adefris Bellehu – Ethiopian (deceased), employed at the Desert Locust Service throughout its existence, later first Director of DLCOEA (Desert Locust Control Organization East Africa) in the 1950s, 1960s and early 1970s. 1950. WU. Coll. at EA.]

Afeworki Gebrai & Mehret Abebe – Ethiopian students. 1983. EW. Coll. at ETH, Asmara.

Ahmed M. Sherif. – Ethiopian, works for Min. of Agriculture Weed Science Division. Resident collector since 1985. SU, GJ. Coll. at ACD (21 nos.), ETH.

Aklilu K. Mariam – Ethiopian student. 1961. HA. Coll. at ACD (7 nos.).

Albers, C.C. – British (?) forester. Pre 1962. Mostly SU (many cultivated plants). Coll. at K, ETH.

Alemayehu Haile – (numbers in SW. Ethiopia Forestry Inventory Series). Ethiopian forestry assistant. 1976. AR. Coll. at EA, ETH, K.

Alemu Mengistu – Ethiopian student. 1971. HA. Coll. at ACD (10 nos.).

Alemayehu, Merga & Zinna – (in SW. Ethiopia Forestry Inventory Series). Ethiopian forestry assistants. 1976. SU. Coll. at ETH, EA.

Ali Hussen – Ethiopian student. 1976. HA. Coll. at ACD (7 nos.).

Allen, J. & Hammersley, J. – British natural history students. 1972. SU, HA (Ogaden). Coll. at K, ETH.

Amanuel Boru – Ethiopian student. 1974. GJ. Coll. at ACD (1 no.).

Amare Abebe – Ethiopian student. 1974. HA. Coll. at ACD (40 nos.).

Amare Getahun – Ethiopian agricultural scientist at Alemaya Agricultural University, later with international employment. 1959 to ca. 1965. Mainly collections from HA, fewer from many other administrative regions. Coll. at ACD (more than 10,000 nos.), ETH, K. Often also distributed as from IECAMA (see this) without the collectors name, *e.g.* the K set.

[Ambjörn, I. – Swedish agronomist and botanist. 1946-1947. SU. Coll. at S, UPS.]

Amdemariam G. M. – Ethiopian student. 1965. HA. Coll. at ACD (2 nos.).

Anderberg, A. – Swedish botanist, curator at the National Swedish Museum of Natural History. 1982. IL, SU, BA. Coll. at ETH, S.

Araya Sileshi – Ethiopian student. 1965. HA. Coll. at ACD (1 no.).

[Archer, W. – British. 1950-51. WU, SU, BA, HA, GJ. 1954. GD, WG, KF. Coll. at K.]

Asfaw Hunde. with Friis *et al.* 1970; with M. Thulin 1980. Ethiopian biologist with long association with the Universities of Copenhagen and Uppsala. A.H. has used European style of name in publications.

Ash, J. (Mrs. Jonquil). – British resident artist and botanist; husband an ornithologist, employed by N.A.M.R.U. (US Navy Medical Research Unit). 1969-1977. C., W. & S. Ethiopia (at least including KF, AF, SU, WG). Coll. at EA, ETH, MO & K. Mrs. Ash has collected ca. 3600 nos. from many parts of Ethiopia.

- Aschalew Bekele – Ethiopian student. 1974. HA. Coll. at ACD (70 nos.), ETH.
- [Ashall, C. – British research entomologist, with the Desert Locust Service and with DLCOEA (Desert Locust Control Organization East Africa) for about 20 years from beginning of 1950s, later Deputy Director of COPR (Centre for Overseas Pest Research). 1956-1957. HA. Coll. at K, EA.]
- Ashebir Aselae – Ethiopian student. 1975. GD Coll. at ETH.
- Asrat Feleke – Ethiopian student. 1960. HA. Coll. at ACD (1 no.).
- [Assefa Abebe – Ethiopian, reasearch assistant with Desert Locust Service, later DLCOEA. 1959. HA. Coll. at ACD (1 no.).]
- [Assefa Bogale – Ethiopian student. 1958. HA. Coll. at ACD (9 nos.).]
- Aweke, G.: See Getachew Aweke. (Getachew Aweke has used European style of personal name usage for his earlier collections).
- Ayele Bekeru – Ethiopian student. 1974. HA. Coll. at ACD (43 nos.).
- Ayele Gebre Mariam – Ethiopian student. 1987. BA. Coll. at ETH.
- Badege Bishaw – Ethiopian student. 1986. HA. Coll. at ACD (4 nos.).
- Badege, G. – Ethiopian. 1973. Ethiopia. Coll. at ETH.
- Bally, P.R.O. – Swiss botanist residing in Kenya, particularly interested in succulent plants. [1943-1944. SU, KF, AR, SD, HA. 1949. EW, EE. 1954. HA. 1957. HA.] 1963. SD, SU. 1967. SU, HA. Coll. at EA, K.]
- [Bally, P.R.O. & Reynolds, G.W. – 1953. SD. Coll. at EA, K. Reynolds: See separate entry.]
- Barkley, F.A. – British. 1962. SU. Coll. at K.
- Barnes, C.I. – British, possibly associated with D.L.C.O.E.A. [1959-]1960. HA. Coll. at EA, FT.
- [Barnes, G. T., with H. A. L. Ferguson. – British. 1953. Ethiopia.]
- Basham, C. – British. 1960. HA. Coll. at ACD (3 nos.).
- Batt, G.R. – British, attached to the British Army Expedition Survey? 1969-1970. EE (Dahlac Ils.). Coll. at K.
- Beals, E. – American ecologist, lecturer at the university in Addis Ababa, also in charge of the National Herbarium after H.F. Mooney. 1964-1966. AF, SU, SD, WU. Coll. at ETH, FT, K.
- Bekele Sissay – Ethiopian forage specialist. 1965. HA. Coll. at ACD (11 nos.).
- Belay Shiferaw – Ethiopian student. 1981. HA. Coll. at ACD (1 no.).
- Bentsson, J. – Swedish agriculturalist attached to C.A.D.U. (Chilalo Agricultural Development Unit). 1968-1969 AR. Coll. at EA.
- [Berhane Berhe – Ethiopian student. 1958. HA. Coll. at ACD (3 nos.).]
- Berhane G. Kidan – Ethiopian student. 1965. Coll. at ACD (24 nos.).
- Berhe W. Aregay – Ethiopian student. 196?. HA. Coll. at ACD (1 no.).
- Bejene Kidane – Ethiopian student. 1974. HA. Coll. at ACD (1 no.).
- Bidgood, S. – British botanist, working at K. 1995, 1996, 1997, 1998, 2000. TU, GD, GJ, WG, KF, IL, GG, SD. Collections mainly with I. Friis (q.v.) and others. Coll. at ETH, K, BR, C, EA, FT, MO, WAG.
- Biru Abebe – Ethiopian student. 1968. HA. Coll. at ACD (1 no.).
- Bisrat Gebru – Ethiopian student. 1982. EEEW Coll. at ETH.
- Bolton, M. – British expert working for the Ethiopian Wildlife Dept. 1969-c. 1972. IL (travelled widely but made few collections). Coll. at ETH.
- Bonnefille, R. [Raymonde] – French palynologist, working on the vegetation history of East Africa. 1968, 1973. SU, GG (Omo Valley). Coll. at EA.
- Bos, J.J. – Dutch botanist, born 1939, associated with WAG, now director of the Botanical Garden of Wageningen Agricultural University. Stationed at Alemaya 1974-1975. SU, SD, AR, HA. Coll. at ACD (ca. 1400 nos.), WAG (ca. 2500 nos.).
- Boudet, G. & Rippstein, G. – French ecologists involved in rangeland survey. 1972-1973. GG, SD, BA, HA?. Coll. at ALF, K (a few). Report with restricted circulation: Boudet, G. & G. Rippstein, *Southern rangeland livestock development project. Ecological Range Survey (Ethiopia)*. A.G.R.O.T.E.C. (Rome), C.R.G. (Florence), S.E.D.S. (Paris) & I.E.M.V.T. (Maisons-Alfort). 175 pp. (1973).
- Boulos, L. – Egyptian botanist, working (in Ethiopia) at ILCA and several other places in the Middle East and Africa. 1977. WU, SU, HA. (Some coll. with Amare Getahun). Coll. at ETH, K, and the herbarium of the International Livestock Centre for Africa (ILCA) in Addis Ababa.



- Brehme, K.L. – ?Swedish or German forester. (partly in Mooney's number series, q.v.) 1961-1962. EE, KF, AR, SU. Coll. at ETH, FT, K.
- Brown, F. – British wildlife expert. 1971. GG, SD. Coll. at EA, K.
- Brummitt, R.K. – British botanist working at K. 1970. SU (a few collections from Addis Abeba Airport). Coll. at K.
- Brunt, M. – British forester, working for the Overseas Development Agency, Land Resources Division. (in SW Ethiopia Forestry Inventory) 1974. AR. Coll. at ETH, K.
- Buer, C. – American Peace Corps Volunteer working in Awash National Park and later at the Bale Mountains Nat. Park. 1967. SU Coll. (included in Balley's number series) at K.
- Burger, W.C. – American botanist, Assistant Professor at the then I.E.C.A.M.A. (now Alemaya University of Agriculture) at Harimaia between Harer and Dire Dawa (later scientist at the Field Museum, Chicago). 1961-1965. HA, KF, AF, GD, SD (early coll. made with Amare G., q.v.). Coll. at ACD (Alemaya University of Agriculture, complete set, ca. 3800 nos.), C (a few), EA (a few), ETH, FT, K (ca. 3500 nos.), US. The vast majority of Burger's collections were made within 150 km of Alemaya University of Agriculture. He published *Families of Flowering Plants in Ethiopia*, (1967).
- [Cambridge University Expedition – (field trip to the Choke Mts., GJ). 1957. GJ Coll. at K (ca. 630 nos.), ETH (a few). The botanical collectors of this expedition (all British biology students) include J.M. Evans, J.R. Flenley, R.G. Hillier, C.L.A. Leakey, J.N. Lythgoe and W.J. Balantine. They collected both independently and in various combinations under the one number series.]
- Campbell, ?. – British; associated with the Omo Valley archaeological excavations. 1967. GG Coll at EA, K.
- Carr, C. (Claudia) J. – American ethnologist attached to the Omo Valley archaeological excavations. 1967-1970. SW Ethiopia, lower Omo Valley (KF, GG). Coll. at EA, K, ETH (a few).
- Chaffey, D.R. – British forester working for the Overseas Development Administration/Ethiopian Forestry Research Institute. (in SW Ethiopia Forestry Inventory). 1974-1977. SU, AR, IL, KF, SD, BA. Coll. at ETH (nearly complete set, ca. 1000 nos.), K (nearly complete set, as ETH), EA.
- Cheke, Anthony. S. – British. 1966. KF. Coll. at K.
- Chonacki, S. – Polish art historian and ethnologist, founder of the Institute of Ethiopian Studies in Addis Ababa. (usually in Mooney's number series). 1959-1962. SU, AR, SD, EW, WU. Coll. at ETH, K.
- Coady, ... – British. ... Ethiopia. Coll. where?.
- [Colville, J.W. 1954. EW, EE. Coll. at K (ca. 110 nos.), FT. British.]
- Cooper: See Omer-Cooper.
- Corrà, M. – Ethiopian ecologist, based in France, sometimes working for the International Livestock Centre for Africa (ILCA). 1976. HA. Coll. at ETH, K, and International Livestock Centre for Africa (ILCA). Corrà uses the European style of personal names.
- [Curle, A.T. – British diplomat (ex army), resident in Addis Ababa. 1951. SU. Coll. at BM.]
- [Curle, A.T. & Schelpe, E.A.C.L. 1952. SU, AR. Coll. at BM. Schelpe was a South African botanist working at Cape Town and mainly interested in ferns.]
- Dagnachew Yirgu – Ethiopian, plant pathologist, worked with the FAO Coffee Mission under F.G. Meyer (q.v.). 1964-1965. HA. Coll. at ACD (7 nos.).
- [Damon E. G – Ethiopian student. 1959. HA, KF. Coll. at ACD (32 nos.).]
- Damtaw Teferra – Ethiopian botanical artist and editor; resident, but has moved abroad. 1984-1988. Collected with I. Friis (q.v.), M.G. Gilbert (q.v.) and S.M. Phillips (q.v.).
- [Daniel Gelata – Ethiopian student. 1958. HA. Coll. at ACD (1 no.).]
- Dawe, Janice. with C. Puff. 1982.
- Dawit Abebe – Resident collector working with medicinal plants since 1980 for Min. of Health. SU, HA, BA. Coll. at ETH.
- Demeke K – Ethiopian student. 1980. SU. Coll. at ETH.
- Demel Teketay – Ethiopian student. 1986-1988. Later Ph.D. at the Swedish University of Agricultural Sciences, Umeå, in 1996. Lecturer at Alemaya University and director of ACD. Now director of Forestry Research in EARO (Ethiopian Agricultural Research Organisation), Addis Ababa. Mainly HA. Coll. at ACD (at least 1000 nos.), some duplicates at ETH.
- Desaling Dessisa – Ethiopian student. Later project assistant. with Fantahun Simon, Tesfay Awas & Gashaw Gibre-Hiwot.
- Destà Hundessa – Ethiopian botanist and agriculturalist, worked for the Min. of Agriculture, assisted Perdue (q.v.). 1968. SU. Coll. at ETH, EA, K.

Ebba, Tadesse: See Tadessa Ebba.

Edwards, S. [Sue] – British botanist, resident in Ethiopia since 1968, collecting since 1968, often with other collectors. (Collections with numbers below 100 distributed under the name of Sue Gilbert). SU, WG, IL, BA (Bale Mts. & Gode Research Station), HA; since 1983 EE and EW. Coll. at ETH, K, UPS, C, MO, EA.

[Ellis, P.[Peggy] E. – British entomologist (retired), researcher on locust behavior at the Anti-Locust Research centre in Britain (British Colonial Office), several research trips to arid areas of Eritrea and Eastern Ethiopia. Later with COPR (Centre for Overseas Pest Research). 1953-1955. EW, HA. Coll. at K (ca. 400 nos.), FT.]

[Emanuel Boru. 1958. HA. Coll. at ACD (1 no.).]

Ensermu Kelbessa – Ethiopian botanist, lecturer at ETH. Resident, collecting from 1980, often in collaboration with others, e.g.: Ensermu K. & Tamrat Bekele (1980-1983); Ensermu K. & Zerihun Woldu (1983); Ensermu K., Tamrat Bekele, Sahle G./K. & Vishwanatan (1984); Ensermu K. (1985); Ensermu K. & Melkie Tesfa (1986); Ensermu K. & Petros E. (1987); Ensermu K., Zemedede Asfaw & Petros E. (1987); Ensermu K. (1991); Ensermu K. & Kifle Dagne (1992); Ensermu K. & Melaku W. (1995); Ensermu K., Zoe Gowler & Lemessa K. (1995); Ensermu K. & Dessalegn D. (1996); Ensermu K. & Aschalew G. (1998)) – TU, WU, GD, GJ, SU, AR, WG, IL, KF, GG, SD, BA, HA. Coll. at ETH, UPS, K (some).

Epherem Mamo – Ethiopian student. 1981. HA. Coll. at ACD (1 no.).

Erich, J. – French ecologist. 1982. SU. Coll. at ETH.

[Eriksson, J. – Swedish medical doctor and amateur botanist. 1958. KF, AR, BA, SD. Coll. at S, UPS, partly published by O. Hedberg in *Arkiv för Botanik*, Ser. 2,4 No. 13d: 421-435, (1962).]

Ermias Dagne – Ethiopian phytochemist at Addis Ababa University. Resident, collecting 1987-, often with other collectors, particularly M.G. Gilbert, Mesfin Tadesse and Sebebe Demissew. BA, SD. Coll. at ETH.

[Esplen, ..., with H.A.L. Ferguson – ?British. 1953. Regions? Coll. where?]

[Evans, J.M. & Lythgoe, J.N. In exp. Univ. Cambridge. 1957. q.v. British students of biology.]

[Evans, J.M. & Flenley, J.R. (in the number series of exp. Univ. Cambridge). 1957. GJ. Coll. at K, ETH (a few). British. Natural history students from Cambridge University.]

Fekadu Abebe – Ethiopian student. 1980. SU. Coll. at ETH.

Fekadu Kassaye – Ethiopian student. 1984. SU. Coll. at ETH.

Feleke Gezahegne ? – Ethiopian student. 1986. HA. Coll. at ETH. ?Working for Min. of Agriculture.

[Feleke Tabor – Ethiopian student. 1958. HA. Coll. at ACD (4 nos.).]

[Ferguson, H.A.L., Esplen, ... & Barnes, G.T. 1953. GD. Coll. at K (ca. 140 nos.). British.]

Fesseha Berhe – Ethiopian student. 1963. HA. Coll. at ACD (48 nos.).

Fesseha Izaz – Ethiopian student. 1960. HA. Coll. at ACD (24 nos.).

[Flenley, J.R. & Hillier, R.G. (in exp. Univ. Cambridge). 1957. GJ. Coll. at K. British. Natural history students from Cambridge University.]

Frahm-Lélieveld, J.A. – ?Dutch/Swedish. 1962. SU, KF. Coll. at WAG, K.

Frank, G. – Austrian railway engineer interested in succulent plants. 1985, 1988. SU, HA. Coll. at ETH, ?WU.

Freiw, ... 1979 SU Coll. at ETH. ?, presumably plant pathologist.

Friis, I. 1970 onwards. Danish botanist, lecturer, later professor of botany at the Botanical Museum and Library, Univ. of Copenhagen (C); frequent botanical visitor to Ethiopia and closely associated with Ethiopian Flora Project (on Editorial Board). Number series with more than 10,000 collections, mostly in teams with other collectors. – With Asfaw Hunde & Jakobsen, K. 1970. KF, IL. Coll. at C, ETH, K, BR. – With Rasmussen, F.N. & Vollesen, K. 1972-1973. Partly with Gilbert, M. G.: SU, SD Partly with Getachew Aweke: KF, IL. Coll. at C, ETH, K, BR, FT. (The 1970 and 1972-1973 collections were partly published by Friis, Rasmussen & Vollesen in *Opera Botanica* 63: 1-70 (1982)). Asfaw Hunde: Ethiopian botanist resident in Uppsala, Sweden, see separate entry. K. Jakobsen was a Danish university lecturer and botanist at Copenhagen University. F.N. Rasmussen is a Danish University lecturer and botanist at Copenhagen University. K. Vollesen: Danish/British botanist at R.B.G., Kew; see separate entry. – Friis, I., Mesfin Tadesse & Vollesen, K. 1982. SD, BA. Coll. at ETH, C, K, UPS. Mesfin Tadesse & K. Vollesen: See separate entry. – Friis, I., Zerihun Woldu & Vollesen, K. 1982. IL. Coll. at ETH, C, K, UPS. Zerihun W.: See separate entry. – Friis, I., Damtaw Teferra, Gilbert, M.G. & Vollesen, K. 1984. IL, KF, BA. Coll. at C, K, ETH, UPS. M. G. Gilbert and Damtaw Teferra: See separate entries. – Friis, I. 1986. KF, IL, EW. Coll. C, ETH, K. – Friis, I. & Lawesson, J. 1988. GD, GJ. Coll. at C, ETH, K. Lawesson is a Danish Botanist at the Biology Department, University of Aarhus. – Friis, I., Zerihun



- hun Woldu, Sebsebe Demissew & A. Michelsen. 1988. BA (Bale Mountains National Park). Coll. at C, ETH, K. [nos. 5611-5765]. Sebsebe Demissew: See separate entry. – Michelsen, A.: Danish ecologist at the Botany department, University of Copenhagen. – Friis, I., Bidgood, S., Høst, P., Melaku Wondafrash, Desalign Sessisa & Shigulte Kebede. 1995. WU, TU, GD, IL, KF. – Friis, I., Bidgood, S., Fantahun Semon, Michael Jensen & Menassie Gashaw. 1996. GJ, WG IL. – Friis, I., Tesfay Awas & Gashaw Gibre-Hiwot. 1997. IL, WG, SU. – Friis, I., Michael Jensen, Menassie Gashaw, Desalign Dessisa, Fantahun Simon, Tesfay Awas & Gashaw Gibre-Hiwot 1997. IL. – I. Friis, S. Bidgood, Malaku Wondafrash & Gashaw Gibre-Hiwot (in part with Malaku Legesse). 1997. SU, SD, GG. Coll. at C, ETH, K. – I. & V. Friis & Ensermu Kelbessa 1998. SU. Coll. at C, ETH, K. – I. & V. Friis, Sebsebe Demissew & Negist Asfaw. 1998. GD, WU, SU. Coll. at C, ETH, K. – Friis, I., Bidgood, S., Malaku Wondafrash, Amsalu Ayana & Fantahun Simon. 1998. KF, IL, WG, SU. Coll. at C, ETH, K. – Friis, I., Bidgood, S., Malaku Wondafrash & Getu Tefera 1998. SU, SD, GG. Coll. at C, ETH, K. – Friis, I., Bidgood, S., Ermias Getachew & Mulugeta Gichile. 2000. KF, IL, SU. Coll. at C, ETH, K. – Friis, I., Bidgood, S., Ermias Getachew & Malaku Wondafrash. 2000. SU, SD. Coll. at C, ETH, K.
- Fröman, B. & Persson, S. – Swedish forage agronomist and animal scientist, respectively. Produced a manual of Ethiopian grasses, Fröman & Persson, *An illustrated Guide to the Grasses of Ethiopia*. CADU, Asella. (1974). 1970-1974. AR. Coll. at K (ca. 60 nos. (mainly grasses)), EA, UPS.
- Fukui, K. & M. – Japanese primatologist & anthropologist. 1973-1976. KF (chiefly Omo River Valley). Coll. at EA, K, ETH.
- Gebrehiwet Medhanie – Eritrean botanist, lecturer at Asmara University. Resident collecting from 1996 -. EE, EW, WU. Coll. at UPS and Asmara University.
- Gelahun Abati & Zerihun Woldu – Ethiopian. 1976. WU. Coll. at ETH. Gelahun A. is a practitioner of traditional medicine who worked in ETH. 1973-1983. Zerihun W. (q.v.).
- Gelahun Abati & Tewolde Berhan Gebre Egziabher. – Ethiopian. 1973. SU. Coll. at ETH. Tewolde Berhan: see separate entry.
- Gérard, ... – ?French. 1960. SU. Coll. at FT.
- Gereau, R.E. – American botanist at MO. 1984. GG, KF (along the Omo River Valley). Coll. at ETH, K, MO.
- Getachew Aweke. Resident collector from 1972. WE, EE, GD, GJ, TU, GG (partly with Friis, Rasmussen & Vollesen, partly with M. G. Gilbert, and with H. C. D. de Wit). Coll. at ACD (209 nos.), ETH, C, K, WAG. Ethiopian botanist at ETH, now retired.
- Getachew Aweke & Weinert, E. 1980. SU. Coll. at ETH. Weinert: see separate entry.
- Getachew Berta – Ethiopian student. 1974. HA. Coll. at ACD (5 nos.).
- Getachew Teka – Ethiopian student. 1976. HA. Coll. at ACD (21 nos.).
- [Getachew Tekle Haimanot – Ethiopian student. 1959. HA. Coll. at ACD (6 nos.).]
- Getachew Zeleke – Ethiopian student. 1987. KF. Coll. at ETH.
- [Ghebre Selassie Mebratu – Ethiopian student. 1959. HA. Coll. at ACD (1 no.).]
- Gilbert, E.[Elisabeth] F. – American botanist in charge of the herbarium (ETH) 1966-1968. 1966-1968. KF, SU. Coll. at ETH, K.
- Gilbert, M.G. – British botanist, resident in Ethiopia and in charge of herbarium (ETH) 1968-1976, worked at East African Herbarium, Nairobi (EA), 1977-1982, then full-time contributor to the Flora of Ethiopia, working at Kew (K), and frequent visitor to Ethiopia until 1991, now working for MO at BM on the Flora of China project. Collections from all regions, ca. 5000 nos., often with other collectors, including S. B. Gilbert, Getachew Aweke, Gelahun Abate, Tewolde Berhan Gebre Egziabher, R. Bonnefille, T. Jefford, D. Rankin, C. I. Gilbert, K. Vollesen, Sebsebe Demissew 1986. SD, BA. Nos. 8052-8327. 1988. SD, BA. 8506-8832. 1989. SU. Nos. 9302-9308.), Ensermu Kelbessa, I. Friis, Ermias Dagne, Damtaw Teferra, S. Phillips. Coll. at ETH, K, EA, C, UPS. – Collections made with B. M. G. Jones, M. Thulin and J.J.F.E. de Wilde are each numbered separately. – Gilbert, M.G. & Jones, B.M.G. 1975. A separate series of numbers from BA, SD. Ca. 200 nos. Coll. at ETH, K. Jones, B.M.G.: British botanist. – Gilbert, M.G. & Thulin, M. 1975 (ca. 1500 nos.), 1978. SD (a few numbers only, most collections on this trip were made in Kenya). A separate series of numbers from SU, GG, WG, SD, HA. Coll. at ETH, K, UPS, EA, MO. Thulin, M.: Swedish botanist, see separate entry.
- Gilbert, S. See Edwards, S.
- Gilliland, H.G. – British/South African plant ecologist, worked sometimes with Desert Locust Service, main botanical collections from Somalia. See: Stower, W.J., Smith, K.D. & Gilliland, H.B.
- Graff, N. van der – Dutch botanist/pathologist. 1974-1975. Ethiopia. Coll. at L.
- [Greathead, D.J. – British entomologist (retired), carried out research on natural enemies of locust with ALRC (Anti-

Locust Research centre in GB), transferred to DLS (Desert Locust Survey), later DLCOEA (Desert Locust Control Organisation of East Africa). At first worked with G.B. Popov (q.v.) and W.J. Stower (q.v.). From 1962 with CIBC (Commonwealth Institute of Biological Control) and CAB (Commonwealth Agricultural Bureaux). Eventually director of IIBC (International Institute of Biological Control). 1953, 1955, 1957, 1958. 1964 (with FAO Coffee Mission under F.G. Meyer (q.v.)). 1975 (FAO mission studying insect attacks on *Olea*). GD, EW, EE. Coll. at BM, EA, ETH, K.]

Haberland, E. see Kuls *et al.*

Hagos, Teckle: See Teckle Hagos.

Hailu Mengesha [Probably identical with "Hailu M."] – Ethiopian student. 1960. GD, HA. Coll. at ACD (11 nos.).

Hailu Mirkanessa – Ethiopian student. 1974. GD, SU, HA. Coll. at ACD (13 nos.), ETH.

Hailu Yadete – Ethiopian student. 1960. HA. Coll. at ACD (13 nos.).

Hall, R.A. – British locust officer (deceased) with DLS (Desert Locust Survey), worked as assistant to G.B. Popov (q.v.). 1961. EE. Coll. at EA.

Hammersly, Jill, with J. Allen – British student. 1972. HA. Coll. ETH.

Handlos, Wayne – American Peace Corps Volunteer. 1962-1963. SU, AF. Coll. at ETH.

[Harrison, M. – British. ca. 1952. EW. Coll. at K (a few grasses). Harrison collected grasses mostly in the Sudan but one of the determination lists at K from 1952 indicates that he also collected in W Eritrea.]

Harlan, J. – American crop biologist. 1969. Collected sorghums. Coll. at Chicago, some at IBCR in Ethiopia.

Haugen, T. – Norwegian missionary. 1983-1985. SD, GG. Coll. at ETH, K (a few).

Headley, P.M. – British. Student in Oxford University exp. (q.v.). 1968. SU/AF. Coll. at K.

Hedberg, O. – Swedish botanist, professor of botany associated with UPS. European coordinator of the Ethiopian Flora Project. 1967, AR. 1973 SU, GD, BA (partly with Getachew Aweke) AR, GD. 1981 SU, WG, IL, BA. 1986 GD (Mt. Guna). Coll. at ETH, K, UPS. The 1967 collections are published by O. Hedberg in *Webbia* 26: 101-128 (1971).

Hedrén, M. Swedish botanist, at some time working at UPS, now lecturer at Lund University. 1982. SU, WG, IL, BA. Coll. at ETH, UPS.

[Hemming, C.F. – British ecologist (retired), attached to DLS (Desert Locust Survey), later D.L.C.O.E.A., travelled widely in Eritrea, Ethiopia and Somalia on vegetation surveys. 1952, 1954, 1956-1958. EE, EW, HA. Coll. at EA, K, ETH.]

Hendrickx, F.L. – Belgian. 19. SU. Coll. at BR.

Henning, E.M. – ?British. 19. SU. Coll. at K.

Hennock T. – Local medical officer. 1986 Coll. at ETH.

Hepper, F.N. – British botanist working at K. 1975. SU. Coll. at K (ca. 20 nos.).

Herbert, E.J. – British. 1962. BA. Coll. at K (ca. 80 nos.).

Hering, E.M. – British. 1959. SU. Coll. at K (ca. 140 nos.).

Hildebrandt, K. – German pharmacist resident in Ethiopia until he died ca. 1979. 1957-1970. SU. Coll. at ETH, W.

Hill, B.G. – American entomologist, lecturer at the Alemaya University of Agriculture. 1959-1960. SU, HA. Coll. at ACD (104 nos.), ETH.

[Hillier, R.G. – British natural history student. Collections in exp. Cambridge University. 1957. q.v.]

Hindorf, ... – ?German. 1970. Ethiopia. Coll. at K (ca. 45 nos.) Hindorf collected partly with Mogk (q.v.).

Hiremath, S.C. – Indian botanist. 1986-1987. Coll. at K (ca. 26 nos.) and probably elsewhere. Hiremath was interested in *Guizotia* and *Bidens* (Asteraceae), and his collections are all of these genera.

[Hodson, A.W. – British. 1923-1926. Ethiopia. Coll. at K (ca. 8 nos.).]

Hounerou, H.N. le – French ecologist, working at ILCA in Addis Ababa. 1976. HA. Coll. at ILCA (International Live-stock Centre for Africa), ETH (a few).

Hovda, ... – Norwegian missionary. 1971-1972. SU, AR, SD. Coll. at UPS.

[Huddlestone, J.A. – British research entomologist with ALRC (Anti-Locust Research Centre) in GB, travelled with P.E. Ellis and C.A. Ashall. 1955. Ethiopia. Coll. at K.]

Hundessa, Desta: See Desta Hundessa.

Hylander, K. [Kristoffer] & E. [Eva], & Adam Gobena – Swedish & Ethiopian. 1994. SU. Coll. (a few hundred) at ETH, UPS.

I.E.C.A.M.A. (this abbreviation covers a number of staff members at the then Imperial Ethiopian College of Agriculture and Mechanical Arts, often referred to as Alemaya College of Agriculture, now Alemaya University of Agriculture). 1957-1960. HA, KF. Coll. at ACD (the herbarium of



- Alemaya University of Agriculture), EA, ETH, K. Duplicates of the same collections may have been distributed under this abbreviation but also as collected by Amare Getahun (q.v.).
- Igersheim, A. with C. Puff. 1987.
- Ingersol, R. – ?British or American. 1960. HA. HA. Coll. at ACD (5 nos.).
- Jackson, J.A.D. – British forestry advisor. 1972, 1974. GG, SU/AF. Coll. at EA, K, ETH.
- [Jackson, B.R. – ?British/American. 1956. SD. Coll. at ACD (9 nos.).]
- Jago, N.D. – British research entomologist, worked with COPR (Centre for Overseas Pest Research) and later NRI (Natural resources Institute). 1975. BA. Coll. at K (ca. 30 nos.).
- Jansen, P.C.M. – Dutch botanist, born 1943, stationed 1975-79 at Alemaya; associated with WAG, in charge of the PROSEA project at the Wageningen Agricultural University. 1975-1977. SU, WG, IL, KF, GG, SD, BA, AR, HA. (partly with H.C.D. de Wit and in IL with Getachew Aweke). Coll. at ACD (ca. 3400 nos.), WAG (ca. 5000 nos.).
- Jefford, T. – British plant physiologist working at ETH. 1968-1976. SU (with M. Gilbert). Coll. at ETH.
- Jember Debelle. – Ethiopian. 1974. SD. Coll. at ETH.
- Jensen, M. – Danish ecologist. 1996-1999. WG, IL. Mostly with Menassie Gashaw (q.v.), I. Friis (q.v.) and others. Coll. at ETH, C.
- Jimma Agricultural & Technical School (now Jimma Agricultural Junior College). 1957. KF. Coll. at ETH, K.
- Jonas Z. – Ethiopian, ?on the staff of the Forestry Dept. 1978 IL. Coll. at ETH.
- Jones, B.M.G. – British botanist, working on teff breeding. 1972. BA. Coll. at ETH, K. Also collecting with M. Gilbert 1975.
- Jones, Q. – British. 1969. Ethiopia. Coll. at K, UPS.
- Joncheere, G.J. de – Dutch amateur botanist interested in ferns. 1970-1971. SU. Coll. at L, ferns in Herb. Pichi-Sermolli.
- Joseph H. Selassie – Ethiopian student. 1972. HA. Coll. at ACD (10 nos.).
- Joseph Keflemariam – Ethiopian student. ... HA. Coll. at ACD (1 no.).
- Kabwogi, I.L. – ?Nationality. 1974. HA. Coll. at ACD (69 nos.).
- Kahurananga, J. – Tanzanian botanist, working at ILCA in Addis Ababa. ca. 1979-?1984. Coll. at International Livestock Centre for Africa (ILCA), ETH (a few).
- Kaji, M. – Japanese primatologist/ ?anthropologist. 1979. GG. Coll. at ETH.
- Kakimov, ... – Russian phytopathologist. 1972, 1979 HA. Coll. at ETH.
- [Kassa W – Ethiopian student. 1957. KF. Coll. at ACD (17 nos.).]
- [Kebede Koomsa – Ethiopian student. 1958. HA. Coll. at ACD (52 nos.), ETH.]
- Kedir ... HA. Coll. at ACD (18 nos.).
- Kefale Gebre Mariam – Ethiopian student. 1979-1980. GJ, GG. Coll. at ETH.
- Kidane Georgis – Ethiopian student. 1981. HA. Coll. at ACD (1 no.).
- Kiloede, R. – ?Nationality. 1960. HA. Coll. at ACD (1 no.).
- Kibreab F. – Ethiopian student. 1964. SU. Coll. at ETH.
- Kifle H. Mariam – Ethiopian student. [1959-]1960. HA. Coll. at ACD (13 nos.).
- Kiflemariam M. – Ethiopian student. 1981. HA. Coll. at ACD (1 no.).
- Kiros ... & Abadi ... – Ethiopian. (Collections with IAR (Weed Research)). 1988. GJ. Coll. at ETH, K.
- Klingel, ... – ?German ...?Year and ?regions. Coll. where?
- Kloetzli, F. – Swiss ecologist. 1971-1973. GD (Semien Mts.). Coll. at EA, ZT.
- Kokwaro, J. – Kenyan professor of botany at Nairobi University; Ethiopian collections made while student at Alemaya College. 1965-1966. HA. Coll. at ACD (239 nos.), EA, ETH.
- Kuchar, P. – Canadian ecologist, working at South East Rangelands Project. ?1989-?1995. HA. Coll. at ETH, K, UPS and Eastern Ethiopia Herbarium.
- Kukkonen, I. – Finnish botanist, born 1926, associated with H. ?year. ?Ethiopia. Coll. at H.
- [Kuls, W. – German ethnologist. 1959-1960. GJ. Coll. at FR. Collections published in a detailed account by G. Cufodontis in *Senck. Biol.* **43**: 301-330 (1962), *Senck. Biol.* **46**: 115-120 (1965), *Senck. Biol.* **47**: 273-282 (1966) & *Senck. Biol.* **50**: 281-288 (1969). Kuls, W., Haberland, E. & Straube, H. (or any of these collectors in combination). 1954-1956. SU, SD, KF. Coll. at FR. German ethnologists. Collections published in a detailed account by G. Cufodontis in *Senck. Biol.*

- 39: 103-126, 289-314 (1958), *Senck. Biol.* **41**: 367-392 (1960), *Senck. Biol.* **43**: 273-300 (1962), *Senck. Biol.* **46**: 89-114 (1965), *Senck. Biol.* **47**: 251-271 (1966) & *Senck. Biol.* **50**: 235-280 (1969).]
- [Leakey, C.L.A. – British natural history student at Cambridge University (q.v.). (Collections in Exp. Univ. Cambridge), later tropical plant pathologist in Uganda and specialist at Cambridge. 1957. GJ. Coll. at K, ETH (a few).]
- Legesse Negash – Ethiopian student. 1976. HA. Coll. at ACD (57 nos.).
- Lemma G. Selassie – Ethiopian. Herbarium assistant at ETH. 1963-1970. WG, GJ, SU, SD, AR. Coll. at ETH.
- Lemordant, D. – French. 1961. SU. Coll. at P.
- Lewis, W.H. – American ethnobotanist. Ca. 1962. HA. Coll. at K.
- Linnavouri, R. – Finnish zoologist. 1963. EE, EW, TU, WU, SU, SD, KF, HA. Coll. (ca. 130 numbers) at H. Itinerary published in *Ann. Zool. Fennici* **8**: 340-366 (1971).
- Lisanewerk Nigatu & Mesfin Tadesse – 1986. BA (Haremma Forest). Coll. at ETH. Lisanewerk: Ethiopian botanist working at Jimma Agricultural Junior College, later at Alemaya University of Agriculture. Mesfin: see separate entry.
- Longhitano, ... – Italian engineer. 1968 SU/HA Coll. at FT.
- [Lulseged Asfaw – Ethiopian student. 1957. HA. Coll. at ACD (1 no.).]
- Lundström, G. – Swedish volunteer working at ETH. 1969-1971. SU. Coll. at EA, ETH.
- [Lythgoe, J.N. – British natural history student. Collections in exp. Cambridge University. 1957. q.v. ]
- Määttä, K. – Finnish. 1972. GD. (E. of Lake Tana). Coll. (ca. 170 numbers) at H.
- Makin, M.J. – British soil scientist working for the Overseas Development Administration. 1973. SD, GG. Coll. at K.
- Makonnen Asres – Ethiopian student. 1964. HA. Coll. at ACD (45 nos.).
- Mantell, Diana, with C. Puff. 1981.
- Masresha Fetene – Ethiopian plant ecologist and physiologist. 1976. HA. Coll. at ACD (55 nos.). Lecturer in ecology at Addis Ababa University.
- Maurel, ... – French. ?Year. HA. Coll. at P.
- Mehret Abebe – Ethiopian student. with Afewirki Gebrai (q.v.). 1983.
- [Melak H. Mengesha – Ethiopian student. Since c. 1970 in charge of gene bank at ICRISAT, India. 1955. KF. Coll. at ACD (49 nos.).]
- [McLoughlin, ... – South African army officer, mainly interested in succulent plants. 1941 HA SU Coll. at PRE, K.]
- Menassie Gashaw – Ethiopian ecologist, working with Ethiopian Wildlife Conservation Organisation. Resident, collecting 1996-1999, often with M. Jensen (q.v.), I. Friis (q.v.) and others. IL, WG. Coll. at ETH, C, K.
- Mercier, J. – French ethnobotanist frequently visiting Ethiopia. 1968 to ?1993. GD, WU, SU. Coll. at ETH, K (a few), P, UPS.
- Merga Gutetta. – Ethiopian forestry assistant. (Collections in SW Ethiopian Forestry Inventory). 1976. SD. Coll. at EA, ETH, K.
- Mersai Ejigu – Ethiopian student. 1966. HA. Coll. at ACD (10 nos.).
- Meseret Wondimu – Ethiopian plant pathologist/ecologist. 1981. HA. Coll. at ACD (1 nos.).
- Mesfin Tadesse – Ethiopian botanist, at some time keeper of the National Herbarium (ETH) and lecturer of botany at ETH. Resident collector since 1977. EW, EE, AF, WU, GD, GJ, WU, SU, WG, IL, KF, GG, SD, AR, HA. Coll. at C, EA, ETH, K, MO, S, UPS, WAG, WU. Often collections together with others: Mesfin Tadesse & Sebsebe Demissew. 1978. Mostly IL, KF, WG. – Mesfin Tadesse & Zerihun Woldu. 1978-1979. Mostly GJ, GD. – Mesfin Tadesse, Gilbert, & S. Edwards 1979. SU. – Mesfin Tadesse & Olov Hedberg or Hedberg & Mesfin Tadesse 1979/1981. mostly AR, BA, SU. – Mesfin Tadesse & J. Mercier 1980. SU. – Thulin, M., Hunde, A. & Mesfin Tadesse. 1980. Mostly BA. – Mesfin Tadesse & Kagnev 1981-1982. GD, GJ, SU, WG, IL, KF. – Friis, Vollesen & Mesfin Tadesse 1982 – mostly SD. Mesfin Tadesse & Tewolde Berhan G.E. 1982. SD. – Mesfin, Sebsebe Demissew & Ensermu Kelbessa. 1985. Mostly SD, EW, EE. – Hedberg, O. & I. & Mesfin Tadesse. 1986. GD. – Mesfin Tadesse, Puff, C., Ryding, O. 1988. Wof Washa (SU). – Mesfin Tadesse & Lisanewerk Nigatu. 1985-1987. BA, IL. – Mesfin Tadesse & Vollesen, K. 1986. SD, BA. – Mesfin Tadesse & Berhanu Abegaz. ?1990. SU. – Mesfin Tadesse & Ermias Dagne. 1991. Mostly BA. – Mesfin Tadesse, Lisanewerk Nigatu, Petros, Shukri, *et al.* (?) BA. – Mesfin Tadesse & Sebsebe Demissew 1986. EW/EE, TU. (nos. 3760-4040). – Mesfin Tadesse, Sebsebe Demissew & Ensermu Kelbessa 1985. SD (nos. 3123-3655). – Mesfin Tadesse, Sebsebe Demissew & Negist Asfaw 1989. BA. (nos. 5140, 5148, 5345). – Mesfin Tadesse, Sebsebe Demissew *et al.* 1986. EW/EE (nos. 3700-3759).



- Meyer, F.G. – American botanist at the U.S. National Arboretum, Washington, D.C., who made two field trips in Ethiopia. On the early trip Meyer collected plants for the anti-cancer screening programme, as did Perdue (q.v.). On the second trip leader of FAO (Food and Agriculture Organisation) Coffee Mission to Ethiopia in 1964. On this latter trip, he was accompanied by L.M. Fernie (British coffee breeder from Tanzania), R.L. Narasimhaswamy (Indian coffee breeder), L.C. Monaco (Brazilian plant geneticist), and the entomologist D.J. Greathead (q.v.). Ethiopian counterparts were Warku Makonnen (Ethiopian Coffee Board), Dagnatchew Yirgu (pathologist), Abebe Abeye (Ministry of Agriculture), and Yilma Yemane Berhan (Jimma Technical and Agricultural School). A report was published: Meyer, F.G. *et al.* (1968), *FAO Coffee Mission to Ethiopia 1964-65*. FAO, Rome. 200 pp. 1961-1962. WG, SU, AR, SD, KF. 1964. KF, IL. Coll. at NA, US, K.
- Mhojo, A. – ?Nationality (West African). 1972. HA. Coll. at ACD (9 nos.).
- Minta, M. – ?Nationality. 1971. SU. Coll. at ETH.
- Mogk, M. – ?American. 1969. SU. Coll. at K.
- Monod, T. – French biologist. ca. 1970. SU/AF. Coll. at P.
- Mooney, H.F. – British forester and botanist, formerly of the Indian Forest Service, and founder of the National Herbarium of Ethiopia (ETH). Published a glossary of Ethiopian plant names: Mooney, H.F. (1963), *A Glossary of Ethiopian Plant Names*. Dublin University press. 79 pp. See also Mesfin Tadesse 1991. Dr. Herbert F. Mooney, founder of the National Herbarium of Ethiopia (ETH). *Taxon* 40: 267-272. – 1953-1961 (series of expeditions). Collections from almost all parts of Ethiopia. Coll. at ACD (84 nos.), BR, ETH (most complete set), EA, FT, K (ca. 4500 nos.), WAG. Numbers above ca. 9300 are only at ETH.
- Moult, P.[Pavela] H. – ?Nationality. 1974. IL. Coll. at K (ca. 70 nos.).
- Mulosu Djote – Ethiopian student. 1963. SU. Coll. at ETH.
- Mulugeta Negassa – Ethiopian student. 1974-1976. HA. Coll. at ACD (63 nos.), ETH.
- Mulwany, P.M. – British natural history student, member of the Oxford University expedition 1968. 1968 GG. Coll. at K (ca. 160 nos.).
- Mwambene, R.O.F. – ?Nationality (East African). 1971. HA. Coll. at ACD (33 nos.).
- Nega W. ? Ethiopian student. 1979 WU Coll. at ETH.
- Nievergelt, S. – Swiss botanist. 1968-1969. GD (Simen National Park). Coll. at Z, with some duplicates at ETH.
- Nigussie Jiru – Ethiopian student. 1983. KF. Coll. at ETH. At some time Ethiopian forestry assistant.
- Nordal, I. – Norwegian; professor of botany associated with O. 1982, 1990, 1994, 1997. TU, GD, SU, SD, BA. Coll. at ETH, O [?elsewhere].
- Ogada, F. – ?Nationality (East African). 1960. HA. Coll. at ACD (37 nos.).
- Ouren, T. – Norwegian missionary. 1961. SU, AR. Coll. at BG, K.
- Padwa, G. – Kenyan. 1953. GG/Sudan. Coll. at EA, K.
- Palmer, M.C.L. – British natural history student. (Collection in Exp. Reading University). 1962. KF. Coll. at K.
- Parker, C. – British tropical weed scientist, specialising in parasitic plants. (Collections in exp. Weed Research Organization). 1969, 1970. TU, SU, AR, HA. Resident in Ethiopia from 1986, after which collections, mainly weeds, from many parts of the country. Coll. at K, IAR (Institute of Agricultural Research), ETH.
- Paskin, M. – British entomologist, associated with ALRC (Anti-Locust Research Centre) in Britain, later with COPR (Centre for Overseas Pest Research). Worked with P.E. Ellis and later on his own in Eritrea. 1961-1962. EE. Coll. at EA.
- Patti, ... – Italian.? ... KF. Coll. at FT.
- Perdue, R.E. – American economic botanist. 1964-1965. SU, AR, KF. Coll. at K (ca. 250 nos.), WAG, US (unlabelled set at ETH). Perdue collected plants for the anti-cancer screening programme as did Meyer (q.v.). The major part of the collections were made in Kenya and Tanzania.
- Persson, S., with B. Fröman. – Swedish agronomist, associated with the CADU project. 1971. See Fröman.
- Phillips, S.M. – British botanist, specialising in grasses, employed by the Ethiopian Flora Project to contribute an account of that family 1982-1994. 1989. GG Coll. at ETH, K, made with M.G. Gilbert (q.v.) and Damtew Teferra (q.v.).
- Pichi-Sermolli, R.E.G. – Italian botanist, professor of botany at various Italian universities. 1966-1967. KF. Coll. (mainly or entirely ferns) in Herb. Pichi-Sermolli.
- Piffard, F. – British. 1958. SU, WG, IL, KF. Coll. at K (c.114 nos.).
- Polunin, O. – British amateur botanist and botanical author. 1981. SU. Coll. at K (ca. 70 nos.).
- Popov, G.B. – British ecologist and entomologist (deceased), worked for the Middle East Anti-Locust Unit during World War II, later with the DLS (Desert Locust

Survey) in Somalia, on Socotra and throughout Eastern Africa, later with F.A.O. and COPR (Centre for Overseas Pest Research). 1953-1954. EE, HA. Coll. at K, EA.

Prosser, M. – British teacher in Biology Dept., Addis Abeba (then H.S.I.) University. 1963-1964. Collected with E. Beals. S Ethiopia. Coll. at ETH.

Puff, C., Mantell, D.E. & Ensermu Kelbessa 1981. AF, GD, GJ, SU, WU. Coll. at ETH, WU, K (partly), UPS (partly). Puff is an Austrian botanist working at the Univ. of Vienna (WU), frequent visitor to Ethiopia. Diana Mantell was a British Ph.D. student at the Univ. of Vienna (now Dr. Mantell-Schachenmann). Ensermu: See separate entry. -Puff, C. Tewolde Berhan G.E., Edwards, S. & Ensermu Kelbessa 1981. SU. Coll. at ETH, WU, K (partly), UPS (partly). Tewolde: See separate entry. Edwards: See separate entry. – Puff, C. & Ensermu Kelbessa 1982. IL, KF, WG, Coll. at ETH, WU, K (partly), UPS (partly). – Puff, C., Dawe, J., Edwards, S. & Ensermu Kelbessa 1982. AR, BA, HA, SU. Coll. at ETH, WU, K (partly), UPS (partly). Janice Dawe was an American Ph.D. student at the Univ. of Vienna (now at Univ. of Alaska). – Puff, C. & Ensermu Kelbessa 1982-83. BA, GG, SD, SU. Coll. at ETH, WU, K (partly), UPS (partly). – Puff, C. & Ensermu Kelbessa 1986. IL, KF. Coll. at ETH, WU, K (partly), UPS (partly). – Puff, C., Igersheim, A., Ensermu Kelbessa & Sebsebe Demissew 1987. BA, SD, SU. Coll. at ETH, WU, K (partly), UPS (partly). Igersheim was an Austrian Ph.D. student at the Univ. of Vienna (now Dr. I. and employed at the Univ. of Vienna). Sebsebe Demissew: See separate entry. – Puff, C. & Sileshi Nemomissa 1988. GG, SD. 1996-1999. GD. Coll. at ETH, WU. Sileshi was a botany student at Asmara University, now lecturer of botany at ETH. See separate entry.

Pülschen, L. – German volunteer working at Debre Zeit Agricultural Research Station. 1984-1985. SU. Coll. at ETH.

[Raeder-Roitzsch, ... – ?Nationality. (Collections partly in Mooney's number series). ca. 1958-1959. SU. Coll. at ETH.]

Rankin, D. [Dorothy] – American missionary, resident near Mezan Tefari to 1977, still teaching in Addis Abeba to ca. 1990. 1960-1977. KF. Coll. at ETH, K (18 ferns).

Reading University expedition. – ca. 1971. ... Coll. at K (ca. 110 nos.). Members: A.J.S. Crees, C.E.D. Thomas, M.C.L. Palme.

[Reynolds, G.W. – South African amateur botanist, specialist in the genus *Aloë*. ca. 1956-7. Ethiopia. Coll. (mainly *Aloë*) at K (ca. 20 nos.). Route map in G. W. Reynolds, *The Aloes of Tropical Africa and Madagascar*, Mbabane, 1966.]

Richards, M. [Mary] – British amateur botanist, resident in

East Africa, who made very extensive collections in SE tropical Africa. 1969. SU. Coll. at K. Collected in Ethiopia with Mrs. S.A. Robertson during short holiday visit.

Rippstein, G. – French ecologist. 197? SD, BA (with Boudet, G., q.v.). Coll. at ALF.

Robertson, S.A. [Mrs.] – British botanist (married to British entomologist working for the Desert Locust Control Organization of Eastern Africa). 1969-1971. EE, EW, TU, HA. Coll. at K (ca. 250 nos., but mostly from Kenya and Tanzania), ETH, EA.

Roos, D. [David] – Swedish. 1982. Ethiopia. Coll. of forestry – related specimens [several hundred] at ETH, UPS.

[Rosenius, K. – Finnish. 1954. AR, SU. Coll. (ca. 170 numbers) at H.]

Ryding, O. – Swedish botanist, trained at Uppsala University, working as university lecturer at Asmara University 1987-1990; since 1994 senior lecturer at C. 1987-90. EE EW (a few from SU WG IL KF GG SD). Coll. (ca. 1200 nos.) at ETH, Asmara, UPS, K, C (few). (A number collected with Sileshi Nemomissa, q.v., and others).

[Samuel Atnafu – Ethiopian student. 1957. HA. Coll. at ACD (48 nos.)]

Sandford, A. [Mrs.] in Ash's number series (q.v.). British, wife of R. Sandford (q.v.).

Sandford, R. – British agriculturist, born in Ethiopia, resident to ca. 1976. (Collections partly in Mooney's number series). 1959. SU. Coll. at BM, ETH.

Schelpe, E.A.C.L.E., with A. T. Curle. – South African Botanist working at Cape Town and mainly interested in orchids and ferns. 1952. Various parts of Ethiopia. Coll. at K.

Sebald, O. – German botanist at the Natural History Museum of Stuttgart. 1966. GD. 1968. GJ, SU. Coll. at ETH (some), STU (main set), M. Collections and travel accounts published by O. Sebald in *Stuttgarter Beitr. zur Naturkunde*, Nr. **194**: 1-40 (1968); *ibid.*, Nr. **206**: 1-37 (1969); *ibid.*, Nr. **222**: 1-28 (1970) *ibid.*, Nr. **236**: 1-32 (1972) & *ibid.*, Nr. **244**: 1-41 (1972).

Sebsebe Demissew – Ethiopian botanist, lecturer, later professor of botany at ETH. 1978. GJ, SU. (nos. 1-64). 1978-79. SU. (nos. 65-198). 1979. GG. (nos. 199-304). 1989-1980. SU. (nos. 305-349). 1980. GD, GJ. (nos. 350-536). 1980-1981. SU. (nos. 540-543). 1981. EW/EE, GJ, SU, SD. (nos. 551-629). 1982. GD, GJ, SU, WG, IL, SD, BA. (nos. 1002-1003, 1034-1184, 1218-1249). 1983. AR. (nos. 1261-1264, 1369-1376). 1986. GD, GJ, SU. (nos. 1677-1729, 1845-1849). 1988. BA, SU. (nos. 2064-2154). 1989. HA. (nos. 2269-2352). 1991. SU. (nos. 2929-2930, 2936-2939). 1993.



- SU. (nos. 3363, 3376, 4014-4027). 1994. WU, SU, BA. (nos. 4239-4346). 1995. WU, SU. (nos. 4423-4713). 1997. SU. (nos. 5124, 5362-?). 1999. SU. (no. 5617). Main set at ETH, duplicates at C, K, and elsewhere. – Other collectors in the series of Sebsebe Demissew: N.N. in Sebsebe Demissew. 1990. SU. (nos. 2905-2908). – Tekle Haimanot in Sebsebe Demissew. 1997. TU, SU. (nos. 5499-5501). – Joint collections: Sebsebe Demissew & Amha B. 1986. SU. (nos. 1673-1676). – Sebsebe Demissew & Berhanu Abegz. 1983. SU, KF, IL. (nos. 1446-1470). 1986. SU. (nos. 1730-1746). 1986. SU. (nos. 1880-1887). 1993. SU, WU, BA (nos. 3377-4013). – Sebsebe Demissew & Ensermu Kelbessa (q.v.) 1981. HA. (nos. 975-1000). 1983. EW/EE, SU, WG, IL. (nos. 1265-1368). 1983. EW/EA, HA. (nos. 1377-1429). 1985. SU. (nos. 1501-1520). 1990. SD, SU (nos. 2596-2897). 1995. BA. (nos. 4714-4980). 1996. GG. nos. 5190-5361). 1997. GG. (nos. 5421-5483). – Sebsebe Demissew & Ermias Dagne (q.v.) 1989. SU. (nos. 2389-2397). 1990. SU. (nos. 2588-2595). – Sebsebe Demissew & I. Friis (q.v.) 1998. SU. (nos. 5582-5589). – Sebsebe Demissew & Melaku Wondefrash A. 1999. SU, KF. (nos. 5626-5736). 2000. SU. (nos. 5737-5740). – Sebsebe Demissew & Mesfin Tadesse (q.v.) 1986. EW/EE, GD, GJ, SU, HA. (nos. 1747-1845). – Sebsebe Demissew & M.G. Gilbert (q.v.) 1990. KF. (no. 2411). – Sebsebe Demissew & Negist Asfaw – 1986. SU, GJ. (nos. 1889-1958). 1987. 1987. GG. (nos. 1959-2002). 1988 [1987?]. SU, BA, HA. (nos. 2005-2063). 1989. SU. (nos. 2398-2410). 1994. SU. (nos. 4132-4134). 1997. SU, IL. (nos. 5502-5525). 1998. SU. (nos. 5526-5530). – Sebsebe Demissew & Zemedede Asfaw (q.v.) – 1981. GG, AR. (Nos. 621-773). – Sebsebe Demissew & Zerihun A. 1982. SU (nos. 1003-1033). – Sebsebe Demissew & Zerihun Woldu (q.v.) 1993. SU, WU. (nos. 4028-4058). – Sebsebe Demissew, Mesfin Tadesse (q.v.) & Ensermu Kelbessa (q.v.) 1985-1986. WG. (nos. 1521-1672). – Sebsebe Demissew, Tewolde Berhan G.E. (q.v.) & S. Edwards (q.v.) 1981. SU, SD. (Nos. 774-974). – Sebsebe Demissew *et al.* 1982. GD, SU. (nos. 1185-1217). 1983. GJ. (nos. 1250-1260). 1986. SU, HA. (nos. 1850-1879). 1988. SU, SD, KF (nos. 2155-2268). 1989. GJ, SU. (nos. 2377-2388). 1990. SU, AR, SD, BA. (nos. 2415-2587). 1991. TU, WU, SU, GG. (nos. 2940-3189). 1992. TU, SU. (nos. 3190-3198). 1992-1993. SU. (nos. 3276-3362). 1994. SU, SD. (nos. 4135-4239). 1995. SU, AR, BA. (nos. 4347-4422, 5125-5130). 1996. TU, GJ, GD, WU, SU. (nos. 5131-5189). 1997. SU, AR. (nos. 5484-5498). 1998. GD, GJ, SD. (nos. 5531-5581, 5592-5761). 1999. SU. (nos. 5620-5625). 2000. BA. (nos. 5741-5761). – Sebsebe Demissew, Ensermu Kelbessa *et al.* – 2000. KF, BA (nos. 5741-5761).
- Seegeler, C.J.P. – Dutch botanist, born 1940, stationed 1971-1974 at Alemaya; later associated with WAG. 1971-1973. EW/EE, TU, GD, WU, GJ, SU, WG, IL, KF, SD, BA, AR, HA. Coll. at ACD (1100 nos.), WAG (1300 nos.).
- Seifu H. Michael – Ethiopian student. 1964. HA. Coll. at ACD (79 nos.).
- Sereke Berhan – Ethiopian student. 1988. SU. Coll. at ETH.
- Sereke W.-Haimanot – Ethiopian student. 1974. HA. Coll. at ACD (46 nos.), ETH.
- Seyoum Ayeahunie – Ethiopian student. 1985. IL. Coll. at ETH.
- Seyoum Leta – Ethiopian student. 1985. SU/AF. Coll. at ETH.
- Siegenthaler, J.E. – American lecturer at Jimma Agricultural & Technical School (q.v.), published *Useful plants of Ethiopia*. C. 1965. 1956-1962. KF. Coll. at K.
- Silberman, ... – ?Nationality. ?Year. TU. Coll. at P.
- Sileshi Nemomissa – Ethiopian student at the Asmara University, since 1988 collector in a range of montane and afro-alpine regions, including EW, EE, TU, GD, now lecturer at ETH. Often with others: C. Puff & Sileshi Nemomissa. 1988. GG, SD. 1996-1999. GD. O. Ryding & Sileshi Nemomissa. 1988-1989. EW, EE.
- [Simmons, K. – ?American botanist or agriculturist at Alemaya (ACD). 1953-1956. HA. 1957. KF. Coll. at K, EA, ETH. Ogaden collections made with the anti-locust organization D.L.C.O.; it is possible that more than one person's collections are involved.]
- [Smeds, H. – Finnish geographer. 1953-1954. KF. Coll. at H, some at K. 1957-1958. SU, KF, WG, BA. Coll. at FT, K (these two sets may not be duplicates of one another), ferns in Herb. Pichi-Sermolli. 1962. IL. Coll. where?, ferns in Herb. Pichi-Sermolli. The whereabouts of Smeds' collections, if any, made after 1962 are unknown.]
- South West Ethiopian Forestry Inventory Project. – Collectors within this project, using one number series entitled as above, include: Alemayehu M., M. Brunt, D.R. Chaffey, Merga G., A.B.C. Thomerson, and Zinna.
- [Staffen, R.M.B. – ?American. 1953. SU, SD. Coll. at ACD (41 nos.).]
- Stauder, J.R. – ?British. 1962. Ethiopia, probably KF, IL or WG. Coll. at K (ca. 15 nos.).
- [Stephenson, P.R. – British entomologist. Was in Uganda at the outbreak of World War II and was assigned to locust control during the war. At the end of the war he became Director of the DLS (Desert Locust Survey), later DLCOEA. 1949. EE. Coll. (included in P. Bally's number series) at K.]
- Stewart, R.B. – American lecturer at Jimma Agricultural & Technical School (q.v.). 1956. KF. 1961. HA. Coll. at ACD (265 nos.), K (ca. 200 nos.), FT.

- [Stower, W.J. & Smith, K.D. – British entomologists, associated with DLCOEA. 1949, 1951. EE. Coll. at BM or (included in P. Bally's number series) at K. See also following.]
- [Stower, W.J., Smith, K.D. & Gililand, H.B. – British entomologists, associated with DLCOEA 1952. EE. Coll. at K. Gilliland is listed as subsidiary collector on sheets at K but sheets at EA with identical data are ascribed to Gilliland only.]
- Straube: See Kuls & al.
- Strecker, W.J.R. [Mrs.] – British anthropologist ca. 1972. GG/SD (lowlands near Kenyan border). Coll. at K (ca. 100 nos.).
- Sutherland, J. [John] – ?British. 1969. Ethiopia. Coll. [a few hundred] at UPS.
- Taddele & Ali – Ethiopian student. 1988. EW. Coll. at ETH, Asmara.
- [Tadesse Abebe – Ethiopian student. 1959. Ethiopia. Coll. at ACD (37 nos.), ETH.]
- Tadesse Ebba – Ethiopian lecturer at Alemaya. 1968. HA, SD. Coll. at ACD (240 nos.), ETH, K.
- Tamrat Abebe – Ethiopian student. 1986. HA. Coll. at ACD (1 no.).
- Tardelli, M. & Bigazzi, M. – Italian, associated with FT. 1987. GJ. Coll. at FT.
- [Taye Bizuneh – Ethiopian student. 1959. HA. Coll. at ACD (11 nos.).]
- Taye Zegeye – Ethiopian student. 1974-76. HA. Coll. at ACD (47 nos.).
- Tekle Hawariat Hagos [usually cited as Tekle H. Hagos] – Ethiopian botanist, assistant to Mooney (q.v.) and first Ethiopian keeper of the National Herbarium (ETH), trained at K. & WAG. 1962. EE, EW, TU, SU, KF. Coll. at EA, ETH, FT, K (ca. 230 nos.).
- Tedros A. & Teswolde Petros – Ethiopian students. 1985. EW. Coll. at ETH, Asmara.
- [Telahun Abebe – Ethiopian student. 1959. HA. Coll. at ACD (1 no.).]
- Tenagne Kebede – Ethiopian student. 1975. GD. Coll. at ETH.
- Tesema ..., Kebede ... & Berhane ... – 1961. HA. Coll. at ACD (25 nos.).
- Tesfaselassie G. Mariam – Ethiopian student. 1972. HA. Coll. at ACD (5 nos.).
- Tesfay Awas – Ethiopian botanist, formerly at Teacher's Training College, Gambella, now working with the Institute for Biodiversity Conservation and Research (IBCR). Resident collector since ?1993. IL, KF. A few collections with I. Friis (q.v.). Coll. mainly at ETH.
- Tesfaye Dagnew – Ethiopian student. 1976. HA. Coll. at ACD (7 nos.).
- Tesfaye Haile – Ethiopian forestry assistant. (Collections in SW Ethiopian Forest Inventory). 1976. SD. Coll. at ETH, K.
- Tesfaye Tesemma. – Ethiopian plant breeder and agronomist. 1975. GD. 1979. SU, HA. Coll. at ETH.
- Tesfesse T. – Ethiopian student. ?1975. GD. Coll. at ETH.
- Tewolde Berhan Gebre Egziabher. – Ethiopian plant ecologist, lecturer at ETH, president of Asmara University, and leader of Ethiopian Flora Project, 1980-1993. Resident, collecting since 1969, has often collected with others. Collections from all regions of Ethiopia and Eritrea at ETH, some at K.
- Tezera Moges – Ethiopian student. 1960. HA. Coll. at ACD (12 nos.).
- Theodoros Mesfin – Ethiopian student. 1981. HA. Coll. at ACD (1 no.).
- [Thesiger, W. – British traveller. 1959. SD, GG. Coll. at BM.]
- Thomas, C.E.H. – British natural history student. (Collections in exp. Reading University). 1962. SU, GJ, KF. Coll. at K.
- Thomerson, A.B.C. – British forestry student working for the Overseas Development Administration/Ethiopian Forestry Research Institute. (Collections in SW. Ethiopia Forestry Inventory). 1975. KF, IL, BA. Coll. at EA, ETH, K.
- Thulin, M. – Swedish, Professor of botany associated with UPS; first visit to Ethiopia on consultancy for C.A.D.U. (Chillalo Agricultural Development Unit) with a project on legumes, contributed a number of families for the Flora of Ethiopia and Eritrea, especially legumes. 1971. AR. Coll. at ETH, K, UPS. Thulin, M. & Gilbert, M.G. – 1975. S. Ethiopia. Coll. at UPS, K, ETH. See also Gilbert & Thulin. Thulin, M., Hunde, A. & Mesfin Tadesse. – Swedish and Ethiopian botanists. 1980. BA, AR, SD, SU. Coll. at UPS, ETH, K. Hunde: See under Friis. Mesfin Tadesse: See separate entry. Thulin, M. & A. Hunde. – Swedish & Ethiopian botanists. ?1982. GJ, SU. Coll. at ETH, K, UPS.
- Tivell, A. – ?Swedish forester. 1977. WG. Coll. at EA.
- Tompsett, B.P. – British. ca. 1960. Ethiopia. Coll. at K (ca. 30 nos.).



- Tornay, S. – ?American, working with the anthropological expeditions to the Lower Omo Valley. 1967-197? Ethiopia (especially lower Omo River Valley). Coll. at EA.
- Tsedale Waktola – Ethiopian soil scientist. 1981. HA. Coll. at ACD (1 no.).
- Tsegaye Habte – Ethiopian student. 1986. HA Coll. at ETH.
- Turton, D.A. – British anthropologist. 1970. (KF/GG). Coll. at K (ca. 300 nos.).
- Uhlig, S.K. – German lecturer at Alemaya. 1986-87. BA, HA. Coll. at ACD (8 nos.).
- Unger, J. – ?German. 1981. HA. Coll. at ACD (34 nos.).
- Urban, E. – American ornithologist teaching in the Biology Dept. of The Addis Ababa (then H.S.I.) University. ca. 1968-1970. SU. Coll. at EA, K.
- Vollesen, K. – Danish botanist, full-time collaborator with the Ethiopian Flora Project from 1981-86. 1986. BA. Coll. at K, ETH, C. Also numerous collections with Mesfin Tadess, I. Friis and M.G. Gilbert (q.v.).
- Wakefield, ... – British. SD. Coll. at K.
- Waterman, P. – British plant chemist based in Glasgow and often working with Chemistry Dept., Addis Abeba University. 1988. SU (with M. G. Gilbert & Ermias D.). Coll. at ETH, K.
- Webb, H. – British. 1960. SU. Coll. at ACD (3 nos.).
- Weinert, E. – German botanist residing in Ethiopia from 1978. 1980. SU, BA. Coll. at ETH.
- Wendinoy Bayov (with IAR (Weed Research)). ?Russian. 1988. WU. Coll. ETH, K.
- West, O. – British (South African) army officer, later (probably) associated with the D.L.O.C. 1941. EE, WU. 1956. SU, HA. Coll. at EA, K.
- Westphal, E. & Westphal-Stevens, J.M.C. Dutch botanists. Dr. E.W. born 1938, Dr. J.M.C. W.-S. born 1942. Associated with WAG, stationed at Alemaya 1967-68, later at Department of Tropical Crops, Wageningen, and member of the PROSEA team. 1967-1968. GD, WU, SU, WG, KF, GG, SD, AR, HA. Coll. 5550 numbers, but this includes herbarium specimens as well as seed collections, according to Anonymous (1976); coll. at ACD (ca 2500 nos.), WAG (main set), K, C.
- Wiens, D. – American botanist, specialist on Loranthaceae and Viscaceae. 1974. TU, WU (with M. G. Gilbert & Getachew Aweke, also under own numbers). Coll. at K.
- Wilde, J.J.F.E. de – Dutch botanist, brother of W.J.J.O. de Wilde, born 1932, now at WAG; associated with WAG, stationed at Alemaya 1968-1970. TU, GD, WU, GJ, SU, IL, GG, SD, BA, AR, HA. Coll. at ACD (ca. 2900 nos.), WAG (main set, ca. 7000 nos.), K. Wilde, J.J.F.E. de & Gilbert, M.G. 1969 (mainly Semien Mts., GD), 1971. GD, BA, SD, GG. Ca. 450 nos. Coll. at WAG, K (ETH set destroyed by fire). See also Wilde, W.J.J.O. de & Wilde-Dufjes, B.E. de.
- Wilde, W.J.J.O. de & Wilde-Dufjes, B.E. de – Dutch botanists, 1965-66 based in Ethiopia, now working at L. 1965-1966. AF, WU, SU, WG, KF, SD, AR, HA. Coll. 5190 numbers, according to Anonymous (1976); most complete sets at ACD, ETH and WAG, duplicates at B, BR, C, DSM, EA, FHI, H, K, MO, P, PRE, UPS.
- Wilde-Dufjes, B.E. de – Dutch botanist, born 1936, based 1965-66 in Ethiopia, collected with husband, W.J.J.O. de Wilde (q.v.).
- Wit, H.C.D. de – Dutch professor of botany at the Wageningen Agricultural University, Associated with WAG. 1978. Collected with Getachew Aweke. Coll. at ETH, WAG.
- Willemse, R.H. – Dutch ?agronomist. 1971. SU. Coll. at K.
- Wilson, R.T. – British agriculturist. 1975. TU. Coll. at K, ETH.
- Wood, R.B. – British teacher in Biology Dept. of the Addis Ababa (then H.S.I.) University. 1964 (?or66) -1968. SD. Coll. at ETH.
- Worku Negash – Ethiopian student. 1987. SU. Coll. at ETH.
- Wudeneh Lechamo – Ethiopian student. 1988. HA. Coll. at ACD (120 nos.).
- Yeneneh Taye – Ethiopian student. 1978. SU, HA. Coll. at ACD (1 no.), ETH.
- Yihenew Makonnen – Ethiopian student. 1987. SU. Coll. at ETH.
- Yilma Dejene & Getachew Aweke. – 1978. SD Coll. at ETH.
- Yitbarek Negatu – Ethiopian student. 1981. HA. Coll. at ACD (1 nos.).
- Yohannes Wolde Yesus – Ethiopian student. 1963. SU. Coll. at ETH.
- [Yohannis Negash – Ethiopian student. 1959. HA. Coll. at ACD (3 nos.).]
- [Yoseph Muletta – Ethiopian student. 1958. HA. Coll. at ACD (4 nos.).]
- Zemedet Asfaw – Resident Ethiopian, collector and researcher of cultivated plants since 1982. Has mainly collected cultivated plants. Coll. at ETH.

Zenna & Tesfaye – Ethiopian forestry assistants (in SW. Ethiopia Forestry Inventory). 1976. SU. Coll. at ETH, EA.

Zerihun Woldu – Resident Ethiopian, ecologist and sometimes collector since 1976, lecturer at ETH. Zerihun Woldu. With Gelahun Abati. – Ethiopia. 1976 onwards.

Zewdu Kebede – Ethiopian student. 1960. HA. Coll. at ACD (25 nos.).

Zewdu Kebede Banteyiwalu – Ethiopian student. 1987-88. IL, HA. Coll. at ACD (19 nos.).