

The identity of *Polyscias lepidota* Chiov. (1940). A name missing in Vol. 3 of the Flora of Ethiopia

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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. ISSN 0366-3612. ISBN 87-7876-246-4.

The type material of *Polyscias lepidota* Chiov. (1940) has been found to consist of a rachis and nine detached terminal and lateral leaflets. It was collected in the mosaic of farmland and secondary evergreen bushland near Jimma in the Kefa Region, and said by Chiovenda to be closely related to the endemic Ethiopian species *Polyscias farinosa* (Del.) Harms (Araliaceae), which is restricted to rocky outcrops in regularly burnt deciduous woodland and wooded grassland. *Polyscias lepidota* was placed in synonymy of *P. farinosa* (Araliaceae) by Bamps in 1974, but he did not examine the type material. In 1979 the present author identified the type material as *Ekebergia capensis* Sparrm. (Meliaceae), but did not publish the identification. The name *Polyscias lepidota* is mentioned neither in the account of the Araliaceae, nor in that of the Meliaceae in the Flora of Ethiopia, Vol. 3, published 10 years later. The author's identification is confirmed here, and the name *Polyscias lepidota* Chiov. is formally placed in synonymy of *Ekebergia capensis* Sparrm. (Meliaceae).

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Introduction

In August 1939 Emilio Chiovenda (born 1871, died 1940) submitted a paper on new Ethiopian plants to the Reale Accademia d'Italia in Rome, of which he was an associate ("Aggregato"). The paper (Chiovenda 1940) contained the protologues of 66 new species and infraspecific taxa from Ethiopia, Eritrea and Italian Somaliland. The work, which was one of Chiovenda's last publications, is of very mixed quality. It contains a number of striking new species that have stood the test of time well, such as the beautiful red-flowered endemic species *Acanthus sennii* Chiov. (Acanthaceae), first observed around 1770 by James

Bruce and Luigi Balugani (Hulton, Hepper & Friis 1991); *Manilkara botugii* Chiov. (Sapotaceae), which is still the correct name for an important forest tree which is narrowly distributed in south-western Ethiopia, the Imatong Mountains, and adjacent parts of Uganda; *Arisaema addis-ababense* Chiov. (Araceae), which is still the correct name for a species restricted to the surrounding of Addis Ababa; and *Erythrina burana* Chiov. (Fabaceae), which is still the correct name for a tall tree with orange red flowers known only from Harar and adjacent parts of Bale. However, not all the new taxa from 1940 have fared so well. The names for four more species of Sapotaceae (Chiovenda

1940: 42-45 & 47) are all now reduced to synonymy (Friis 1985a), just to mention a few. There is also a number of astounding misidentifications, which resulted in Chiovenda (1940) describing already well established taxa as new ones in completely wrong families, usually based on poor or inadequate material. De Wilde (1968) pointed out that the type material of *Trichilia siderotricha* Chiov. consisted of two detached leaflets of the small tree *Brucea antidysenterica* Mill. (Simaroubaceae), and nine unidentified reniform seeds with a red testa. Vollesen (1985) demonstrated that the poor type material of *Commiphora reghinii* Chiov. belonged to a species of *Euphorbia* (Euphorbiaceae) later identified by Gilbert (1995) as *Euphorbia jatrophoides* Pax. Equally far off the mark was the description of a small, immature twig of *Buxus hildebrandtii* Pax (Buxaceae) as a new species of *Garcinia* (Clusiaceae), *G. buxifolia* Chiov. The true identity of this name was demonstrated by Friis (1985b) after dissection of the very immature flower buds of the type material.

Most of the taxa described in Chiovenda (1940) are dealt with in the volumes of *Flora of Ethiopia and Eritrea* where they belong. The completely misplaced ones, such as *Trichilia siderotricha*, *Commiphora reghinii* and *Garcinia buxifolia*, have been mentioned both in the family where Chiovenda suggested they belonged, and where it has subsequently been found that they truly pertain. This, however, is not the case with *Polyscias lepidota* Chiov. (Chiovenda 1940: 32), which at least should have been mentioned as a species of uncertain position under Araliaceae on pp. 537-542 of *Flora of Ethiopia*, Vol. 3 (Bamps 1989).

This half-forgotten case was again brought to my attention when Sr. Marcello Tardelli of the Erbario Tropicale, Florence, in July, 1999, wrote to me. For curatorial purposes he wanted to know if I still stood with an identification I had written in November 1979 on a label

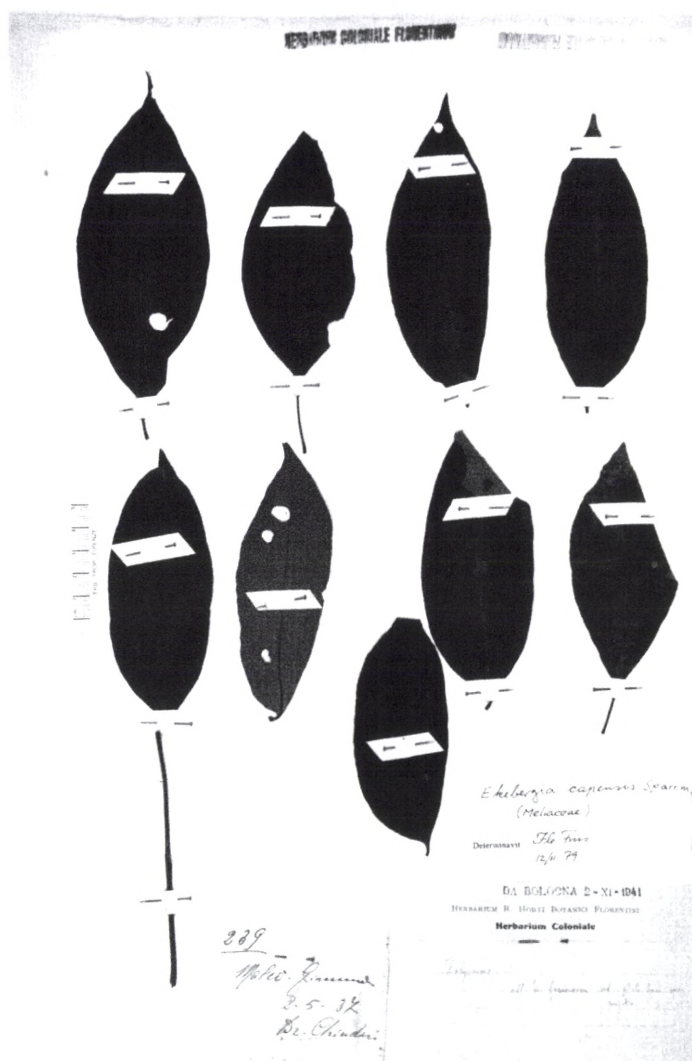
attached to the type material at FT of *Polyscias lepidota*, and if I had published anything about my observations. I therefore had to re-examine the whole reasoning, and bring it to a conclusion by publishing the findings.

The identity of *Polyscias lepidota* Chiov.

Very little has been written about *Polyscias lepidota* since it was first published. Cufodontis (1959: 636) listed the name in his check-list of Ethiopian plant species. Bamps (1974a: 121) later placed it in the synonymy of *Polyscias farinosa* (Del.) Harms in his revision of African Araliaceae. However, he pointed out that he had not seen the cited type specimen, and the accompanying distribution map (Bamps 1974b) does not show a record of *Polyscias farinosa* from the type locality of *P. lepidota* near Jimma.

In correspondence with Paul Bamps while Vol. 3 of the *Flora of Ethiopia* was in the course of publication I described him my impression of the ecological preferences of *Polyscias farinosa*. The species could be found in deciduous woodland and wooded grassland with regular burning, for example in the river gorges of Kefa, but not in the evergreen bushland and montane forests in the near surroundings of Jimma. In November 1979 I examined the type material of *Polyscias lepidota* (Fig. 1) in the Erbario Tropicale (FT) in connection with my study of the forest trees of the Horn of Africa for a book on that subject (Friis 1992). The type, which is annotated "*Polyscias* aff. *P. farinosa* ..." in Chiovenda's hand, consists of one sheet of paper, on which is mounted a rachis with opposite scars from leaflets and nine detached leaflets. The three detached terminal leaflets have more or less drawn-out, up to c. 1.4 cm long acuminate apex, and still attached to the leaflets are 1.3-2.5 cm long petiolules. The six detached lateral leaflets have more or less

Fig. 1. Photograph of the holotype of *Polyscias lepidota* Chiov., Chiuderi 239 (FT), collected between the town of Jimma and Malc3 (on the way to Bonga), Kefa Region, southwestern Ethiopia. Photo kindly provided by FT.



curved, acuminate apex, more or less oblique base, and very short, often bent petiolules. Other dimensions and overall morphology are as described by Chiovenda.

Chiuderi, a little known collector, had collected the type material of *P. lepidota* as his no. 239. The type locality, "Malc3-Gimma", is somewhere between the town of Jimma, capital of the old Kefa Region (KF), and Malc3. Guida d'Italia (1938) described the latter place as a

site of colonial agricultural development, reached by driving *c.* 3 km out of Jimma along the road to Bonga, past the airport, and a few km to the right, up into the hilly country which overlooks Jimma. The altitude of the type locality is therefore probably 1700-2000 m, and, like today, the area must have supported a mosaic of farmland and secondary evergreen bushland with scattered trees, and must have had good rainfall well distributed through the year.

Polyscias farinosa is, as mentioned, a species of deciduous woodland and wooded grassland associated with rocky outcrops in the deep river valleys of the Ethiopian Plateau, where regular burning of the extensive and tall grasslands occur. *P. farinosa* can be found in the upper reaches of the Ghibe Gorge, for example on some rocky outcrops between Abeli and Assendabo, c. 100 km from Jimma towards Addis Ababa, and in the Omo Valley between Waka and Soddu; I have collected it in both places. Most likely, it also occurs in the Gojeb Valley, but I have never seen *Polyscias farinosa* in the near surroundings of Jimma.

When studying the type material of *P. lepidota* in 1979, I decided that this scanty and fragmented leaf-material should all be referred to *Ekebergia capensis* Sparrm. (Meliaceae). This is a very common tree in the mosaic of farmland and secondary evergreen bushland with scattered trees which covers most of the hills around Jimma. I noted this identification on a *determinavit* slip. The type material is a fairly good match for leaf-material of *Ekebergia capensis*, especially poorly preserved material that has gone black on drying, except for the pale grey lower surface of some of the lateral leaflets. Moreover, most of Chiovenda's description in the protologue of *Polyscias lepidota* fits leaves of *Ekebergia capensis* very well. The dimensions of the leaflets, their papery texture and overall morphology, the acuminate apex which may be slightly curved or falcate, the characteristically unequal base which is wider in the apical than in the basal half, and the pale or grey-glaucous undersides.

Chiovenda points to the unequal base of the lateral leaflets of the type material as an optimal diagnostic character separating *Polyscias lepidota* from the subcordate bases of the leaflets of *P. farinosa*. In fact, the leaflets of the Ethiopian species of *Polyscias*, e.g. *P. fulva* (Hiern) Harms and *P. farinosa*, have rounded, subcordate or cordate bases, whereas most

Ethiopian species of Meliaceae have characteristic unequal base on the leaflets. The leaves of *Ekebergia capensis* offer the best match with the type material, and *Ekebergia capensis* is, as mentioned above, very common around the type locality. The leaves of other Ethiopian species of Meliaceae, including the two species of *Trichilia*, *T. emetica* Vahl and *T. dregeana* Sonder, do not really match the type specimen in detail, and the distribution and ecology do not agree. The two species of *Trichilia* are not very likely to be encountered in disturbed evergreen bushland at 1700-2000 m around Jimma, as *T. emetica* is almost entirely a riverine species of lower altitudes, and *T. dregeana* occurs in lowland and transitional evergreen forest below 1500 m.

However, the following set of characters mentioned in the protologue of *Polyscias lepidota* does not fit with characters known from normal material of *Ekebergia capensis*: Chiovenda described the lower side of the leaflets as being provided with large, sparse and scattered scales mixed with plentiful, short and mealy hairs. When studying the type material in 1979 I found it difficult to observe features which fitted at all well with that part of Chiovenda's description, and to me the leaflets generally appeared to be glabrous beneath. However, a partial infection of mould fungi on some leaflets could perhaps have been interpreted as a mixture of scales and mealy hairs. The infection would have occurred during the unsuccessful conservation process, which also accounted for the blackening of the leaf-material.

I have also considered the possibility that poorly preserved leaflets of *Lepidotrichilia volkensis* (Gürke) Leroy could have been mixed into the type material or been used by Chiovenda when he prepared the description, because *L. volkensis* has scattered scale-like hairs on the lower surface of the leaflets. However, a mixture of the type material with leaflets

of *Lepidotrichilia volkensii* is not at all likely. The extant type material appears homogenous, the leaflets of *L. volkensii* are generally smaller and more narrowly lanceolate than the leaflets of the type material, and they almost always dry green, even in poorly preserved material. In Ethiopia I have almost exclusively seen *Lepidotrichilia volkensii* in closed evergreen or riverine forest, for example in Beletta Forest, c. 60 km south-west of Jimma, and in forests near Bonga, but hardly in secondary vegetation around Jimma. A theory that Chiovenda saw scales on leaflets that are not preserved among the current type material seems therefore far-fetched.

In conclusion, I find it most probable that all the material seen by Chiovenda was of one species, and that his observation of scales was due to a misinterpretation of the material. More information about the ecological range and distribution of *Ekebergia capensis*, *Lepidotrichilia volkensii*, *Trichilia emetica* and *T. dregeana* on the Horn of Africa can be found in Friis (1992: 196-200 & Map 95-98). I will therefore stand with my tentative identification in 1979 of *Polyscias lepidota* with *Ekebergia capensis*. I still find it fully convincing. However, because of the criteria used for the inclusion of synonyms in Friis (1992: 84), the name *Polyscias lepidota* was not then included as a synonym of *Ekebergia capensis*, and a separate paper with the new synonymy was not published.

The ecological arguments I advanced in 1979 against an identification of *Polyscias lepidota* with *P. farinosa* is most likely the reason why Bamps (1989: 537) did not mention the former name under *Polyscias* in Vol. 3 of *Flora of Ethiopia*. However, Styles & White (1989: 489) did not include *Polyscias lepidota* Chiov. in synonymy of *Ekebergia capensis* Sparrm. either. The name is not mentioned in their account of the Meliaceae on p. 479-489 in the same *Flora*-volume. On principle, all synonyms from the *Flora* area should be dealt with in the *Flora of*

Ethiopia and Eritrea, and I therefore find it correct formally here to place the name *P. lepidota* in synonymy of *E. capensis*.

Ekebergia capensis Sparrm. in Sv. Vet. Akad. Handl. 40: 282, tab. 9 (1779).

Type: South Africa, *Sparrmann* s.n. (S holotype).

Polyscias lepidota Chiov. (Chiovenda 1940: 32); Cufodontis (1959: 636), **synon. nov.** Type: Ethiopia, KF, between Malc' and Gimma [Jimma], 2.5.1937, *Chiuderi* 239 (FT, holotype; C, ETH, K, photo of holo.).

Acknowledgement

I wish to thank Sr. Marcello Tardelli of the Erbario Tropicale, Florence, for reminding me of the case, and for promptly sending me adequate photographic documentation of the type material when I asked to reconsider the case.

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