

The genus *Trichoscypha* (Anacardiaceae) in Lower Guinea and Congolia: A synoptic revision

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KEY WORDS

Anacardiaceae,
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ABSTRACT

Following the taxonomic treatment of the *Trichoscypha* species for Upper Guinea (BRETELER 2001) those for Lower Guinea and Congolia are revised. Eighteen species are recognized, three of which are described as new and four of which also occur in Upper Guinea. A key to the species is given and their distributions are mapped. The male and female flowers are illustrated for those taxa for which material was available.

RÉSUMÉ

Le genre Trichoscypha (Anacardiaceae) en Basse Guinée et Congolia : révision synoptique.

À la suite de la révision des espèces de *Trichoscypha* de la Haute Guinée (BRETELER 2001), les espèces de Basse Guinée et de Congolia sont révisées. Dix-huit espèces sont reconnues, dont trois nouvelles décrites ici et quatre autres présentes aussi en Haute Guinée. Une clé de détermination et des cartes de répartition sont présentées. Lorsqu'elles sont connues, les fleurs mâles et femelles sont illustrées.

MOTS CLÉS

Anacardiaceae,
Trichoscypha,
Basse Guinée,
Congolia.

INTRODUCTION

The synoptic revision of the African genus *Trichoscypha* Hook.f. has been undertaken in two parts, the first concerning the 14 species of Upper Guinea (BRETELER 2001), the second for the 18 remaining species, which is presented here. These species are concentrated in Lower Guinea and to a lesser extent in Congolia, defined by WHITE (1979: fig. 1), with one species extending into

tropical East Africa and South tropical Africa. The three species that are described as new in this paper all occur in Lower Guinea. Some additional specimens that may represent other species had to be left unidentified until more and/or better material becomes available.

The types of several specific names were lost at Berlin. Lectotypes were designated when possible, but neotypes had to be chosen in 10 instances.

CHARACTERS OF THE GENUS *TRICHOSCYPHA*

Trees, sometimes large (≥ 40 m), mostly small and slender, branched or not, shrubs, or lianas. Exudate little, white to orange-pink, black when dry. Leaves, imparipinnate, rarely simple, often crowded at the top of the trunk or end of branches. Inflorescence many-flowered, (sub)terminal or axillary, and/or borne below the leaves on the main stem or branches. Flowers unisexual, dioecious, rather small (≤ 8 mm), usually 4-merous often a few 5-merous ones, rarely 6-merous, sessile to pedicellate, the female flowers generally less numerous and often with longer pedicels than the male flowers. Sepals united at base, suberect. Petals free, usually imbricate (mostly narrowly so) or valvate in bud, \pm erect, spreading, or reflexed at anthesis. Stamens the same in number as the petals and alternate with them, inflexed in bud. Disc present, glabrous or variously hairy, in the male flower sometimes surrounding a small pistillode, in the female flower located at the base of the ovary. Stamines present in female flowers. Ovary glabrous to variously hairy, 1-locular, crowned by 3-4(-6) styles with entire to shallowly bilobed stigmas, or stigmas \pm sessile, ovule one, pendulous. Fruit fleshy, 1-seeded, rarely dehiscent.

TYPE. — *Trichoscypha mannii* Hook.f.

MORPHOLOGICAL NOTES

Several species exhibit considerable variation in habit, from erect shrubs to lianas and usually to medium-sized trees. A few intermediates (described as “long very slender trees”) have been found and field notes sometimes indicate that an erect individual has been found close to a lianescent one of apparently the same species. The use of habit alone in identification keys, as was done by VAN DER VEKEN (1960), is therefore very unsatisfactory.

Within a species leaves can be extremely variable in the number, size and shape of their leaflets as well as in indumentum and the number of lateral nerves. Foliar characters are thus rarely of

much use in separating species (see Fig. 9). Only the inflorescence, flowers and fruits offer taxonomically reliable characters.

Some species (e.g., *Trichoscypha reygartii* and *T. rubicunda*) show a patchy, whitish indumentum on the leaves, inflorescences, and, sometimes on the fruits as well (*T. rubicunda*). This indumentum is intermediate in appearance between arachnoid hairs and fungal mycelium. Sometimes it is so dense that it appears normal hairs have difficulty coming through (see Fig. 14G, H).

Information on the indumentum of the calyx is provided in the discussion under *T. bracteata*.

Trichoscypha hallei and *T. laxiflora* are the only species from Lower Guinea and Congolia with truly valvate petals. In all the other species the petals are, at least in part, imbricate and mostly narrowly so. The valvate character of the petals in *T. hallei* and *T. laxiflora* is associated with the presence of minute, brown dots on the lower surface of the leaflets.

Most species with a hairy disc also have hairy ovaries. Exceptions are found in *T. acuminata* whose disc may be glabrous or hairy whereas the ovary is always hairy, and in *T. hallei*, *T. oddonii*, and *T. rubicunda*, in which a glabrous disc occurs in combination with a hairy ovary (see also BRETELER 2001: 248).

Seedlings of *Trichoscypha bijuga*, *T. mannii*, and *T. patens* have been grown at the Herbarium Vadense greenhouses in Wageningen. They all show the same model in which the germination is hypogeal, with the distinct epicotyle of 8-12 cm in length is terminated by two opposite, simple leaves. The next leaves are also simple, but usually have longer petioles, and may be considered as unifoliolate. The seedlings of *T. oddonii*, grown in Congo (Kinshasa), have an epicotyle 20-25 cm long, with the first pair of leaves also opposite but with long petioles and one to three leaflets.

GEOGRAPHICAL NOTES

Of the 18 species of *Trichoscypha* present in Lower Guinea and Congolia, 14 are endemic to this area; the remaining four species, *T. arborea*, *T. bijuga*, *T. lucens*, and *T. mannii*, also occur in Upper Guinea (BRETELER 2001). *Trichoscypha*

lucens, which occurs from Liberia to Africa East coast, is the only wide-spread species. The 18 species treated here are very unevenly distributed over Lower Guinea and Congolia. Most of the diversity occurs in Lower Guinea where 17 species are present of which eight are endemic, whereas Congolia only has eight species, of which *T. pauciflora* is the only endemic. When considered on a country by country basis, Gabon, in the centre of Lower Guinea, is the richest with 16 species present, followed by Cameroun with 13 species. In

Congo (Brazzaville) eight species occur and Congo (Kinshasa) has nine whereas Nigeria has seven. In Cabinda, the northern part of Angola, five species have been recorded. Much more exploration is however needed for a better understanding of the variation in habit and morphology as well as of the distribution of certain species (e.g., *T. engong*, *T. hallei*, *T. oliveri*), which show gaps in their ranges based on available material that almost surely represent an artefact of insufficient collecting, that are too wide to be true.

Key to the species of *Trichoscypha* in Lower Guinea and Congolia

The following key is based on material with male flowers unless stated otherwise. When known and when useful, characters of the female flower and/or fruit have been included.

The disc in the female flower is similar to that of the male flower. It remains observable, with or without hairs, in fruit.

1. Trees with inflorescences borne on the main stem and/or on the thicker branches 2
- 1'. Trees, shrubs, or lianas with (sub)terminal and/or axillary inflorescences and/or with inflorescences borne just below the leaves, when cauliflorous, then, as a rule, with axillary and/or (sub)terminal inflorescences also present 6
2. Leaflets strongly asymmetric at base (see Fig. 7); lower surface covered by stellate hairs. Gabon 5. *T. debruijnii*
- 2'. Leaflets not asymmetric at base or only slightly so; lower surface, if hairy, with simple hairs only 3
3. Trees up to at least 35 m tall and 1 m dbh, with large crown. Inflorescences mainly on the thick branches, sometimes extending below these, i.e. on the upper part of the trunk as well; pistil glabrous. Cameroun, Equatorial Guinea, Gabon..... 6. *T. engong*
- 3'. Slender trees, up to 25 m tall and 50 cm dbh, poorly branched or not, i.e. with narrow crown, or shrub up to 8 m tall; flowers borne on the trunk, usually well below the leaves, at most at 5 m height; pistil hairy or glabrous 4
4. Inflorescence bracts up to 7 mm long; disc glabrous (Fig. 2E); ovary and fruit glabrous. Eastern Congo (Kinshasa) 16. *T. pauciflora*
- 4'. Inflorescence bracts at least 15 mm long; disc glabrous to sparsely hairy, ovary and fruit hairy 5
5. Leaves up to 1.5 m long, 7-17(-22?)-jugate; leaflets usually glabrous beneath or nearly so, oblong-elliptic, sometimes lanceolate, (6-)15-20(-28) × (2-)3-7(-10) cm, with (9-)12-18 pairs of main lateral nerves; disc sparsely hairy to glabrous (Fig. 1A); pistillode absent. Nigeria to Central African Republic, Congo (Kinshasa), and Angola 1. *T. acuminata*
- 5'. Leaves 1.15-2.5 m long, (16-)22-28-jugate; leaflets usually distinctly hairy beneath, lanceolate-oblong, (13-) 20-35(-50) × (2.5-)7-10(-12) cm, with (10-)15-24(-34) pairs of main lateral nerves; disc glabrous, a hairy pistillode present or not (Fig. 2B). From Cameroun to western Congo (Kinshasa) and Angola (Cabinda).... 13. *T. oddonii*
6. Disc hairy 7
- 6'. Disc glabrous or with a few hairs in the centre (i.e. on the pistillode) only 11
7. Petiole deeply canaliculate above, the ± thin borders folded inwards (Fig. 11C); flowers with cucullate petals (Fig. 11A, B); ovary velutinous. SW Gabon 12. *T. nyangensis*
- 7'. Petiole ± flat to very shallowly canaliculate above, or grooved only, or (sub)terete; flowers without cucullate petals 8
8. Disc distinct, ± firm, well exposed, 1.5-2.5(-3) mm in diam., usually with appressed indumentum and with imprints of anthers (Fig. 2C); fruits pubescent, oblique, apiculate, laterally compressed, at least when immature. From Cameroun to Congo (Kinshasa) 14. *T. oliveri*

- 8'. Disc not apparent, merely looking like the velutinous to hispid bottom of the flower (Figs 1G, I; 2A), 0.5–1 mm across, usually without imprints of anthers, or these hidden by the ± erect indumentum; fruits terete or elliptic in cross-section, usually not oblique, beaked or ± rounded at apex 9
9. Stamens at most as long as the ± 1.5 mm long petals (Fig. 1G); fruit ellipsoid, sparsely appressed-puberulous. Coastal region of Gabon 8. *T. imbricata*
- 9'. Stamens longer than petals, the latter 2–4 mm long (Figs 1I; 2A) 10
10. Anthers ≥ 1 mm long; petals (2.5–)3–5 mm long; fruit usually beaked, at least sparsely hairy. Nigeria to Congo (Brazzaville) 11. *T. mannii*
- 10'. Anthers < 1 mm long; petals ≤ 2.5 mm long (up to 3 mm in female flowers); fruit ± rounded at apex, sparsely to densely velutinous. Lower Guinea and Congolia, extending to the areas of the Flora of Tropical East Africa and Flora Zambesiaca 10. *T. lucens*
11. Midrib of leaflets plane or prominent above 12
- 11'. Midrib of leaflets impressed above 13
12. Corolla yellow; inflorescence glabrous to sparsely (sub)appressed-puberulous; pedicel glabrous, rarely with a few dispersed hairs; leaflets usually minutely pustulate above. Nigeria to Congo (Kinshasa).... 15. *T. patens*
- 12'. Corolla dark red to purple; inflorescence and pedicel (sub)appressed-puberulous; leaflets ± smooth above. Nigeria, Cameroun 2. *T. arborea*
13. Inflorescence densely bracteate, at least until anthesis, the bracts boat-shaped, longer than the flower clusters that they subtend, densely appressed-pubescent outside, less densely so inside (Fig. 4). Gabon 4. *T. bracteata*
- 13'. Inflorescence not densely bracteate, at least not until anthesis; bracts shorter than the flower clusters that are subtended 14
14. Petals with papillate margins, valvate in bud 15
- 14'. Petals imbricate in bud, at least narrowly so, margin thin, not papillate 16
15. Shrubs up to 2 m tall; leaves (1–)3–5(–13)-foliolate; pedicel thin, ± thread-like, (2–)3–5(–7) mm long; petals distinctly and usually prominently veined outside; fruits glabrous. From SE Nigeria to Congo (Kinshasa) 9. *T. laxiflora*
- 15'. Shrubs to treelets to 6 m tall; leaves 15–17-foliolate; pedicel ± stout, ≤ 1 mm long; petals not distinctly veined, appressed-pubescent outside; fruits velvety. Cameroun, Gabon 7. *T. hallei*
16. Inflorescences ± narrow, with ± fastigiate branches ≤ 7 cm, the flowers borne in spike-like units; ovary and fruit glabrous. Nigeria to Congo (Kinshasa) 3. *T. bijuga*
- 16'. Inflorescences widely branched, branches up to 30 cm long, the flowers usually distinctly pedicelled, ± arranged in separate fascicles; ovary and fruit glabrous or hairy 17
17. Flowers white to yellow; ovary glabrous, rarely with a few hairs; fruit glabrous; upper surface of leaflets usually minutely pustulate to grumose. Cameroun to Congo (Kinshasa) 17. *T. reygartii*
- 17'. Flowers pink to red; ovary velutinous; fruit subappressed-short-hairy; upper surface of leaflets smooth. Cameroun to Congo (Brazzaville) 18. *T. rubicunda*

1. *Trichoscypha acuminata* Engl.

Bot. Jahrb. Syst. 1: 425 (1881); Exell & Mendonça, Consp. Fl. Ang. 2: 124 (1956); Keay in Hutch. & Dalz., Fl. West Trop. Afr. ed. 2, 1: 735 (1958); Van der Veken, Fl. Congo Belge et Ruanda-Urundi 9: 71 (1960); Wilks & Issembé, Arbres Guinée Équatoriale: 94 (2000). — Type: see below under *Sorindeia mannii*. *Sorindeia mannii* Oliv., Fl. Trop. Afr. 1: 442 (1868). — Type: *Mann 1845*, Equatorial Guinea, Corisco Bay, ♂ fl. Sep. 1862 (holo-, K!, iso-, A!, P!). See Notes.

Trichoscypha braunii Engl., Bot. Jahrb. Syst. 15: 111 (1892); Keay in Hutch. & Dalz., Fl. West Trop. Afr. ed. 2, 1: 735 (1958). — Type: *Büttner 431*, Gabon, Sibang, ♂ fl. Sep. 1884 (lecto-, B!, designated here). See Notes.

Trichoscypha ferruginea Engl., Bot. Jahrb. Syst. 15: 112 (1892); Keay in Hutch. & Dalz., Fl. West Trop. Afr. ed. 2, 1: 735 (1958). — Type: *Preuss 283*, Cameroun, Barombi Station, fl., fr. 1890 (holo-, B, delet.; lecto-, K!, designated here). See Notes.

Trichoscypha congensis Engl., Bot. Jahrb. Syst. 36: 222 (1905); Van der Veken, Fl. Congo Belge et Ruanda-Urundi 9: 71 (1960). — Type: *E. Laurent s.n.*, Congo (Kinshasa), Mayombe, ♀ fl., juv. fr. Sep. 1893 (holo-, BR!).

Trichoscypha laurentii De Wild., Miss. Laur.: 144 (1905); Van der Veken, Fl. Congo Belge et Ruanda-Urundi 9: 71 (1960). — Type: *E. & M. Laurent s.n.*, Congo (Kinshasa), Ibali, ♂ fl. Nov. 1903 (holo-, BR!).

Trichoscypha flamignii De Wild., Fedde Repert. 13: 375 (1914), p.p. (flowers only); Van der Veken, Fl. Congo Belge et Ruanda-Urundi 9: 71 (1960). — Type: *Flamigni 128*, Congo (Kinshasa), Dibela, ♂ fl. Oct. 1905 (holo-, BR!). See Notes.

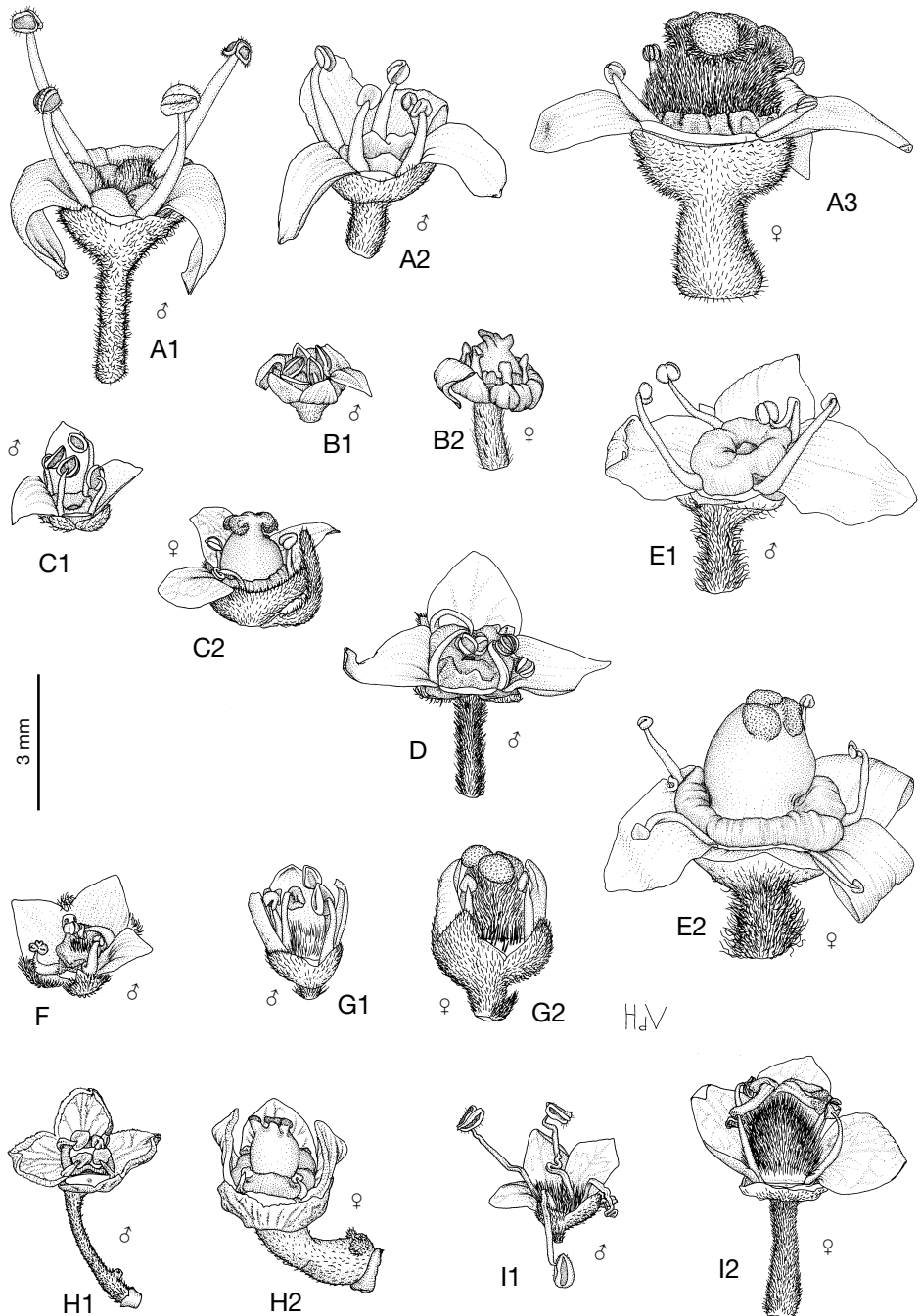


FIG. 1. — Flowers of *Trichoscypha* species, one petal removed: **A**, *T. acuminata* Engl.; **B**, *T. arborea* (A. Chev.) A. Chev.; **C**, *T. bijuga* Engl.; **D**, *T. bracteata* Breteler; **E**, *T. engong* Engl. & Brehmer; **F**, *T. hallei* Breteler; **G**, *T. imbricata* Engl.; **H**, *T. laxiflora* Engl.; **I**, *T. lucens* Oliv. A1, Breteler 15670; A2, Sosef et al. 516; A3, Breteler 15680; B1, Van der Burg 766; B2, J.J. de Wilde 311; C1, Stoop-van de Kastele 210; C2, Beentje 889; D, Walker s.n.; E1, Mildbraed 5391; E2, Wilks 3519; F, N. Hallé 2822; G1, Breteler et al. 14477; G2, Breteler et al. 14491; H1, Bos 4981; H2, Van Andel et al. 3959; I1, de Koning 3909; I2, Beentje 875. Drawing by H. DE VRIES.

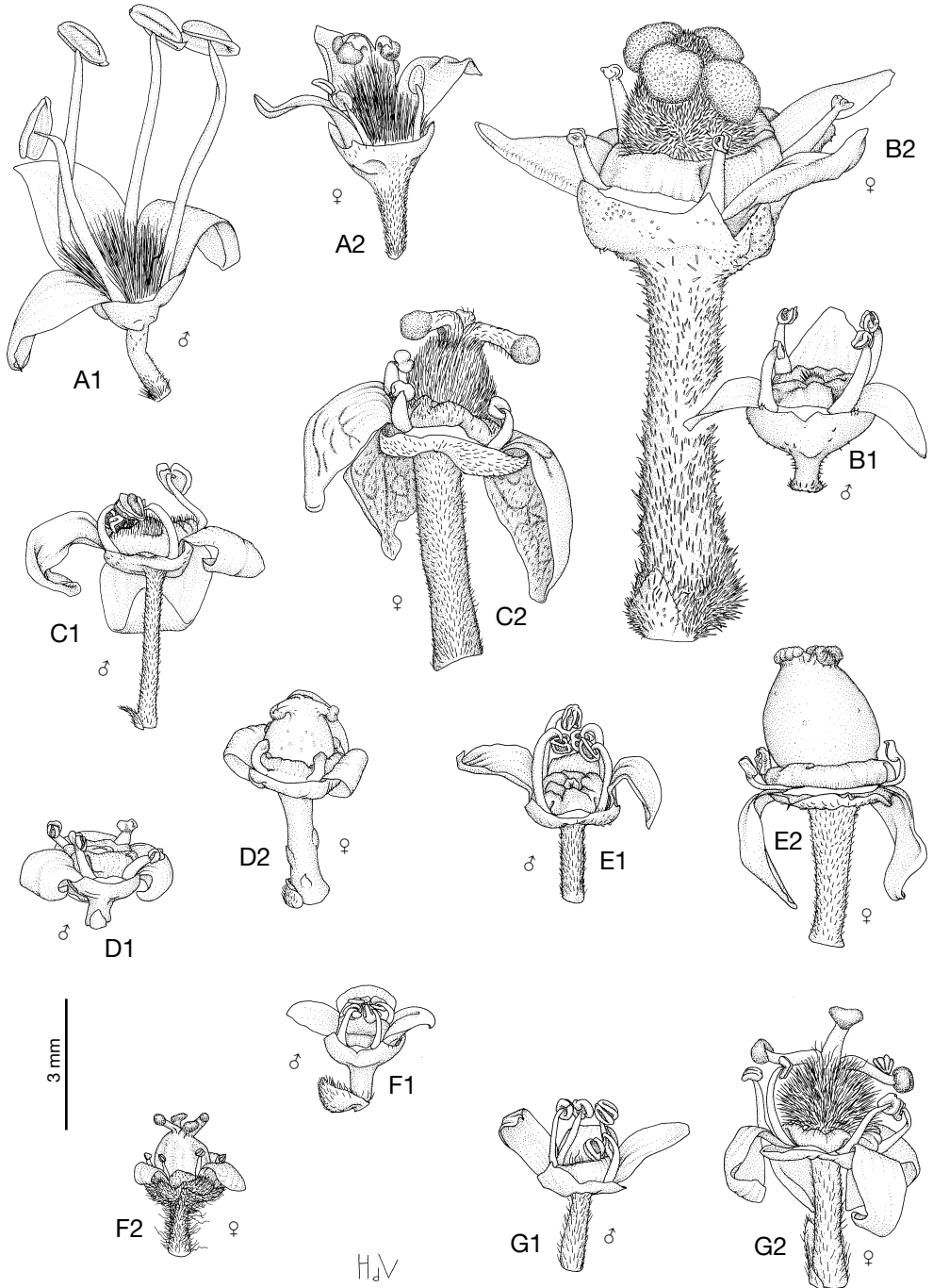


FIG. 2. — Flowers of *Trichoscypha* species, one petal removed: **A**, *T. mannii* Hook.f.; **B**, *T. oddonii* De Wild.; **C**, *T. oliveri* Engl.; **D**, *T. patens* (Oliv.) Engl.; **E**, *T. pauciflora* Van der Veken; **F**, *T. reygartii* De Wild.; **G**, *T. rubicunda* Lecomte. A1, Versteegh & Den Outer 739; A2, Talbot 1278; B1, J.J. de Wilde 11197; B2, J.J. de Wilde 11196; C1, Tchouto et al. LIKOX 56; C2, Van Andel et al. 3890; D1, Leeuwenberg 5213; D2, Van Andel et al. 4262; E1, Michelson 895; E2, A. Léonard 5154; F1, Breteler et al. 14501; F2, Reygaert 94; G1, Klaine 1080; G2, Klaine 251. Drawing by H. DE VRIES.

Trichoscypha redingii De Wild., Bull. Jard. Bot. État 4: 369 (1914); Van der Veken, Fl. Congo Belge et Ruanda-Urundi 9: 71 (1960). — Type: *Reding 51*, Congo (Kinshasa), between Mongodolo and Bumba, ♂ fl. Sep. 1911 (holo-, BR!).

Schubea heterophylla Pax in Engl., Bot. Jahrb. Syst. 28: 22 (1899), flowers only; Pax & Hoffmann, Euphorbiaceae in Engl. & Prantl, Nat. Pflanzenfam. ed. 2, 19c: 233 (1931); Keay in Hutch. & Dalz., Fl. West Trop. Afr. ed. 2, 1: 735, flowers only. — Type: *Preuss 1330*, Cameroun, between Victoria and Bimbia, ♂ fl. Aug. 1892 (holo-, B, delet.; lecto-, K!, designated here, flowers only, n.v.)

Trichoscypha büttneri Engl., Bot. Jahrb. Syst. 15: 112 (1892), nomen. See Notes.

Unbranched or poorly branched tree up to 20 m tall and 45 cm dbh. Leaves usually crowded at the top of the stem or branches, up to c. 1.5 m long, 7-17(-22?)-jugate. Leaflets oblong-elliptic, sometimes lanceolate, (6-)15-20(-28) × (2-)3-7 (-10) cm, with (9-)12-18 pairs of main lateral nerves, usually glabrous beneath or nearly so. Inflorescence borne on the lower part (≤ 4 m) of the stem, the male inflorescence up to 30 cm long, the female one usually shorter; bracts of the inflorescence 1.5-3.5 × 1-2 cm, deciduous. Flowers (Apr.-Dec.) pink to wine-red. Fruits (May-Nov.) subellipsoid, up to 6 × 3.5 cm, puberulous to shortly velutinous, (partly) glabrescent, dark red at maturity, edible. — Figs 1A; 3.

HABITAT AND DISTRIBUTION. — Rain forest, from Nigeria to Central African Republic, Congo (Kinshasa) and Angola (Cabinda). Alt. up to c. 800 m.

SELECTED SPECIMENS. — ANGOLA: *Gossweiler 6831*, Buco Zau, fl., juv. fr. (BM!, COI!, K!); *Gossweiler 8164*, Landana, ster. (BM!, COI!, K!). — CAMEROUN: *Asonganyi 318*, Somalomo, fl. b. June (P!); *Bates 847*, Bitye, fl. (BM!); *Bos 4778*, 20 km Kribi-Lolodorf, fr. June (MO!, P!, WAG!); *Breteler 1745*, Dimako, fl. Aug. (P!, WAG!); *J.J. de Wilde 7672*, Nkoemvone, fl. Nov. (BR!, MA!, MO!, P!, WAG!); *Dundas FHI 15218*, Etam, fl. May (K!); *Leeuwenberg 5770*, Atozok, fl. June (MO!, P!, WAG!); *Letouzey 11309*, Bikok, juv. fr. June (K!, P!); *Rudatis 41*, Abonando, fl. Apr. (G!, K!); *Thomas 4710*, Korup Nat. Park, fl. Apr. (MO!); *Van Andel 4191*, Boussebeliga Creek, fl. b. Oct. (WAG!); *Zenker 1747*, Bipindi, fl. (A!, BM!, COI!, G!, K!, MO!, P!, WAG!, Z!). — CENTRAL AFRICAN REPUBLIC: *Harris 2272*, 45 km S of Lidjombo, fl. Nov. (MO!). — CONGO (Brazzaville): *Bouquet 496*, forêt de Bangou,

fl. Sep. (P!); *Bouquet 608*, Mayama-Mouyondzi, ster. Nov. (P!); *Bouquet 711*, Tsiako, fr. Nov. (P!); *de Foresta 1363*, Makaba, ster. June (P!); *Sargos 48*, Kouilou, fl. Mar. (P!). — CONGO (Kinshasa): *Bequaert 639*, Boma Sundi, fl. Aug. (BM!, BR!); *Dubois 259*, Kombo, fl. Dec. (BR!, WAG!); *Gillardin 302*, Kakenge, ster. Nov. (BR!, G!, WAG!); *Laurent s.n.*, Ibali, fl. Nov. (BR!, G!); *Lebrun 872*, Eala, fl. Aug. (BR!, WAG!); *Toussaint 2021*, Luki, ster. Aug. (BR!, K!, WAG!); *Wagemans 1914*, Gimbi, ster. Mar. (K!, WAG!). — EQUATORIAL GUINEA: *Mann 1845*, Corisco Bay, fl. Sep. (A!, K!, P!). — GABON: *Bourobou 113*, near Makokou, fl. Dec. (WAG!); *Breteler & Jongkind 10418*, 5-15 km NNW Ndjolé, fr. Nov. (LBV, WAG!); *Breteler et al. 14635*, Gamba, fl., fr. Nov. (LBV, WAG!); *Breteler et al. 14955*, Makandé, ster. Feb. (LBV, WAG!); *Breteler 15760*, Olounga, fl. Oct. (LBV, WAG!); *De Wilde & Sosef 10297*, N of Ebel-Alémbé, fr. Jan. (WAG!); *N. Hallé 2960*, Bélinga, fl. Nov. (P!, WAG!); *Le Testu 1281*, Loukandou, fl. Dec. (BM!); *Le Testu 7464*, Pougui, fl. Sep. (BM!, P!); *Reitsma c.s. 1475*, Oveng, fl. Sep. (LBV, WAG!); *Schoenmaker 85*, Rabi-Kounga, fl. Oct. (LBV, WAG!); *Sosef et al. 516*, Lopé Reserve, fl., fr. Oct. (LBV!, WAG!). — NIGERIA: *Jones & Onochie FHI 18730*, Ogoja, ster. May (K!, P!); *Jones & Onochie FHI 18731*, Afi R. F.R., fl. May (K!); *Van Meer 1625*, Awi, fl. May (WAG!).

NOTES. — By the transfer of *Sorindeia mannii* Oliv. to *Trichoscypha* the epithet could not be maintained because of the earlier *Trichoscypha mannii* Hook.f. *Trichoscypha acuminata* is the new name by ENGLER based on the same type.

ENGLER confused *Trichoscypha braunii* with *T. büttneri* when he discussed the position of his *T. ferruginea*, most likely because he based *T. braunii* on two syntypes, one collected by *Braun* in Cameroun, the other by *Büttner* in Gabon. In my opinion it is without doubt that ENGLER (p. 113) meant *T. braunii* where he wrote *T. büttnerii*. Of the original material of *T. braunii* at Berlin, a duplicate of *Büttner's* collection remains. It has been designated as the lectotype.

The petals of *T. ferruginea* are described by Engler as “*intus arachnoideo-pilosis*”, which I have never observed in *T. acuminata*. The petals are always glabrous inside. Unfortunately the lectotype at Kew has leaves only. All the other characteristics of the flower fit *T. acuminata*. The arachnoid indumentum referred to by Engler might in fact be caused by a fungus, or by inaccurate observation, as the dried petals may be

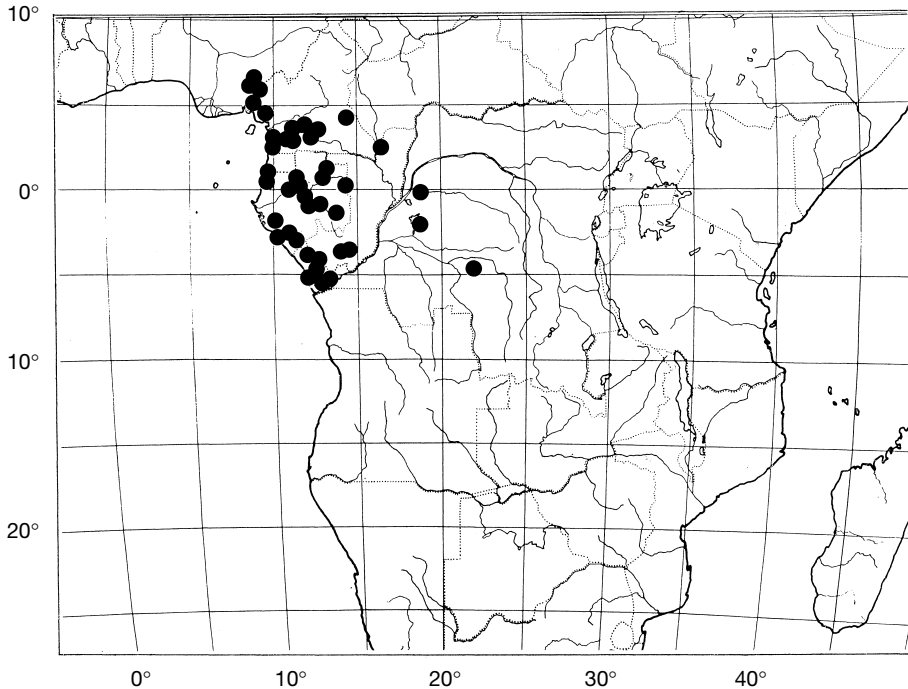


FIG. 3. — Distribution of *Trichoscypha acuminata* Engl.

strongly wrinkled inside, which gives them the aspect of being arachnoid.

DE WILDEMAN based his *Trichoscypha flamigni* on *Flamigni* 128, of which only the flowers represent *Trichoscypha*, the leaflets belonging to *Carapa* (Meliaceae), most probably to *C. procera* DC.

The relationship between *Trichoscypha acuminata* and *T. odonii* is discussed under the latter.

2. *Trichoscypha arborea* (A. Chev.) A. Chev.

Expl. Bot.: 161 (1920); Keay in Hutch. & Dalz., Fl. West Trop. ed. 2, 1: 736 (1958); Breteler, *Adansonia*, sér. 3, 23: 250 (2001). — *Emiliomarcelia arborea* A. Chev., Bull. Soc. Bot. France 58, Mém. 8d: 151 (1912). — Type: *Chevalier* 22322, Côte d'Ivoire, Yapo, fr. Oct. 1909 (holo-, P!; iso-, K!, WAG!).

Trichoscypha rubriflora Engl. & Brehmer, Bot. Jahrb. Syst. 54: 318 (1917). — Type: *Ledermann* 469, Cameroun, Bodje, Bukumbe, ♀ fl. Aug. 1908 (holo-, B, delet.). Neotype (designated here): *Van Andel et al.* 4163, Cameroun, Campo Ma'an area, Elephant Mt., juv. fr. Oct. 2001 (WAG!).

Tree up to 30 m tall, trunk to 40 cm diam. Leaves 6-9-jugate; leaflets coriaceous, glabrous, smooth. Inflorescences up to *c.* 80 cm long. Flowers (May-Nov.) red to purplish. Fruits (Oct.-Feb.) red, smooth and glabrous at maturity. — Figs 1B; 4.

HABITAT AND DISTRIBUTION. — Rain forest of Nigeria and Cameroun. Also known from Upper Guinea. Alt. below 300 m (see note under *T. patens*).

SPECIMENS EXAMINED. — CAMEROUN: *Tchouto et al.* 3293, Bifa, fl. Oct. (SCA, WAG!); *Tchouto & Elad* MIRAX 13, fl. b. Aug. (WAG!); *Thomas* 4735, Ndiam R., fl. b. April (K!, MO!); *Van Andel* 4163, Elephant Mt., juv. fr. Oct. (WAG!). — NIGERIA: *Latilo FHI* 45811, Oban Group F, R., fr. Feb. (FHO!, K!); *Talbot* 209, Oban, fl. (BM!, K!).

NOTES. — The identity of *Trichoscypha rubriflora* is without doubt. The various elements of the original description such as tree, the coriaceous,

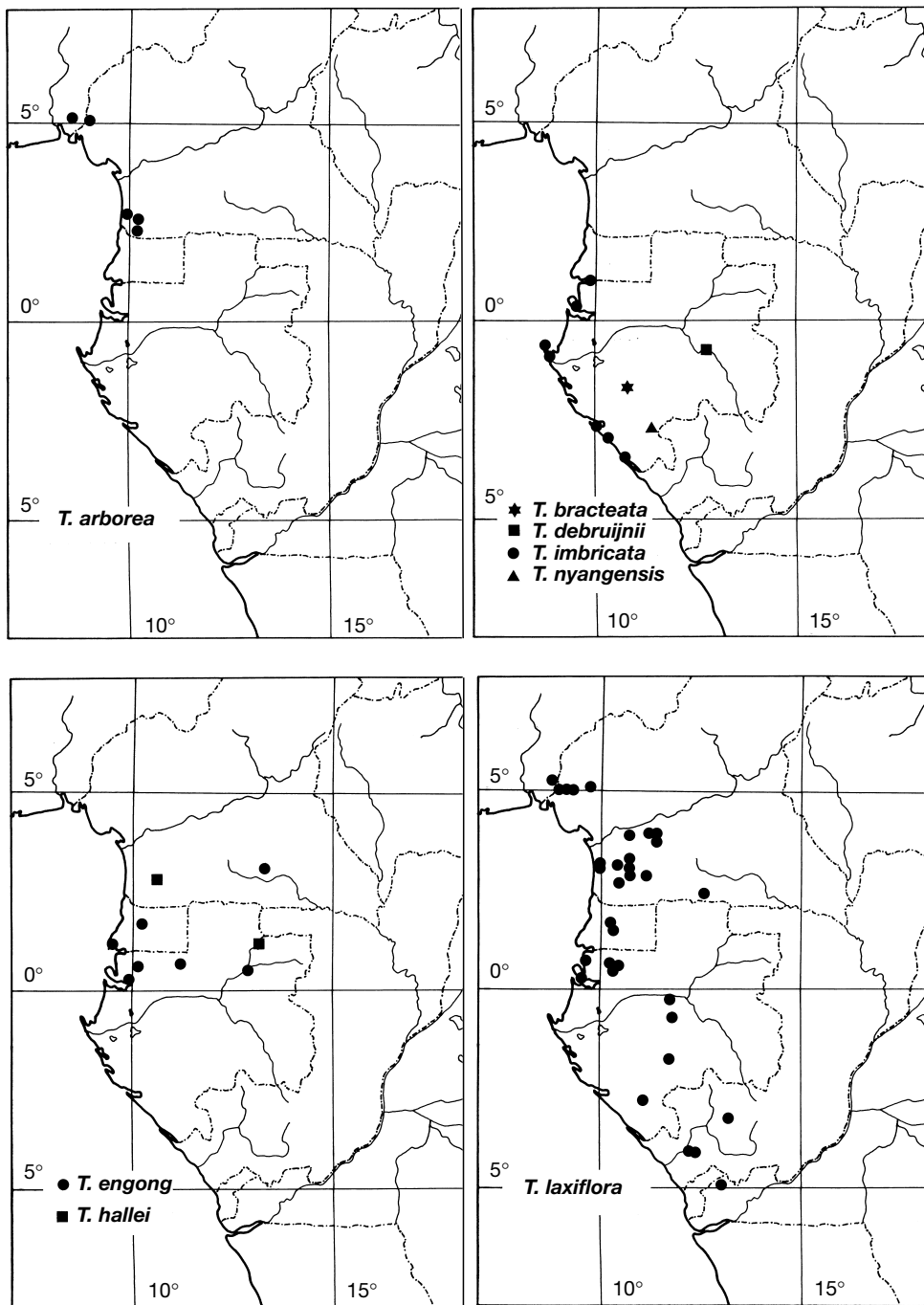


FIG. 4. — Distribution of *Trichoscypha* species 2, 4-9, 12.

glabrous leaflets with prominent midrib on both sides, the terminal inflorescence and the red flowers point unmistakably to *T. arborea*. There was no female flowering specimen available from or near the type locality to be designated as neotype. Therefore a specimen with young fruits has been chosen.

3. *Trichoscypha bijuga* Engl.

Bot. Jahrb. Syst. 1: 425 (1881); Keay in Hutch. & Dalz., Fl. West Trop. Afr. ed. 2, 1: 736 (1958); Breteler, Adansonia, sér. 3, 23: 252 (2001). — Type: *Mann 2343*, Equatorial Guinea, Bioko, sin. loc., ♂ fl. Mar. (holo-, B, delet.; lecto-, K!; iso-, A!, P!).

Trichoscypha reticulata Engl. in DC, Monogr. Phan. 4: 307 (1883). — Type: *Soyaux 112*, Gabon, Sibangefarm, ♀ fl. Aug. 1880 (holo-, B, delet.; lecto-, designated here, P!; iso-, K!, Z!).

Trichoscypha preussii Engl., Bot. Jahrb. Syst. 15: 110 (1892); Keay in Hutch. & Dalz., Fl. West Trop. Afr. ed. 2, 1: 736 (1958). — Type: *Preuss 463*, Cameroun, Barombi-ba-Mbu, ♂ fl. Sep. 1890 (holo-, B, delet.; lecto-, K!).

Trichoscypha dinklagei Engl., Bot. Jahrb. Syst. 36: 224 (1905). — Type: *Dinklage 265*, Cameroun, Lokundje R., ♂ fl. Nov. 1889 (holo-, B, delet.). Neotype (designated here): *Bos 7146*, Cameroun 36 km Kribi-Campo, ♂ fl. July 1970 (WAG!; iso-, K!). See Notes.

Trichoscypha gossweileri Exell & Mendonça, Bol. Soc. Brot., sér. 2, 26: 278, tab. 2 (1952); Consp. Fl. Ang. 2: 124, tab. 29 (1956); Van der Veken, Fl. Congo Belge et Ruanda-Urundi 9: 85 (1960). — Type: *Gossweiler 6630*, Angola, Cabinda, Buco Zau, rio Munze, ♀ fl. Aug. 1916 (holo-, BM!; iso-, COI!).

Shrub to small tree up to 20 m tall, trunk *c.* 15 cm in diam. Leaves 2-10(-13)-jugate; leaflets usually papery, with an impressed hairy midrib above, up to 40 × 11 cm. Inflorescence usually borne on the leafy shoot above, between or just below the leaves, often sharply reflexed at base and pendulous. Flowers (Jan.-Nov.) white to pale-red, the male ones sessile or nearly so, the female ones more often distinctly pedicelled. Fruits (Jan.-Dec.) red, ellipsoid to spindle-shaped, up to 4.5 × 2.5 cm, red, glabrous. — Figs 1C; 5.

HABITAT AND DISTRIBUTION. — Rain forest, from Nigeria to Congo (Kinshasa); also known from Upper Guinea. Alt. up to *c.* 1000 m.

SELECTED SPECIMENS. — ANGOLA: *Gossweiler 6630*, Buco Zau, fl. Aug. (BM!, COI!). — CAMEROUN: *Binuyo & Daramola FHI 35059*, Kumba, fr. Jan. (FHO!, K!, P!); *Bos 3314*, near Kribi, fr. Nov. (K!, P!, WAG!); *Cable et al. 845*, Kupé Mt., fl. Jan. (WAG!); *J.J. de Wilde 8460*, Nkoemvone, fl. Sep. (BR!, K!, MA!, MO!, WAG!); *Gentry & Thomas 52668*, 10 km SE Korup, ster. Nov. (MO!, WAG!); *Leeuwenberg 8359*, Eboné, fl. Nov. (BR!, P!, WAG!); *Mildbread 10700*, Likomba, fl. Nov. (A!, K!); *Sonké 1216*, Dikoumbe, juv. fr. May (BR!); *Tchouto & Elad BIFAX 124*, Bifa, juv. fr. Oct. (WAG!); *Tchouto et al. NMX 107*, Bibabimvone, fl. July (WAG!); *Thomas 6145*, Tisongo Lake, fr. June (K!, MO!, WAG!); *Zenker 2202*, Bipindi, fl. (BM!, BR!, COI!, G!, GOET!, K!, MO!, P!, WAG!, Z!). — CONGO (Brazzaville): *Bouquet 651*, Loualou, fr. Nov. (P!); *Cusset 593*, Kuila, juv. fr. Nov. (P!); *Sita 4907*, Simba, fl. (BR!). — CONGO (Kinshasa): *Mahieu 266*, Luki, fl. (BR!). — EQUATORIAL GUINEA: *Mann 2343*, Bioko, sin. loc., fl. Mar. (A!, K!, P!); *Lejoly & Van Asbroeck 49*, Etembue, fl. b. Aug. (BRLU!). — GABON: *Arends et al. 393*, Waka, fr. Nov. (BR!, LBV, MO!, WAG!); *Breteler & Jongkind 10188*, Rabi, fr. Oct. (LBV, WAG!); *Breteler c.s. 12375*, Lifouta, fr. Nov. (WAG!); *Breteler & de Wilde 347*, Kinguélé, fl. Aug. (BR!, K!, LBV, MO!, WAG!); *N. Hallé 3604*, Bélinga, fr. Dec. (P!); *Le Testu 1588*, Issala, fl. Aug. (BM!, P!, WAG!); *Le Testu 7462*, Pougui, fl. Sep. (BM!, BR!, P!, WAG!); *Sosef et al. 695*, Iboundji Mt., fr. Feb. (LBV, WAG!); *Soyaux 112*, Sibange, fl. Aug. (K!, P!, Z!); *L. White 1182*, Lopé Res., Reitsma's plot, fl. Aug. (LBV, MO!, WAG!); *Wieringa et al. 3028*, near Fougamou, fr. Nov. (LBV, WAG!). — NIGERIA: *Gentry & Pilz 32889*, 25 km N of Oban, ster. June (MO!); *Latilo FHI 30925*, Boshi-Okwango F.R., fr. May (K!); *Okafor & Latilo FHI 57288*, Ondo, fl. Sep. (FHO!, K!); *Talbot 1301*, Oban, fl. (BM!, K!). — CULTA (Netherlands): *de Bruijn 1904*, Wageningen, seedling (WAG!).

NOTES. — It was with some difficulty and only after other species had been excluded that *Trichoscypha dinklagei*, of which all the type material was lost, could be identified as representing *T. bijuga*. The short pedicel, the short stamens, and the glabrous disc, as mentioned in the original description, point to this species. *Trichoscypha bijuga* is a common species in the region around Kribi where DINKLAGE collected the type of *T. dinklagei*. More than 20 out of a total of 55 collections of this species examined from Cameroun are from this area, one of which from near Kribi is here designated as the neotype.

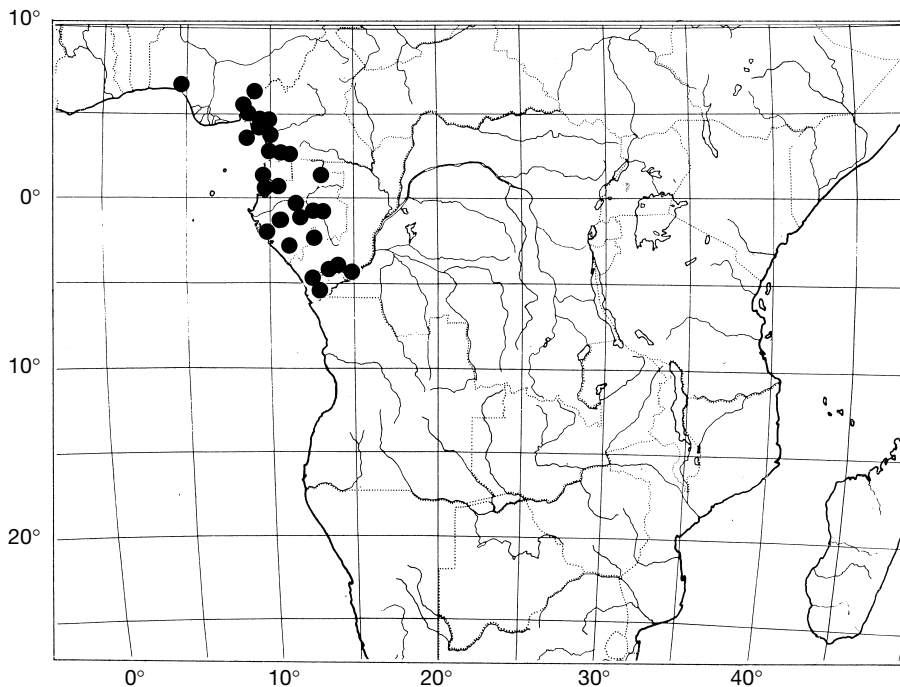


FIG. 5. — Distribution of *Trichoscypha bijuga* Engl.

4. *Trichoscypha bracteata* Breteler, sp. nov.

T. bijugae Engl. *affinis disco glabro et inflorescentia compacta, ab ea differt bracteis grandibus persistentibus, staminibus inflexis et disco floris masculis majore, perispicue exposito, irregulatim plicato.*

TYPUS . — *Walker s.n.*, Gabon, St. Martin, ♂ fl. July 1939 (holo-, P!; iso-, WAG!).

Medium sized tree. Branchlets appressed-pubescent. Leaves 7-13-foliolate; petiole and rachis appressed-puberulous; leaflets alternate to subopposite, elliptic to lanceolate, 2-4 times as long as wide, (4-)8-15 × (1.5-)2.5-5 cm, rounded to cuneate at base, shortly acuminate at apex, glabrous above except for the impressed, pubescent midrib, beneath appressed-puberulous on midrib and the 9-12(-14) pairs of main lateral nerves, sparsely so to glabrous on the remaining surface. Inflorescence (sub)terminal, panicle, compact, up to *c.* 5 cm long, densely bracteate until anthesis, pubescent; main bracts subtending the flower

clusters boat-shaped, ± keeled, 5-10 mm long, appressed-pubescent outside, appressed-puberulous inside; secondary bracts and bracteoles much smaller. Flowers 4(-5)-merous; male flower: pedicel 2-3 mm long, pubescent; calyx *c.* 1 mm long, shortly lobed, appressed-puberulous outside; petals narrowly imbricate, spreading to reflexed, ovate-elliptic, *c.* 2.5 × 2 mm, glabrous; stamens inflexed, slightly shorter than petals, glabrous; disc well exposed, ± quadrate, 1.5-2 mm across, irregularly plicate, glabrous. Pistillode glabrous. Female flowers and fruits unknown. — Figs 1D; 4; 6.

HABITAT AND DISTRIBUTION. — Rain forest of W Gabon. Alt. below 300 m.

NOTES. — The calyx of *Trichoscypha bracteata* is distinctly appressed-puberulous outside in bud, but at anthesis it is glabrous or nearly so (Fig. 6 F). I have never before observed this phenomenon so clearly in a single specimen (see also BRETILER 2001: 248).

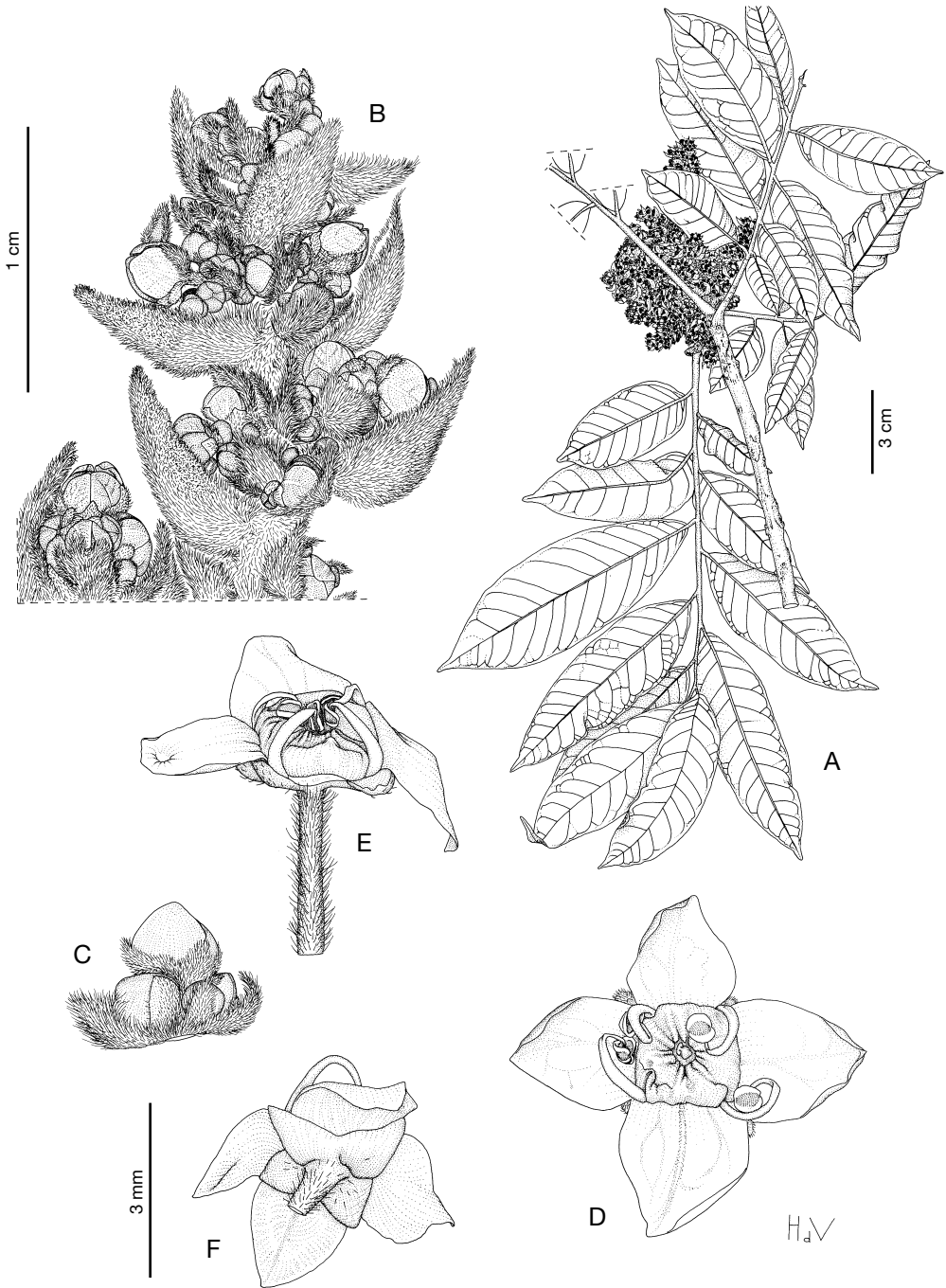


FIG. 6. — *Trichoscypha bracteata* Breteler: **A**, flowering branch; **B**, part of inflorescence; **C**, detail of inflorescence, showing pubescent calyx; **D**, flower from above; **E**, flower, one petal removed; **F**, open flower from beneath, calyx nearly glabrous. All from *Walker s.n.* Drawing by H. DE VRIES.

5. *Trichoscypha debruijnii* Breteler, sp. nov.

T. acuminatae Engl. et *T. odonii* De Wild. *affinis inflorescentiis caulifloris et fructibus piliferis, ab eis differt foliolis basi valde obliquis inferne indumento stellatopiloso vestitis.*

TYPUS. — *Van der Maesen, Louis & De Bruijn 5837*, Gabon, 23 km from Lastoursville, railway bridge, fr. Nov. 1988 (holo-, WAG!; iso-, G, K, LBV, MO, P).

Treelet *c.* 5 m tall, trunk 3-5 cm in diam. Branchlets tomentellous, hairs stellate. Leaves up to *c.* 80 cm long, 13-jugate, petiole and rachis subterete, hairy like the branchlet; folioles opposite to alternate, obliquely elliptic-lanceolate, (2-)3-4 times as long as wide, (8-)14-20 × 4-5 cm, strongly asymmetric at base, cuneate on the proximal side, rounded to obtuse distally, apex caudate-acuminate, the acumen 2-2.5 cm long, ± sparsely stellate-hairy on the impressed midrib above, densely so beneath; lateral nerves 16-20 pairs, slightly prominent beneath; petiolule (6-)7-9(-10) mm long. Inflorescence borne on the main stem at *c.* 1.8 m height, brown-short-hairy, hairs mainly simple. Male flower unknown. Female flower (see note): pedicel *c.* 1 mm long, puberulous; calyx *c.* 1.5 mm long, puberulous outside, lobes *c.* 0.5 mm long; petals narrowly imbricate, reflexed at anthesis, ovate-oblong, *c.* 2.5 mm long, sparsely subappressed-puberulous outside; staminodes *c.* 1 mm long; disc ± cup-shaped, sparsely hairy inside; ovary tomentellous, stigmas sessile. Fruit red, ovoid-ellipsoid, 3.5-5 × 2.5-3.5 cm, velvety, hairs simple; pulp red. Seed ellipsoid, laterally compressed, 3.2 × 1.8 × 1.5 cm. — Figs 4; 7.

HABITAT AND DISTRIBUTION. — Rain forest in Central Gabon. Alt. 300-400 m.

NOTES. — *Trichoscypha debruijnii* is the only species of this genus with a stellate indumentum, a feature that is quite common in the genus *Lannea* of the Anacardiaceae.

The description of the female flower is based on some debris found attached to the infructescence.

The species is named after J. DE BRUIJN, an excellent field worker and one of the collectors of the type specimen.

6. *Trichoscypha engong* Engl. & Brehmer

Bot. Jahrb. Syst. 54: 324 (1917), as *T. eugong*. — Type: *Mildbraed 5391*, Cameroun Lomie area, ♀ fl. May 1911 (holo-, B, delet.; lecto-, HBG!), designated here, isolecto-, BR!).

Trichoscypha tessmannii Engl. & Brehmer, Bot. Jahrb. Syst. 54: 316 (1917). — Type: *Tessmann 77*, Equatorial Guinea, Nkolentanga, ♂ fl. Dec. 1907 (holo-, B, delet.; lecto-, K!, designated here). *Trichoscypha* spp. Wilks & Issembé, Arbres Guinée Équatoriale: 96 (2000). See Notes.

Tree with large crown, up to at least 35 m tall, trunk 1 m dbh. Leaves crowded at the end of the branches, up to *c.* 12-jugate. Leaflets papery to coriaceous, subopposite, ovate-elliptic to oblong, rarely obovate, (11-)16-20(-25) × 6-9 cm, broadly rounded at base, acutely acuminate, glabrous above except for the ± puberulous, impressed midrib, sparsely puberulous beneath, often more densely so on the midrib and the (11-) 13-20 pairs of main lateral nerves, or almost glabrous. Inflorescences borne on the thicker branches well below the leaves, more rarely on the upper part of the trunk, with large bracts subtending the main branches, ferruginous. Flowers (May, Dec.) shortly pedicellate, red. Fruits pink to red, dull, glabrous, *c.* 4 cm long, edible (see Notes). — Figs 1E; 4.

HABITAT AND DISTRIBUTION. — Primary or old secondary rain forest of Cameroun, Equatorial Guinea and Gabon. Alt. up to *c.* 800 m.

SPECIMENS EXAMINED. — CAMEROUN: *Mildbraed 5391*, Lomié region, fl. May (BR!, HBG!). — EQUATORIAL GUINEA: *Tessmann 77*, Nkolentanga, fl. Dec. (K!); *Wilks 3517*, Alen Mt., ster. Apr. (BRLU!, WAG!); *Wilks 3519*, Moka, fl. May (BRLU!, WAG!). — GABON: *F.J. & B.J.M. Breteler 15551*, Kouamé on Assok Rd., ster. Aug. (LBV, WAG!); *Breteler et al. 15709*, IRET near Makokou, ster. Mar. (LBV, WAG!); *Corbet 1017 SRF*, Kougouleu, ster. Dec. (P!); *J.M. & B. Reitsma 1230*, Oveng, ster. June (LBV, WAG!).

NOTES. — *Trichoscypha engong* was originally published as *T. eugong*. The epithet is based on the vernacular name “engong”, which was mentioned by MILD BRAED, the collector of the type, of which

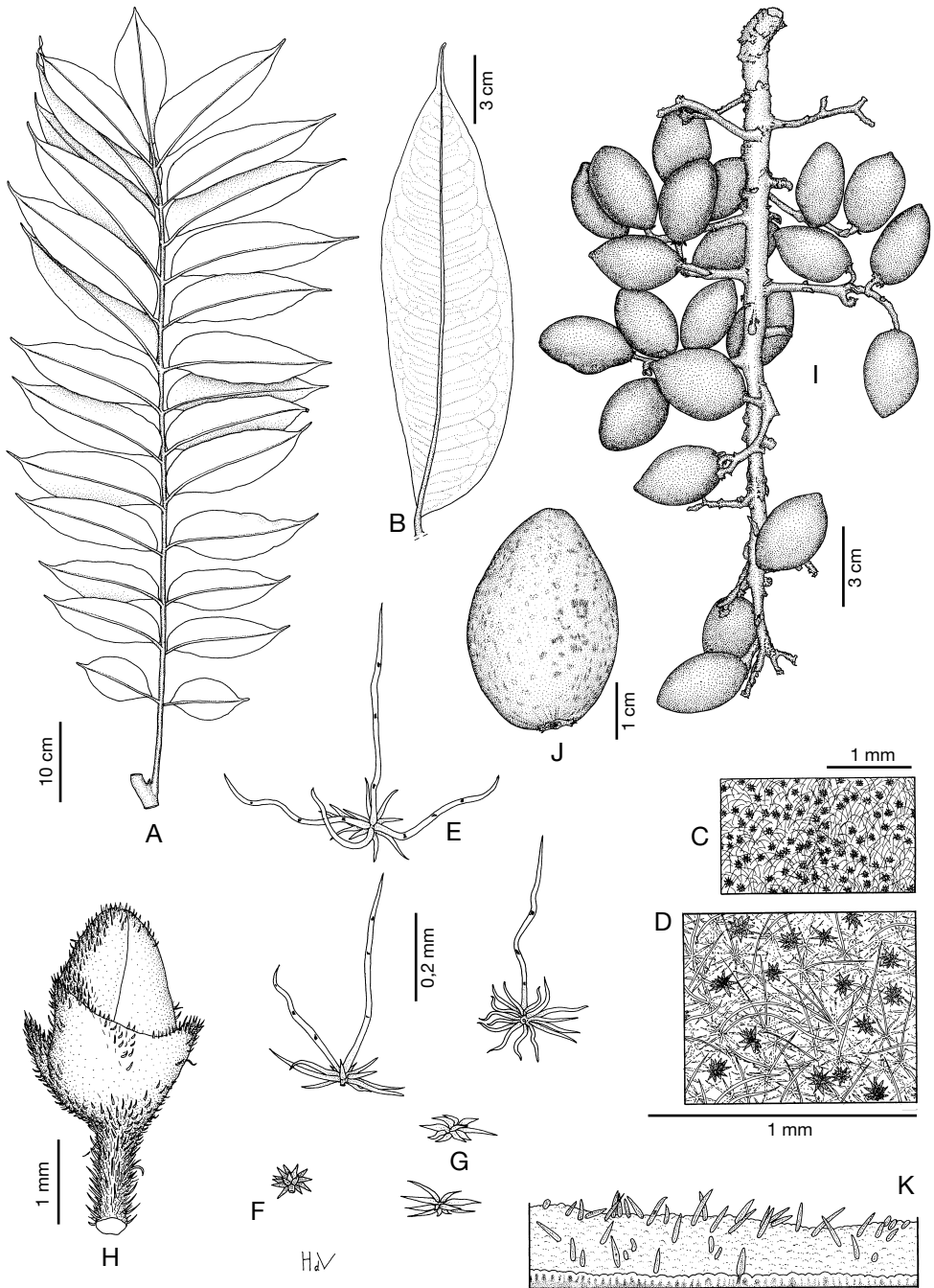


FIG. 7. — *Trichoscypha debuijnii* Breteler: **A**, leaf; **B**, leaflet, lower surface; **C**, **D**, detail lower surface of leaflet; **E**–**G**, stellate hairs; **H**, flower bud; **I**, infructescence; **J**, fruit; **K**, detail of fruit indumentum. All from Van der Maesen et al. 5837. Drawing by H. DE VRIES.

the duplicate at Hamburg is here designated lectotype, the holotype at Berlin having been destroyed. Either by misreading by the authors ENGLER & BREHMER (1917) or by misprinting “engong” became “eugong”. MILDBRAED himself (1922: 77) referred to this error in saying: “Der Bulu-Name is engong nicht eugong”. Also WILKS & ISSEMBÉ (2000) refer to this species by its vernacular name “engong”, which is also used in northern Gabon (*Breteler c.s. 15551* and *Corbet 1017 SRF*). The name “engong” is also mentioned by ENGLER & BREHMER (1917) when they published *T. tessmannii*. Because the holotype at Berlin was destroyed, the isotype of this specific name at Kew has been designated lectotype.

According to *Mildbread 5391* and WILKS & ISSEMBÉ (2000: 96), the fruits are edible.

7. *Trichoscypha hallei* Breteler, sp. nov.

T. laxiflorae Engl. *affinis floribus parvis, petalis valvatis, disco glabro et foliis in pagina inferiore punctis numerosis parvis brunneis obsitis, ab ea differt pedicellis florum masculorum multum brevioribus, petalis piliferis et fructus pilifero.*

TYPUS. — *N. Hallé 2822*, Gabon, Bélinga, ♂ fl. Oct. 1964 (holo-, P!; iso-, WAG!).

Shrub or treelet 3-6 m tall. Branchlets pubescent. Leaves 7-8-jugate, petiole and rachis pubescent; folioles oblong-elliptic, 2-4 times as long as wide, 11-30 × 3.5-7(-8) cm, rounded at base, caudate-acuminate, the acumen (1-)1.5-2(-2.5) cm long; midrib impressed above, pubescent; beneath ± sparsely pubescent and with minute brown dots, the 17-27 pairs of main lateral nerves parallel, slightly impressed above, prominent beneath; petiolule 5-10 mm long, grooved above, pubescent. Inflorescence a (sub)terminal or axillary, pubescent, loose panicle, the male inflorescence up to c. 60 cm long, the female one much shorter. Male flower 4-merous, yellowish; pedicel ≤ 1 mm long, pubescent; calyx c. 1 mm long, pubescent; petals valvate in bud, suberect to slightly spreading, ovate with an acute tip, 1.5 mm long, 1.2 mm wide, appressed-pubescent outside, margin papillate; stamens shorter than petals, ± inflexed,

glabrous; disc subquadrate, c. 1 × 1 mm, glabrous, with a small, velutinous pistillode in the centre. Female flower unknown. Fruit subglobose to ellipsoid, 2-2.5 × 1.8-2.2 cm, dark red at maturity, velvety. — Figs 1F; 4.

HABITAT AND DISTRIBUTION. — Rain forest in Cameroun and Gabon. Alt. 500-900 m.

PARATYPES. — CAMEROUN: *Van Andel et al. 3717*, Akom II, Nkol Dangueng, fr. Aug. (WAG!). — GABON: *Cours 7011*, Bélinga, fl. Oct. (MA!).

NOTES. — This species is named in honour of Nicolas HALLÉ, who has greatly enriched our knowledge of the Gabonese flora, not only by his very valuable collections, but also by his taxonomic treatments of several plant families.

8. *Trichoscypha imbricata* Engl.

Bot. Jahrb. Syst. 1: 426 (1881). — Type: *Mann 928*, Equatorial Guinea/Gabon, Gaboon R., ♂ fl. 1861 (holo-, K!; iso-, P!).

Trichoscypha nigra Lecomte, Bull. Soc. Bot. Fr. 52: 653 (1905). — Type: *Klaine 1005, 1051, 1193*, near Libreville (syn-, P); lecto-, designated here, *Klaine 1005*, fl. July 1897 (P!).

Shrub, lianescent shrub or liana. Leaves coriaceous, (1-)3-7(-9)-foliolate; folioles densely and minutely pustulate above, usually less apparently so beneath, glabrous above, usually except for the impressed midrib, glabrous to sparsely appressed-puberulous beneath. Flowers (July-Aug.) (sub)sessile, pale-green. Petals erect to somewhat spreading, c. 1.5 mm long; stamens ≤ petals; disc hispid. Fruits (Sep.-Nov.) sparsely appressed-puberulous, subglobose to ellipsoid, dark-red at maturity, c. 1.5-2.5 × 1.2-1.5 cm. Pulp juicy; cotyledons ± white on section. — Figs 1G; 4.

HABITAT AND DISTRIBUTION. — In coastal scrub on sandy soil, from the southern border of Equatorial Guinea to southern Gabon. Alt. 0-10 m.

SPECIMENS EXAMINED. — EQUATORIAL GUINEA/GABON: *Mann 928*, Gaboon R., fl. (K!;

P!). — GABON: *Breteler & Van Raalte 5534*, 15 km SE Port Gentil, fr. Sep. (BR!, LBV, WAG!); *Breteler et al. 14477*, Nyanga R., S of Gamba, fl. July (LBV, WAG!); *Breteler et al. 14491*, Gamba, fl. July (LBV, WAG!); *Breteler et al. 14600*, Gamba, fr. Nov. (LBV, WAG!); *Breteler et al. 14636*, Gamba, fr. Nov. (WAG!); *Fleury 26719*, near Cap Lopez, fr. Sep. (P!); *Klaine 230*, Libreville, fl. b. July (P!); *Klaine 233*, Libreville, fl. July (P!, WAG!); *Klaine 1005*, Libreville, fl. July (P!); *Klaine 1051*, Libreville, fl. Aug. (P!); *Klaine 1024*, Libreville, fl. Aug. (P!, WAG!); *Klaine 1193*, Libreville, fr. (P!); *Le Testu 1771*, Mayumba, fl. Aug. (BM!, P!, WAG!); *Reitsma c.s. 1262*, 25 km N of Libreville, fl. July (LBV!, WAG!); *Wieringa 1163*, Gamba, fl. b. June (WAG!).

9. *Trichoscypha laxiflora* Engl.

Bot. Jahrb. Syst. 1: 110 (1892). — Type: *Soyaux 320*, Gabon, Munda, ♂ fl. Nov. 1881 (holo-, B, delet.; lecto-, K!, designated here; iso-, Z!).

Trichoscypha camerunensis Engl., Bot. Jahrb. Syst. 15: 109 (1892); Keay in Hutch. & Dalz., Fl. West Trop. Afr. ed. 2, 1: 736. — Type: *Preuss 99*, Cameroun, Kumba-Ninga to Mokonje, ♂ fl. Apr. 1889 (holo-, B, delet.). Neotype (designated here): *Bos 4918*, Cameroun, 2 km N of Longii, ♂ fl. June 1969 (WAG!; iso-, BR, K, MO, P, PRÉ, UPS, YA). See Notes.

Trichoscypha talbotii Bak.f. in Rendle et al., Cat. Talbot Nig. Pl.: 22 (1913); Keay in Hutch. & Dalz., Fl. West Trop. Afr. ed. 2, 1: 735. — Type: *Talbot 579*, Nigeria, Oban, ♂ fl. (holo-, BM).

Trichoscypha heterophylla Engl. & Brehmer, Bot. Jahrb. Syst. 54: 314 (1917). — Type: *Zenker 2147, 2147a, 1883*, Cameroun, Bipindi, fl. July-Aug. 1899-1900 and *Mildbraed 5837, 5838*, Cameroun, near Kribi, fl. July 1911 (syn-, B, delet.); lecto-, designated here, *Zenker 2147*, ♂ fl. July 1900 (WAG; isolecto-, A!, BM!, COI!, G!, GOET!, K!, MO!, P!, Z!).

Trichoscypha dusenii Engl., Pflanzenw. Afrikas, III, II: 191 (1921). — Neotype (designated here): *Bos 5459*, Cameroun, 15 km N of Kribi, ♂ fl. Oct. 1969 (WAG!; iso-, K!, P!, YA). See Notes.

Shrub-treelet up to 2.5 (-15?, see Notes) m tall. Leaves very variable, (1-)3-5(-13)-foliolate; folioles variable in size and shape, from broadly elliptic to oblong-obovate, (5-)12-30(-40) × (2-)5-10(-16) cm, (1.5-)2-3(-5) times as long as wide, ± glabrous, beneath with minute, brown dots; lateral nerves 3-12(-17) pairs, impressed above. Flowers (Jan.-Dec.) dark red to purple; the male ones arranged in loose many-flowered panicles on thin, (2-)3-5(-7) mm long pedicels, the

female ones in narrow panicles, borne on shorter pedicels; petals distinctly valvate. Fruits (Jan.-Dec.) ellipsoid, 1.5-4.5 × 1-2.5 cm, glabrous, orange, smooth, glossy; pulp sweet, cotyledons purple. — Figs 1H; 4.

HABITAT AND DISTRIBUTION. — Rain forest, from SE Nigeria to Congo (Brazzaville). Alt. up to c. 800 m.

SELECTED SPECIMENS. — CAMEROUN: *Bamps 1742*, Lolodorf, fr. Jan. (BR!); *Bos 3718*, 17 km N of Kribi, fr. Jan. (BR!, WAG!); *Bos 4918*, 2 km N of Longhi, fl. June (BR!, K!, MO!, P!, PRÉ!, UPS!, WAG!, YA); *Bos 5459*, 15 km N of Kribi, fl. Oct. (WAG!); *Bos 6936*, Ottotomo Res., fl. May (WAG!); *Dang 633*, Nkolomang, fr. Mar. (P!); *J.J. de Wilde 7683*, Nkoemvone, fl. fr. Nov. (BR!, MO!, WAG!); *J.J. de Wilde et al. 12108*, Bingalanda Mts., fr. Dec. (WAG!); *W. de Wilde c.s. 1557*, 50 km W of Eséka, fr. Dec. (WAG!); *Etuge & Thomas 154*, Bakolle Bakossi, fl. May (A!); *Gentry & Thomas 62430*, Banyong, ster. May (MO!); *Letouzey 12297*, Boga, fr. Dec. (P!); *Mambo et al. 15*, Mbu, fl. Apr. (MO!); *Mézili 47*, Ngbouassa, fr. Nov. (P!); *Nemba & Thomas 15*, Mekom Bakossi, fl. Apr. (BR!, MA!, MO!); *Tchouto et al. EGONX 186*, Efulan & Egongo hills, fr. Dec. (WAG!); *Thomas 2096*, Kala Mt., fl. b. May (MO!); *Thomas & McLeod 5858*, Korup Nat. Park, fl. b. Mar. (MO!); *Zenker 2147*, Bipindi, fl. (A!, BM!, COI!, G!, GOET!, K!, MO!, P!, WAG!, Z!). — CONGO (Brazzaville): *Cusset 672*, Dimonika, ster. Nov. (P!); *Sita 2942*, Maseka, fl. Oct. (P!); *Sita 4167*, Moutouala, fr. Apr. (BR!, WAG!). — CONGO (Kinshasa): *Hauzer 36*, Kisafu, fl. Nov. (BR!). — EQUATORIAL GUINEA: *Lejoly 93/410*, Mbini, fr. Oct. (BRLU!); *Ngomo 86*, Alen Mt., fr. Mar. (BRLU!); *Van Reeth 147*, Chocolate Mt., fr. Jan. (BRLU!). — GABON: *Breteler et al. 14959*, Makandé, fr. Feb. (LBV, WAG!); *J.J. de Wilde et al. 59*, Kinguéle, fr. Jan. (BR!, LBV, MO!, P!, WAG!); *Hallé & Villiers 5098*, Mela Mt., fr. Feb. (P!); *Leeuwenberg 11464*, 8 km WSW Makokou, fl. Nov. (WAG!); *Le Testu 1643*, Issala, fl. Oct. (BM!, P!); *Louis et al. 930*, Mouyanama, fr. Nov. (BR!, LBV, MO!, WAG!); *Reitsma et al. 2117*, 13 km S of Cocobeach, fr. Apr. (WAG!); *Soyaux 320*, Sibange Farm, fl. Nov. (K!, Z!); *L. White 1341*, Lopé Reserve, fr. Feb. (LBV, MO!); *Wieringa 710*, Tchimbélé, fr. Mar. (WAG!). — NIGERIA: *Talbot 579*, Oban, fl. (BM!).

NOTES. — ENGLER (1892) described the petals of this species as “*intus minute puberulis*”. The flowers analyzed always have glabrous petals. It may be that either the flower(s) seen by ENGLER

had the petals molded inside or, being finely wrinkled, were misinterpreted as finely puberulous.

Trichoscypha camerunensis Engl. was published simultaneously with *T. laxiflora*. Its type was lost at Berlin and no duplicate has been found. As ENGLER's description leaves no doubt as regards the identity of *T. camerunensis*, a neotype has been designated accordingly. The only small difference between *Trichoscypha laxiflora* and *T. camerunensis* is found in the petals, which, for the latter are described by ENGLER as "flavidis", with blackish veins ("von schwärzlichen Adern durchzogen") whereas they are usually reported to be dark red to purple.

Trichoscypha dusenii Engl. was validly published, although no type material was mentioned. The short description in German, however, clearly points to *T. laxiflora* Engl. The neotype that has been chosen, originates from the same area where Ilende, the type locality indicated by ENGLER, is situated.

There are two collectors (*Gentry & Thomas 62430*) who described the habit of *T. laxiflora* as a treelet of 15 m tall, whereas all other collectors refer to it as a shrub up to at most 2.5 m tall, usually much smaller. *Trichoscypha* species can be variable as regards their habit (cf. *T. mannii*, *T. reygartii*) and it may therefore also occur in this species.

10. *Trichoscypha lucens* Oliv.

Fl. Trop. Afr. 1: 444 (1868); Breteler, *Adansonia*, sér. 3, 23: 259 (2001). — Type: *Mann 1749*, Equatorial Guinea/Gabon, River Muni, ♂ fl. Aug. (lecto-, K!; isolecto-, A!).

Trichoscypha coriacea Engl. & Brehmer, Bot. Jahrb. Syst. 54: 319 (1917). — Type: *Ledermann 1720*, Cameroun, Markt Singwa, Bambutoberge, ♂ fl. Dec. 1908 (holo-, B, delet.). Neotype (designated here): *Sidwell 415*, Cameroun, Nyasoso, ♂ fl. Oct. 1995 (WAG!). See Notes.

Trichoscypha ledermannii Engl. & Brehmer, Bot. Jahrb. Syst. 54: 321 (1917). — Type: *Ledermann 743*, Cameroun, Nkolibunde, ♂ fl. Oct. 1908 (holo- B, delet.). Neotype (designated here): *Letouzey 13307*, Cameroun, Bana Mts., ♂ fl. Nov. 1974 (WAG!; iso-, P!). See Notes.

Trichoscypha pallidiflora Engl. & Brehmer, Bot. Jahrb.

Syst. 54: 317 (1917). — Type: *Ledermann 665, 672*, Cameroun, Ilende, ♂ fl. Sep. 1908 (syn-, B, delet.). Neotype (designated here): *Bos 7348*, Cameroun, 9 km N of Kribi, ♂ fl. Sep. 1970 (WAG!; iso-, BR!, K!, P!). See Notes.

Trichoscypha rhoifolia Engl. & Brehmer, Bot. Jahrb. Syst. 54: 315 (1917). — Type: *Zenker 3509*, Cameroun, Bipindi, ♂ fl. Oct. 1907 (holo-, B, delet.; lecto-, P! (designated here); isolecto-, BM!, G!, GOET!, HBG!, K!, Z!).

Trichoscypha ulugurensis Mildbr., Notizbl. Bot. Gart. Berlin 11: 1071 (1934); R. & A. Fernandes, Fl. Zambesiaca 2: 572, tab. 124 (1966); Kokwaro, Anacardiaceae: 51, Fl. Trop. East Afr. (1986). — Type: *Schlieben 2724*, Tanzania, Uluguru Mts., ♂ fl. Sep. 1932 (holo-, B!; iso-, A!, BR!, G!, HBG!, MO!, P!).

Trichoscypha silveirana Exell & Mendonça, Bol. Soc. Brot. ser. 2, 26: 278, tab. 3 (1952); Consp. Fl. Angolensis 2: 124 (1956); Van der Veken, Fl. Congo Belge et Ruanda-Urundi 9: 80 (1960); R. & A. Fernandes, Fl. Zambesiaca 2: 572 (1966). — Type: *Gossweiler 11423*, Angola, Lunda, Dala, ♂ fl. Apr. 1937 (holo-, COI!; iso-, BM!, BR!).

Trichoscypha diversifoliolata Van der Veken, Bull. Jard. Bot. État 29: 254 (1959); Fl. Congo Belge et Ruanda-Urundi 9: 75 (1960). — Type: *Desenfans 1993*, Congo (Kinshasa), Mapanda, juv. fr. Aug. 1951 (holo-, BR!).

Trichoscypha ealaensis Van der Veken, Bull. Jard. Bot. État 29: 255 (1959); Fl. Congo Belge et Ruanda-Urundi 9: 78 (1960). — Type: *Pynaert 1118*, Congo (Kinshasa), Eala, ♂ fl. Feb. 1907 (BR! iso-, K!).

Trichoscypha kwangoensis Van der Veken, Bull. Jard. Bot. État 29: 256 (1959); Fl. Congo Belge et Ruanda-Urundi 9: 76 (1960). — Type: *Devred 2076*, Congo (Kinshasa), Tono-Feshi-Kwango, ♂ fl. June 1955 (holo-, BR!; iso-, MO!).

Trichoscypha liketensis Van der Veken, Bull. Jard. Bot. État 29: 257 (1959); Fl. Congo Belge et Ruanda-Urundi 9: 78 (1960). — Type: *Gorbatoff 287*, Congo (Kinshasa), Likete, fr. July 1953 (holo-, BR!).

Trichoscypha parvifoliolata Van der Veken, Bull. Jard. Bot. État 29: 258 (1959); Fl. Congo Belge et Ruanda-Urundi 9: 77 (1960). — Type: *Vanderyst 12416*, Congo (Kinshasa), Bampumu, juv. fr. Oct. 1922 (holo-, BR!).

Trichoscypha submontana Van der Veken, Bull. Jard. Bot. État 29: 260 (1959); Fl. Congo Belge et Ruanda-Urundi 9: 79, fig. 1 (1960). — Type: *Pierlot 2881*, Congo (Kinshasa), Bitale, ♀ fl. May 1959 (holo-, BR!).

Trichoscypha volubilis Van der Veken, Bull. Jard. Bot. État 29: 262 (1959); Fl. Congo Belge et Ruanda-Urundi 9: 76 (1960). — Type: *Germain 944*, Youndja Lake, fr. June 1948 (holo-, BR!).

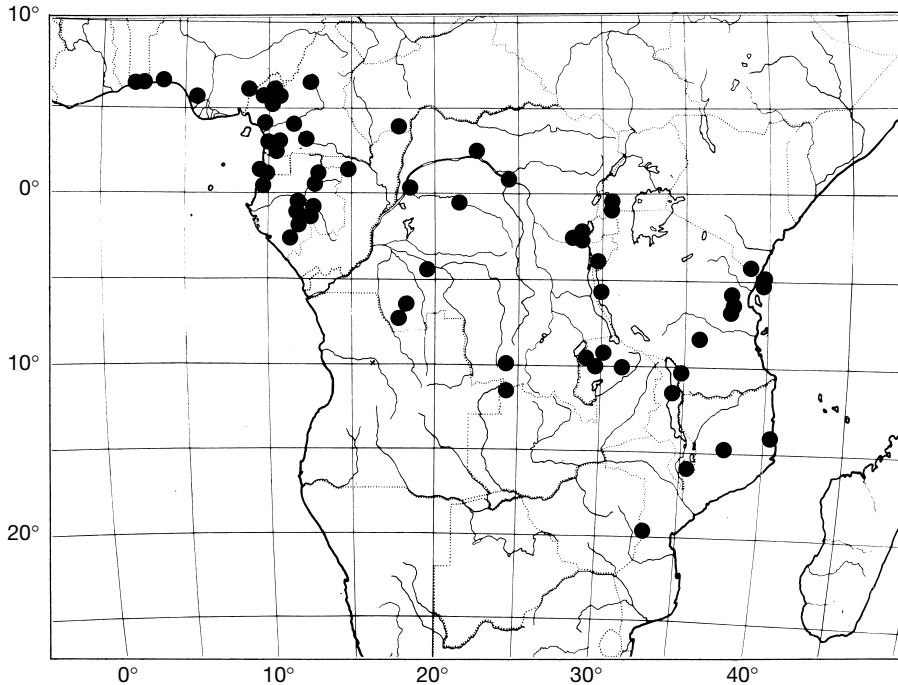


FIG. 8. — Distribution of *Trichoscypha lucens* Oliv.

Trees, or more rarely, scandent shrub or liana. Leaves (4-)5-10(-13)-jugate; leaflets papery to coriaceous, the lowest pair sometimes close to the stem, (2-)10-25(-36) × (1-)4-7(-12) cm, with 10-16 pairs of main lateral nerves, ± glabrous above except for the usually pubescent, impressed midrib, ± glabrous to sparsely appressed-puberulous to pubescent beneath, usually minutely pustulate above. Inflorescence brown-velutinous, (sub)terminal or borne below the leaves. Flowers (Jan.-Dec.) with white to pinkish petals. Fruits (June-Feb.) pink to dark red, subellipsoid, up to 3 × 2 cm, densely to sparsely hairy. — Figs 11; 8.

HABITAT AND DISTRIBUTION. — Rain forest of Lower Guinea and Congolia extending to the areas of the Flora of Tropical East Africa and Flora Zambesiaca. Alt. up to *c.* 2000 m. Also known from Upper Guinea.

SELECTED SPECIMENS. — ANGOLA: *Gossweiler 11423*, Dala, fl. Apr. (BM!, BR!, COI!). — BENIN:

Adjanohoun 287, Porto Novo, fl. Sep. (K!, P!); *Akoegninou 3263*, Quidah, juv. fr. (WAG!). — BURUNDI: *Lewalle 6124*, Kumuyanga, fr. Sep. (BR!, G!, WAG!). — CAMEROUN: *Bates 1406*, Bitey, fl. (BM!, MO!, Z!); *Bos 7348*, 9 km N of Kribi, fl. Sep. (BR!, K!, P!, WAG!); *Breteler 2001*, Fèbé Mt., fl. Nov. (A!, BR!, K!, P!, WAG!); *Leeuwenberg 5335*, 25 km E of Douala, fl. Apr. (BR!, WAG!); *Letouzey 5888*, Maka, fl. Sep. (K!, P!); *Letouzey 13307*, 20 km E of Bafang, fl. Nov. (P!, WAG!); *Letouzey 13505*, 25 km W of Foumban, fl. Dec. (P!); *Sidwell et al. 415*, Kupé Mt., fl. Oct. (WAG!); *Tchouto et al. 2840*, Efoulan, fl. Apr. (WAG!); *Ujor FHI 30407*, Bamenda, ster. (K!); *Zenker 3509*, Bipindi, fl. (BM!, BR!, G!, GOET!, HBG!, K!, P!, Z!). — CENTRAL AFRICAN REPUBLIC: *Tisserant (Équipe) 1459*, Boukoko, fl. Apr. (BM!, BR!, P!). — CONGO (Brazzaville): *Champluvier 5185*, Odzala, fr. Dec. (BR!, WAG!). — CONGO (Kinshasa): *Desenfans 1993*, Lubilash, juv. fr. Aug. (BR!); *Devred 1983*, Panzi, fl. June (BR!); *Devred 2076*, Tono, fl. June (BR!, MO!); *Evrard 3427*, Bumba, ster. Feb. (BR!, K!); *Germain 944*, Yandja Lake, fr. June (BR!); *Gorbatoff 287*, Likete, fr. July (BR!); *A. Léonard 3868*, Kimbili, fl. Apr. (BR!, K!, WAG!); *A. Léonard 5118*, Kalengera, fr. July (BR!, K!, WAG!); *Pierlot 2880*, Bitale, fl. b. May (K!, WAG!);

Pynaert 1118, Eala, fl. b. Feb. (BR!, K!); *Vanderyst 12416*, Bampumu, fr. Oct. (BR!). — EQUATORIAL GUINEA: *Eneme & Lejoly 74*, Etembue, fl. Aug. (BRLU!); *Mann 1749*, Muni R., fl. Aug. (A!, K!, P!). — GABON: *N. Hallé 3229*, Bélinga, juv. fr. Nov. (P!); *Hladik 1871*, Ipassa, fr. Dec. (P!); *Leeuwenberg & Persoon 13485*, Cap Esterias, fr. Sep. (K!, LBV, MA!, MO!, WAG!); *Le Testu 1586*, Midounga, fl. Aug. (BM!, P!); *Le Testu 6086*, Mandji, fl. Sep. (BM!, BR!); *Le Testu 6314*, Boulembo, fl. Oct. (BM!, BR!, P!, WAG!); *Le Testu 7619*, Lastoursville, fl. Nov. (BM!, BR!, P!, WAG!); *Le Testu 8273*, Mogoumou, fl. b. Aug. (BM!, BR!, P!); *Le Testu 8326*, Iméno, fl. Sep. (BM!, BR!); *Reitsma c.s. 1256*, 25 km NE Libreville, fl. July (LBV, WAG!); *Sosef et al. 558*, Lopé, fl. Oct. (LBV, WAG!). — KENYA: *Graham 1695*, Kwale, fl. b. (FHO!). — MALAWI: *Chapman 610*, Mlanje Mt., fl. July (BR!, FHO!, K!, MO!); *Muller 1618*, Nkata Bay, fl. Sep. (K!). — MOZAMBIQUE: *Torre & Correia 16511*, Malema, fr. Dec. (BR!, COI!, K!); *Van Niekerk SA 503*, Mutolo, juv. fr. Aug. (K!). — NIGERIA: *Dalziel 1229*, Lagos, Ikoyi Plains, fl. Oct. (K!); *Daramola FHI 32798*, Koko R., fr. Feb. (BR!, K!, WAG!); *Latilo FHI 31823*, Akpara, fr. June (K!). — TANZANIA: *Bruce 807*, Tanana, fl. b. Feb. (BM!, K!); *Burt Davy 22366*, Pemba I., fr. Oct. (FHO!); *Drummond & Hemsley 1750*, Bondwa Hill, fl. Mar. (BR!, K!); *Harley 9199*, Pasagulu, fl. Aug. (K!); *Kayombo 803*, Uhafiwa-Luhega, fr. Aug. (MO!, WAG!); *Lovett & Thomas 2656 A*, Kanga MT., fl. Dec. (MO!); *Rodgers et al. 2780*, northern Pemba I., fr. Dec. (K!); *Schlieben 2724*, Morogoro, fl. Sep. (A!, B!, BR!, G!, HBG!, MO!, P!); *Semsei 2559*, Liwiri-Kiteza F.R., fl. Oct. (FHO!, K!). — UGANDA: *Eggeling 5826*, Ankole, fr. June (K!); *Hafashimana 563*, Kayonza, fl. Apr. (K!). — ZAMBIA: *Angus 509 A*, Mwinilunga, ster. Sep. (FHO!, K!); *Fanshawe 3555*, Kawambwa, juv. fr. Aug. (BR!, K!); *Fanshawe 4922*, Mporokoso, fr. Oct. (BR!, FHO!, K!); *Fanshawe 8730*, Luwingu, fl. May (FHO!, K!, P!); *Fanshawe 8788*, Kansama, fl. July (FHO!, K!). — ZIMBABWE: *McGregor M 37/48*, Chimanimani Mts., fl. Aug. (FHO!, K!). — CULTA (Netherlands): *de Bruijn 2256*, Wageningen, fl. Dec. (WAG!).

NOTES. — In Upper Guinea *Trichoscypha lucens* has always been reported as a shrub or small tree, the lectotype from outside this area, collected by *Mann*, being the only exception (BRETELER 2001: 261). Although the material from Lower Guinea and Congolia has a similar habit, a few collectors have described plants as lianas or lianescent shrubs, e.g., *Leeuwenberg 5335* from Cameroun, *Devred 1980* and *2076* from Congo (Kinshasa), and *Lewalle 6124* from Burundi.

The neotypes chosen for three synonyms, *T. coriacea*, *T. ledermannii*, and *T. pallidiflora*, have, as far as possible, been selected according to the origin of the type material (which appears to have been lost at Berlin) and the original description.

Of the 12 new species described for the *Flore du Congo Belge et du Ruanda-Urundi* by VAN DER VEKEN (1959, 1966), seven are treated here as synonyms of *T. lucens*, one of the very variable species of *Trichoscypha* and the most wide spread. VAN DER VEKEN (1960) distinguished these seven species both by habit and leaflet characteristics, such as shape, size, texture, and details of the acumen. These elements have proven to be of little or no value for specific segregation.

11. *Trichoscypha mannii* Hook.f.

In Benth. & Hook.f. Gen. Pl. 1: 423 (1862); Keay in Hutch. & Dalz., Fl. West Trop. Afr. ed. 2, 1: 736 (1958); Bretelet, Adansonia, sér. 3, 23: 261 (2001). — Type: *Mann 941*, Equatorial Guinea/Gabon, Gaboon R., lat. 1°N., ♀ fl. July 1861 (holo-, K!).

Trichoscypha turbinata Lecomte, Bull. Soc. Bot. France 52: 658 (1906). — Type: *Klaine 49*, Gabon, near Libreville, juv. fr. July 1896 (holo-, P!).

Trichoscypha longipetala Baker f., in Rendle et al., Cat. Talbot Nig. Plants: 22 (1913); Keay in Hutch. & Dalz., Fl. West Trop. Afr. ed. 2, 1: 736 (1958). — Type: *Talbot 1681*, Nigeria, Oban, ♀ fl. 1912 (holo-, BM!; iso-, WAG!).

Trichoscypha soyauxii Engl. & Brehmer, Bot. Jahrb. Syst. 54: 319 (1917). — Type: *Soyaux 379*, Gabon, Sibange-Farm, ♀ fl. Sep. 1881 (holo-, B, delet.). Neotype (designated here): *Bretelet & Van Raalte 5652*, Gabon, Gamba, fr. Sep. 1968 (WAG!; iso-, BR!, LBV!).

Trichoscypha subretusa Engl. & Brehmer, Bot. Jahrb. Syst. 54: 317 (1917). — Syntypes: *Ledermann 629*, Cameroun, Ilende, fl. Sep. 1908; *Ledermann 908*, Cameroun, Nkolebunde, fr. Oct. 1908 (B, delet.). Neotype (designated here): *Binuyo & Daramola FHI 35596*, Cameroun, Kumba, ♂ fl. Mar. 1956 (WAG!; iso-, BR!, K!, P!).

Trichoscypha gambana Jongkind, Bull. Jard. Bot. Nat. Belg. 63: 224 (1994). — Type: *Wieringa 1242*, Gabon, Gamba, ♂ fl. July 1992 (holo-, WAG!; iso-, BR!, LBV, MO!).

Shrub-treelet up to 6 m tall, or tree up to c. 15 m tall, trunk 15 cm dbh, or liana up to at least 25 m high. Leaves up to 17-jugate, up to c. 1 m long, with hispid to pubescent to tomentose petiole and

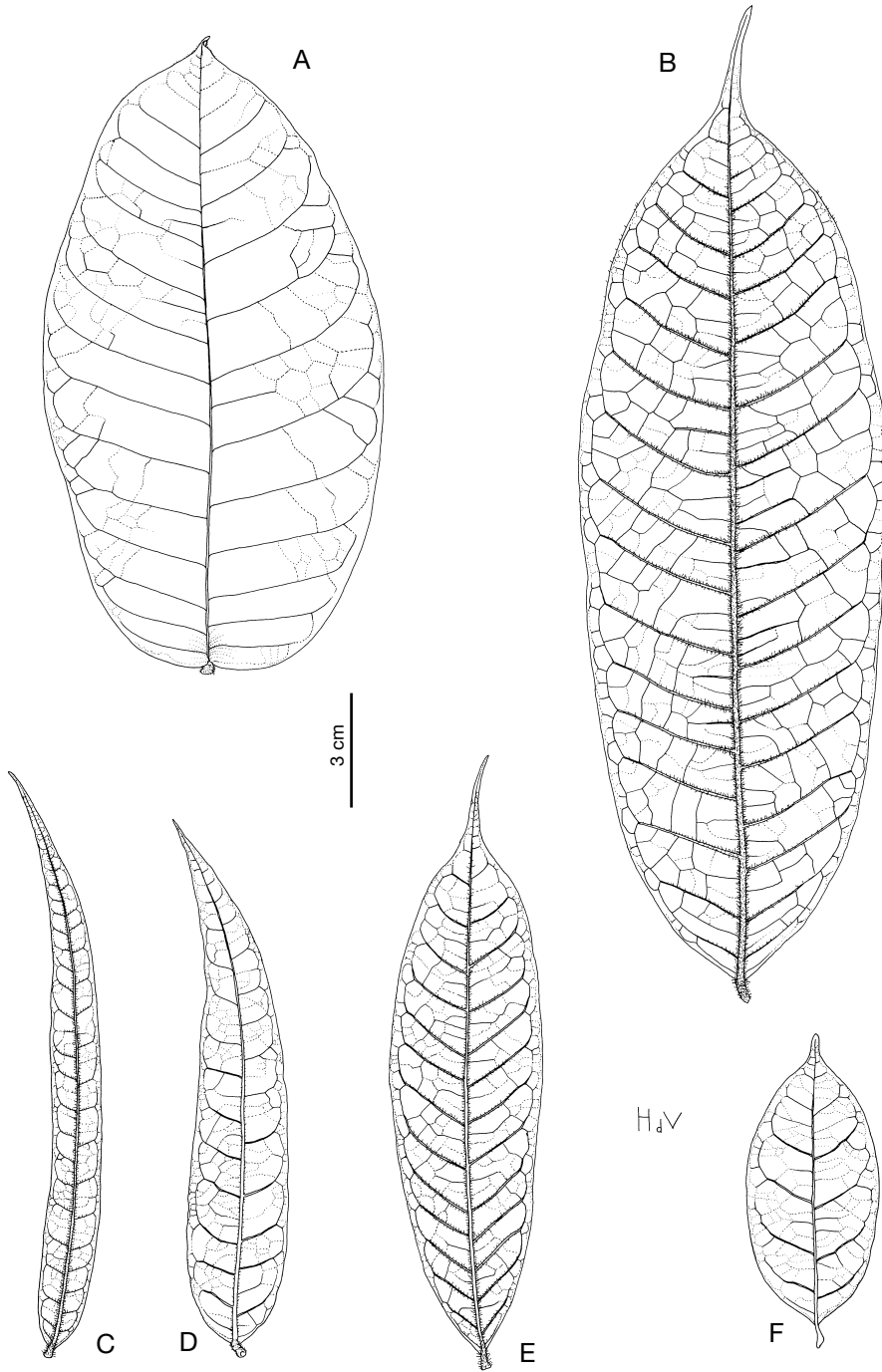


FIG. 9. — Leaflet variation in *Trichoscypha mannii* Hook.f. (lower surfaces except A): **A**, Breteler et al. 9746; **B**, Van Bergen & Van den Houten 161; **C**, **D**, J.J. de Wilde et al. 9744; **E**, Breteler & Jongkind 10340; **F**, Tchouto & Elad BIFAX 66. Drawing by H. DE VRIES.

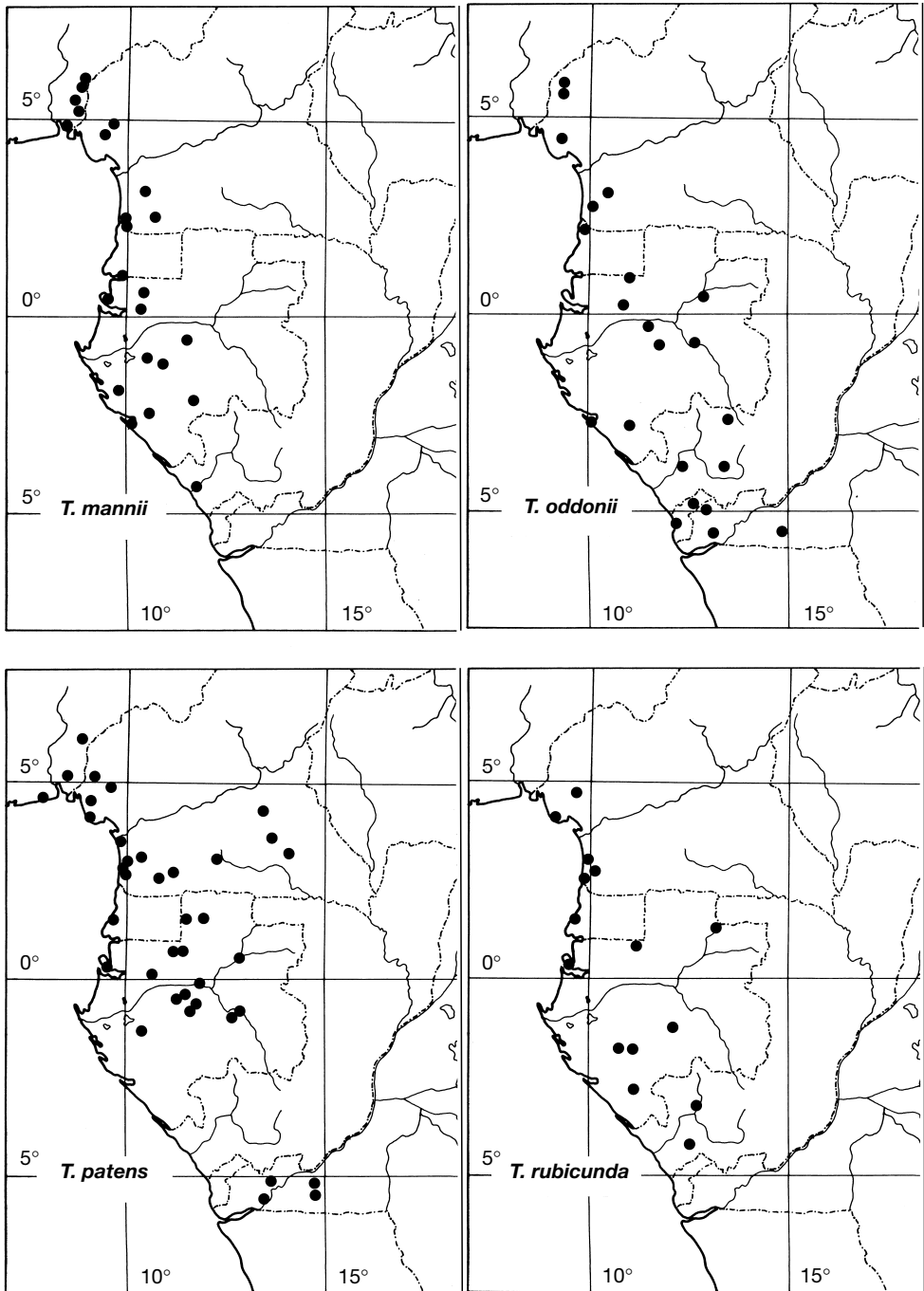


FIG. 10. — Distribution of *Trichoscypha* species 11, 13, 15, 18.

rhachis, the lowest pair of leaflets sometimes close to the stem; leaflets usually papery, ovate-elliptic to oblong lanceolate, (8-)12-20(-27) × (1-)3-8(12) cm, up to 13 times as long as wide, usually slender-tipped, mostly with long hairs, but sometimes pubescent to tomentose to glabrous or nearly so. Inflorescences (sub)terminal or axillary, shorter than the leaves, hispid or soft-hairy. Flowers (Mar.-Oct.), petals (2.5)3-5 mm long, usually dark-red. Fruits (May-Dec.) subovoid-ellipsoid, usually beaked, (2-)3-3.5(-4) × 1-1.5 cm, dark-red at maturity, ± densely to sparsely hairy. — Figs 2A; 9; 10.

HABITAT AND DISTRIBUTION. — Rain forest from Nigeria to Congo (Brazzaville). Alt. up to c. 300 m. Also known from Upper Guinea.

SELECTED SPECIMENS. — CAMEROUN: *Bimuyo & Daramola FHI 35596*, Kumba, fl. Mar. (K!, P!, WAG!); *Nemba & Thomas 7*, Konye, fl. Apr. (MO!); *Tchouto et al. 3050*, Mobiogo on Dipikar I., fl. Sep. (WAG!); *Tchouto et al. 3253*, Massif des Mamelles, fl. Apr. (WAG!); *Tchouto et al. ONOX 273*, Onoyong, fl. Mar. (WAG!); *Zenker 80*, Bipindi, fl. Mar. (K!, P!). — CONGO (Brazzaville): *Moutsambote & Dowsett-Lemaire 4521*, Koubotchi, juv. fr. Sep. (BR!). — GABON: *Breteler & Van Raalte 5652*, Gamba, fr. Sep. (BR!, LBV!, WAG!); *Breteler 5767*, 50 km SE Lambaréné, fr. Oct. (WAG!); *Breteler et al. 9746*, Rabi, near Echira R., ster. Apr. (WAG!); *Breteler & Jongkind 10340*, Mondah, fr. Nov. (WAG!); *Breteler c.s. 15548*, Assok road, fl. b. Aug. (LBV!, WAG!); *Chevalier 26975*, Agonenzorck, fr. Oct. (P!); *Klaine 49*, Libreville, juv. fr. July (P!); *Le Testu 1586 bis*, Issala, fr. Oct. (P!); *Louis et al. 1311*, Waka, fr. Dec. (WAG!); *Reitsma c.s. 1359*, 40 km SW Doussala, juv. fr. Aug. (WAG!); *Reitsma c.s. 2608*, Lopé Res., fr. Nov. (LBV!, WAG!). — NIGERIA: *Latilo & Oguntayo FHI 67725*, Bendiga Ayuk, fr. Feb. (WAG!); *Mann 2238*, Old Calabar R., fl., fr. (K!, P!); *Talbot 1681*, Oban, fl. (BM!, WAG!). — CULTA (Netherlands): *De Bruijn 1894*, Wageningen, seedling (WAG!); *Van Veldhuizen 1384*, Wageningen, seedling (WAG!).

NOTES. — The variability in shape of the leaflets of *Trichoscypha mannii* is illustrated in Figure 9. The type of the synonym *T. gambana* (Fig. 9A) represents one of the extreme leaflet shapes within the species, but its flowers are unmistakably of *T. mannii*. More or less the same holds for the other synonyms. Neotypes have been designated for two of the synonyms whose

original type material was destroyed at Berlin. They were selected taking into account the original description and the origin of types.

12. *Trichoscypha nyangensis* Pellegr.

Bull. Mus. Natl. Hist. Nat. Paris 28: 316 (1922). — Type: *Le Testu 2034*, Gabon, Mobila-Mwirri, ♂, ♀ fl. Mar. 1915 (holo-, P!; iso-, BM! (♂), BR! (♀), G! (♂), WAG! (♂, ♀)).

Tree c. 12 m tall. Branches, petioles, rhachis, and petiolules appressed-puberulous, more sparsely so on the leaflets beneath. Leaves 7-10-jugate; leaflets coriaceous, opposite to subopposite, oblong-lanceolate, 12-18(-20) × 3.5-6(-7) cm, midrib impressed above, prominent beneath; margin of leaflets ± revolute; petiolules c. 8-10 mm long. Inflorescence axillary, up to c. 30 cm long. Flowers purplish; calyx, petals outside as well as anthers dark-brown appressed-hairy; petals cucullate at apex; anthers of male flowers 3-3.5 mm long, longer than the filaments. Disc and ovary velutinous. Fruits unknown. — Figs 4; 11.

HABITAT AND DISTRIBUTION. — Rain forest in SW Gabon. Only known from the type locality. Alt. below 300 m.

NOTES. — The type specimen of *T. nyangensis* consists of a mixture of leaves and female as well as male flowers. The collector, LE TESTU, was not certain about the flowers, whether they were: “polygames ? dioiques ? Je crois plutôt polygames”. More collections with better field observations are needed to see whether *T. nyangensis* is dioecious like all other members of the genus or not (but see also Notes under *T. rubicunda*).

13. *Trichoscypha oddonii* De Wild.

Ann. Mus. Congo Belge, Bot., sér. V, I: 282, t. 60, 61 (1906); Van der Veken, Fl. Congo Belge et Ruanda-Urundi 9: 73 (1960); Wilks & Issembé, Arbres Guinée Équatoriale: 94-95 (2000). — Type: *Oddon in coll. J. Gillet 3659*, Congo (Kinshasa), Sanda, ♂, ♀ fl. juv. fr. 1904 (holo-, BR!).

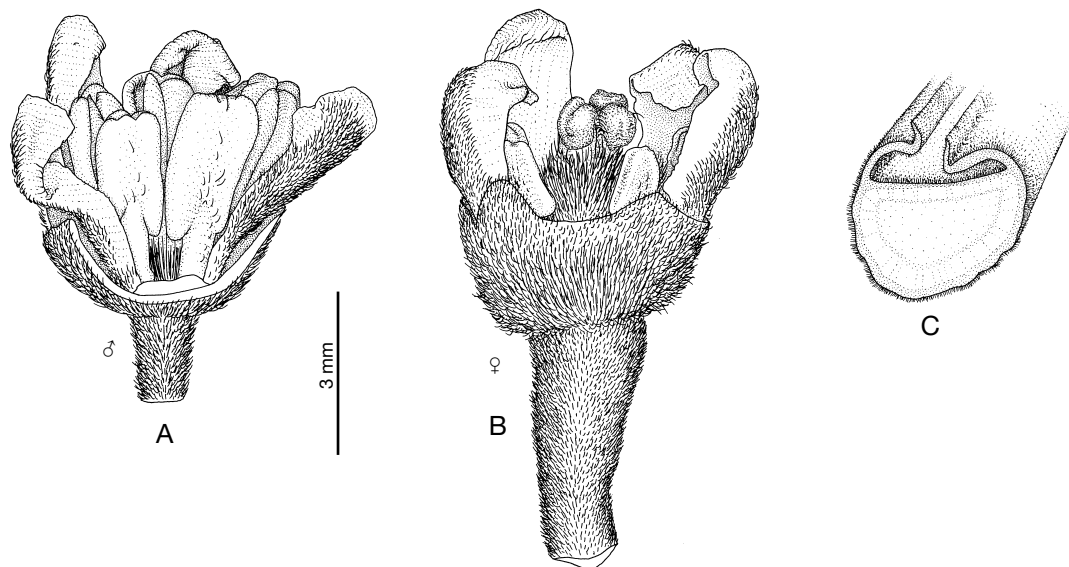


FIG. 11. — *Trichoscypha nyangensis* Pellegr.; **A**, male flower, one petal removed; **B**, female flower, one petal removed; **C**, detail of petiole. *Le Testu* 2034. Drawing by H. DE VRIES.

Trichoscypha le-testui Lecomte, Not. Syst. 3: 7 (Mar. 1914); Van der Veken, Fl. Congo Belge et Ruanda-Urundi 9: 73 (1960). — Syntypes: *Le Testu* 1263, 1282, Gabon, ♂, ♀, fl. Dec. 1907 (syn-, P!); lecto- (designated here), *Le Testu* 1263, ♂ fl. Dec. (P!; isolecto-, BM!).

Trichoscypha brieiyi De Wild., Bull. Jard. Bot. État 4: 369 (Aug. 1914); Van der Veken, Fl. Congo Belge et Ruanda-Urundi 9: 73 (1960). — Type: *De Brieiy* 154, Congo (Kinshasa), Ganda-Sundi, ♂ fl. 1911 (holo-, BR!).

Trichoscypha abut Engl. & Brehmer, Bot. Jahrb. Syst. 54: 322 (1917); Wilks & Issembé, Arbres Guinée Équatoriale: 94-95 (2000). — Type: *Zenker* 3554, Cameroun, Bipindi, ♀ fl. 1908 (holo-, B, delet.; lecto-, P!, designated here; isolecto-, BR!, GOET!, HBG!, K!, Z!). See Notes.

Trichoscypha ejui Engl. & Brehmer, Bot. Jahrb. Syst. 54: 322 (1917). — Type: *Tessmann* 661, Equatorial Guinea, Bebao in Campo area, ♂ fl. Nov. 1908 (holo-, B, delet.; lecto-, (designated here) HBG!; isolecto-, K!).

Trichoscypha cabindensis Exell & Mendonça, Bol. Soc. Brot., ser. 2, 26: 279, t. 4 (1952); Consp. Fl. Angol., 2: 127, t. 31 (1954); Van der Veken, Fl. Congo Belge et Ruanda-Urundi 9: 73 (1960). — Type: *Gossweiler* 6882d, Angola, Maiombe, Belize, ♂ fl. Dec. 1916 (holo-, BM!).

Emiliomarcelia oddonii (De Wild.) Th. & H. Durand, Syll. Fl. Cong.: 115 (1909).

Unbranched or poorly branched tree up to 26 m tall, trunk to 50 cm dbh. Leaves crowded at the top of the stem or branches, up to 2.50 m long, (16-)20-28-jugate. Leaflets lanceolate to oblong, (13-)22-35(-50) × (2.5-)7-10(-12)cm, with (10-)15-24(-34) pairs of main lateral nerves, usually pubescent beneath. Inflorescences borne on the lower part (≤ 5 m) of the stem, the male ones up to 30 × 25 cm, the female ones up to 15 cm long. Bracts of the inflorescence 3.5-5 × 2-3.5 cm, deciduous. Flowers (Jan.-Mar., Sep.-Dec.) pink to wine-red. Fruits (Jan.-Feb., Apr.-July, Oct.-Dec.) subellipsoid, up to 7 × 4 cm, puberulous to slightly velutinous, sparsely so or not, (partly) glabrescent, dark-red at maturity, edible. — Figs 2B; 10.

HABITAT AND DISTRIBUTION. — Rain forest, from Cameroun to western Congo (Kinshasa) and Angola (Cabinda). Alt. up to c. 600 m.

SELECTED SPECIMENS. — ANGOLA: *Gossweiler* 6882, Bucu Zau, fl. Dec. (BM!, COI!, K!). — CAMEROUN: *Binuyo & Daramola FHI* 35599, Kumba, fl. Feb. (K!, WAG!); *Leeuwenberg* 10010, near Nkongsamba, fl., fr. June (BR!, P!, WAG!); *Letouzey* 13717, 20 km WNW of

Mamfe, fl. June (P!); *Van Andel et al. 3452*, Elephant Mt., juv. fr. May (SCA, WAG!, YA); *Zenker 3554*, Bipindi, fl. (BR!, G!, GOET!, HBG!, K!, P!, Z!). — CONGO (Brazzaville): *Bouquet 1735*, Sibiti-Zanaga Rd., Isieré, ster. Oct. (P!); *Koechlin 3997*, forêt de Bangou, fl. Dec. (BR!); *Mabiala 795*, Mamboma, juv. fr. Nov. (P!). — CONGO (Kinshasa): *Davio 17*, forêt de Kinganga, ster. Dec. (BR!, K!, WAG!); *de Briey 154*, Ganda-Sundi, fl. (BR!); *Toussaint 139*, Luki, ster. Jan. (BR!, K!). — EQUATORIAL GUINEA: *Tessmann 66*, Bebao, fl. Nov. (HBG!, K!). — GABON: *Bourobou 110*, Makokou, fl. Dec. (LBV, WAG!); *J.J. de Wilde c.s. 11196, 11197*, Gamba, fl. Nov. (WAG!); *F. Hallé 4572*, Makandé, ster. Feb. (WAG!); *Le Testu 1263*, Tchibanga, fl. Dec. (BM!, BR!, P!); *Le Testu 7855*, Lastoursville, fl. Dec. (BM!, P!, WAG!); *McPherson 13799*, S of Ayem, fl. Mar. (LBV, MO!, P!); *Reitsma & Louis 1856*, 29 km ESE of Médouneu, fr. Feb. (WAG!); *Wieringa et al. 4131*, 11 km WSW of Gongué, fr. Jan. (BR!, LBV, WAG!); *Wilks 2557*, Otouma, fr. Jan. (MO!). — CULTA: Congo (Kinshasa): *Hombert 224, 252, 327, 351, 371*, I.N.E.A.C. Luki, seedling (BR!).

NOTES. — ENGLER & BREHMER (1917) cited seven different collections in their protologue of *Trichoscypha abut.* One of these, *Zenker 3554*, the best distributed collection, has been designated as the lectotype.

Trichoscypha oddonii is very closely related to *T. acuminata* and it may be questioned if these two taxa should be maintained at the species level or whether they might better be treated as varieties. The separation is now based on their leaf characteristics only, as the flowers do not offer reliable elements for specific distinction. In *T. acuminata* e.g., the disc is quite often hairy, but in *T. oddonii* the presence of a glabrous disc is not a constant character as a hairy disc has been observed in *McPherson 13799*, whose leaves at least are clearly *T. oddonii*. In Cameroun, Equatorial Guinea, and Gabon *Amvout* or *Amvut* is the vernacular name for both species (WILKS & ISSEMBÉ 2000: 94). The local population distinguishes the two based on the taste of their fruits: in *T. oddonii* they are said to be slightly more acid. Additional fieldwork is needed to determine whether the species can be maintained as distinct.

14. *Trichoscypha oliveri* Engl.

Bot. Jahrb. Syst. 1: 425 (1881); Breteler, *Adansonia*, sér. 3, 23: 259 (2001). — Type: *Mann*

1830, Equatorial Guinea/Gabon, River Muni, 1°N, ♀ fl. Sept. (holo-, K!).

Trichoscypha parviflora Engl., Bot. Jahrb. Syst. 15: 108 (1892). — Type: *Soyaux 115*, Gabon, Sibange Farm, ♂ fl. Aug. 1880 (holo-, B, delet.; lecto-, designated here, P!; iso-, K!, Z!).

Trichoscypha bipindensis Engl., Bot. Jahrb. Syst. 36: 223 (1905). — Type: *Zenker 2904*, Cameroun, Bipindi, ♂ fl. Mar. 1904 (holo-, B, delet.; lecto- (designated here), K!; iso-, BM!, BR!, G!, GOET!, Z!).

Trichoscypha gabonensis Lecomte, Bull. Soc. Bot. France 52: 650 (1906). — Type: *Trilles 26*, Gabon, Ngun, ♂ fl. (holo-, P!).

Trichoscypha macrophylla Lecomte, Bull. Soc. Bot. France 52: 654 (1906). — Type: *Klaine 2953*, Gabon, near Libreville, ♂ fl. July 1902 (lecto- (designated here), P!, iso-, WAG!).

Trichoscypha parvifloroides Pellegr., Bull. Mus. Natl. Hist. Nat. 28: 315 (1922). — Type: *Le Testu 2100*, Gabon, Nyanga, ♀ fl. Sep. 1915 (holo-, P!; iso-, A!, BM!, BR!, K!, WAG!).

Trichoscypha platycarpa Van der Veken, Bull. Jard. Bot. État 35: 453 (1966). — Type: *Dechamps 219*, Congo (Kinshasa), Bena-Longo, fr. Dec. 1959 (holo-, BR!; iso-, K!).

Treelet to tree up to 20(-50?) m tall. Leaves up to c. 1 m long, 3-6(-10?)-jugate. Branches, petiole, rachis and leaflets beneath puberulous, appressedly or not. Leaflets (sub)opposite to alternate, oblong-lanceolate to ovate-elliptic or oblong- obovate, (8-)15-20(-32) × (3-)4-8(12) cm, rounded to cuneate at base, apex acuminate, the acumen 1-1.5 cm long, midrib impressed above, main lateral nerves (9-)14-17(-20) pairs, ± indistinct above, prominent beneath. Inflorescence terminal to axillary, usually widely branched, up to at least 50 cm long. Flowers (Jan.-Mar., June-Oct.) usually dark red to purple, also reported as yellow to orange, 4-5(-6)-merous. Fruits (June-Dec.) red at maturity, distinctly obliquely ovoid, acute to apiculate at apex, slightly laterally compressed, up to 30 × 20 mm, ± appressed-puberulous, sometimes also with a white mold-like indumentum. — Figs 2C; 12.

HABITAT AND DISTRIBUTION. — Rain forest, from Cameroun to Congo (Kinshasa). Not collected in Congo (Brazzaville). Alt. up to c. 600 m.

SELECTED SPECIMENS. — ANGOLA: *Mounteiro & Murta 288*, Chiaca, fl. June (COI!). — CAMEROUN:

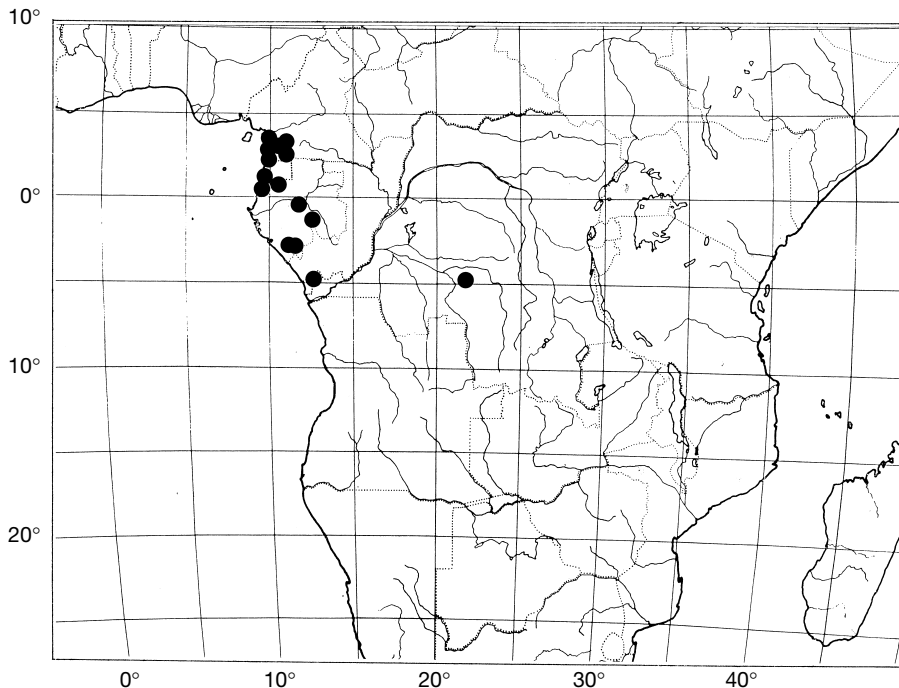


FIG. 12. — Distribution of *Trichoscypha oliveri* Engl.

Annet 332, Lolodorf, fr. June (P!); *Bos 3373*, 7.5 km Kribi-Ebolowa, fr. Nov. (K!, P!, WAG! YA); *Tchouto et al. LIKOX 56*, Massif des Mamelles, fl. June (WAG!); *Tchouto & Elad ONOX 204*, Onoyong, fl. Mar. (WAG!); *Thomas 286*, Tisongo Lake, fl. Jan. (K!); *Zenker 2904*, Bipindi, fl. (BM!, BR!, G!, GOET!, K!, Z!). — CONGO (Kinshasa): *Dechamps 219*, Bena-Longo, fr. Dec. (BR!, K!). — EQUATORIAL GUINEA: *Lejoly & Elad 98/161*, Ngoma, fl. Aug. (BRLU!); *Mann 1830*, River Muni, juv. fr. Sep. (K!). — GABON: *Breteler et al. 12830*, Assok, fr. Sep. (WAG!); *J.J. de Wilde c.s. 11823*, Lopé Res., fr. Dec. (WAG!); *Klaine 2953*, near Libreville, fl. July (P!, WAG!); *Le Testu 1587*, Midounga, fl. Aug. (BM!, P!); *Le Testu 2100*, Nyanga, fl. Sep. (A!, BM!, K!, P!, WAG!); *Le Testu 8409*, Poupa, fl. Oct. (BM!, BR!, P!, WAG!); *Soyaux 115*, Sibange Farm, fl. Aug. (K!, P!, Z!); *Trilles 26*, Ngum, fl. (P!).

NOTES. — LECOMTE (1906: 647) and PELLEGRIN (1922: 316) were well aware of the doubtful status of several of the previously described *Trichoscypha* species and even of those that they recognized as new. When based on a single male or female flowering specimen, several

of these species, LECOMTE (1906) stipulated, were to be reduced to synonymy in a future revision. He placed both his *T. gabonensis* and *T. macrophylla* close to *T. oliveri* but distinguished them on the size of the leaflets and the length of the pedicel, characters that have since proven to be of limited use for specific segregation. PELLEGRIN (1922) distinguished *T. parvifloroides* with female flowers from the type of *T. parviflora* with male flowers based on flower size alone, although the types are, in his words, “tout à fait semblable”. In *T. oliveri*, as in many other species, it has been shown that the best characters for specific distinction are found in the flowers and not or hardly in the vegetative elements.

15. *Trichoscypha patens* (Oliv.) Engl.

Bot. Jahrb. Syst. 1: 425 (1881); Key in Hutch. & Dalz., Fl. West Trop. Afr. ed. 2, 1: 736 (1958); Van der Veken, Fl. Congo Belge et Ruanda-Urundi 9: 81 (1960); Breteler, Adansonia, sér. 3, 23: 250 (2001). — *Sorindeia patens* Oliv., Fl. Trop. Afr. 1: 441 (1868). —

Type: *Mann 1847*, Equatorial Guinea, Corisco Bay, ♀ fl. Sep. 1862 (holo-, K!, iso-, A!, P!).

Trichoscypha victorae Engl., Bot. Jahrb. Syst. 36: 224 (1905). — Syntypes: *Preuss 1206*, 1293, Cameroun, Bimbia, ♂ fl. Mar.-May (B, delet.; lecto-, *Preuss 1206*, P!, designated here).

Trichoscypha paniculata Engl., Bot. Jahrb. Syst. 43: 413 (1909), as *T. panniculata*. — Syntypes: *Zenker 2976*, 3006, Cameroun, Bipindi, ♂ fl. 1904 (B; lecto-, designated here, *Zenker 2976*, B!; iso-, BM!, COI!, G!, GOET!, K!, MO!, P!, WAG!, Z!).

Tree up to 22 m tall, trunk to 40 cm in diam., or liana? (see Notes). Leaves up to c. 80 cm long, 3-5(-7)-jugate; leaflets usually alternate, ± coriaceous, ± glabrous, elliptic to obovate or oblong, (5-)10-18(-26) × (2-)3-7(-9) cm, apex caudate-acuminate, the acumen 1.5(-2) cm long, midrib raised (at least plane) above; lateral nerves (5-)7-11(-14) pairs. Inflorescence a panicle to 60 × 30 cm, (sub)terminal, loose, usually pendulous. Flowers (Jan.-Dec.) yellowish. Fruits (Feb.-Dec.) red, ellipsoid, laterally compressed or not, up to 4 × 3 cm, smooth, glabrous. — Figs 2D; 10.

HABITAT AND DISTRIBUTION. — Rain forest from Nigeria to Congo (Kinshasa), not recorded from Congo (Brazzaville) or Cabinda (Angola). Alt. up to 650 m.

SELECTED SPECIMENS. — CAMEROUN: *Bates 1848*, Bitey, fl. (FHO!, K!, P!); *Bos 3279*, 13 km Kribi-Ebolowa, juv. fr. Nov. (BR!, WAG!); *Breteler 1843*, 16 km Bertoua-Deng Deng, fr. Sep. (P!, WAG!, YA); *Breteler 2847*, Djemiong, fl. Apr. (A!, BR!, K!, P!, WAG!, Z!); *J.J. de Wilde 7657*, Nkolandom I, fl. Oct. (BR!, K!, MA!, WAG!, YA); *Elad & Tchouto 1496*, Akok, fr. Dec. (WAG!); *Letouzey 3286*, between Goyoum and Lindii, ster. Jan. (P!); *Letouzey 10262*, Zingui, fl. Apr. (BR!, COI!, HBG!, K!, P!, WAG!); *Maitland 182*, Limbe (Victoria), fl. Jan. (K!); *Milbraed 5163*, Lomié, fl. May (HBG!); *Nemba & Thomas 118*, Konye, fr. June (A!, B!, BR!, MO!, P!, WAG!); *Tchouto & Elad ELEX 8*, Bidou, Elephant Mt., juv. fr. Oct. (WAG!); *Thomas 4808*, Bai, fl. May, (K!); *Thomas & Mambo 8220*, Banyu, fl. Apr. (P!); *Waterman & Mckey 833*, Tissongo Lake, fl. June (K!); *Zenker 2976*, Bipindi, fl. b. (B!, BM!, BR!, COI!, G!, GOET!, K!, MO!, P!, WAG!, Z!). — CONGO (Kinshasa): *Dubois 306*, Kinganga Forest, fr. May (BR!, WAG!); *Davio 26*, Mvuazi, fl. Dec. (G!, K!, WAG!); *Wagemans 1937*, Gimbi, ster. Mar. (BR!, K!, WAG!). — EQUATORIAL GUINEA: *Lisowski M 98*, Jandye, fl. b. Aug. (BRLU!); *Mann 1847*, Corisco Bay, fl. Sep. (A!, K!, P!). — GABON: *Breteler & Jongkind 10848*, 30 km E of

Lastoursville, fl. Nov. (LBV, WAG!); *Breteler c.s. 13105*, 20-30 km NNW of Ndjolé, fl. Sep. (WAG!); *Breteler et al. 14943*, Makandé, fr. Feb. (LBV, WAG!); *J.J. de Wilde et al. 11694*, Ngounié, fr. Dec. (LBV, WAG!); *Floret 1880*, Booué, fl. Oct. (MA!, P!); *Hladik 1881*, Ipassa, fr. Dec. (P!); *Klaine 633*, near Libreville, fr. Dec. (P!); *Klaine 1028*, near Libreville, fl. July (P!); *Le Testu 7459*, Moupeyou, fl. Sep. (BM!, P!, WAG!); *Le Testu 8576*, Iwatchi, fl. Dec. (BM!, BR!, P!, WAG!); *Le Testu 9209*, Mbabou, fl. July (BM!, BR!, MA!, P!, WAG!); *Le Testu 9327*, Mitzic, fl. Oct. (BM!, BR!, P!, WAG!); *Le Testu 9398*, Oyem, fl. Nov. (BM!, BR!, P!, WAG!); *McPherson 15677*, S of Ayem, fr. Dec. (LBV!, MO!); *Reitsma c.s. 1477*, Oveng, fl. Sep. (MO!, WAG!). — NIGERIA: *Latilo & Oguntayo FHI 67724*, Bendiga-Ayuk, fl. Feb. (K!, WAG!); *Onochie FHI 32911*, Stubbs Creek F.R., fl. May (K); *Talbot 1725*, Oban, fl. (BM!, K!). — CULTA (Netherlands): *Breteler 3025*, Wageningen, seedling (WAG!).

NOTES. — Although most collectors report the habit of *Trichoscypha patens* as a tree, some do not. *Mann* noted for the type of this species “climbing plant of 30 ft”, and also *Klaine* (*Nos 633* and *1028*) noted the habit as “liana”. In two other cases (*Breteler & Jongkind 10848*; *Hladik 1881*) the collectors noted “liana?” *Trichoscypha patens*, like many other species thus appears to be very variable in habit, although it is usually a tree.

VAN DER VEKEN (1960) cited under this species *A. Léonard 5945* from Kamusuku in Kivu, in eastern Congo (Kinshasa) (BR), a locality that is more than 1200 km away from the known limit of distribution of this species. The specimen, with flower buds only, is reported to have red inflorescences that exhibit the more dense indumentum characteristic of *T. arborea*. However, the latter species has an even more westerly distribution than of *T. patens*. More collections from Kivu are thus needed to ascertain to which species this specimen should be assigned.

16. *Trichoscypha pauciflora* Van der Veken

Bull. Jard. Bot. État 19: 258 (1959); Fl. Congo Belge et Ruanda-Urundi 9: 73 (1960); Bull. Jard. Bot. État 35: 465 (1966). — Type: *Michelson 895*, Congo (Kinshasa), Kamakobola-Kifuku, ♂ fl. Feb. 1949 (holo-, BR!).

Shrub 2-8 m tall. Leaves 8-11-jugate, up to at least 1 m long, crowded at the top of the branches; leaflets ovate to oblong-lanceolate, (6-)

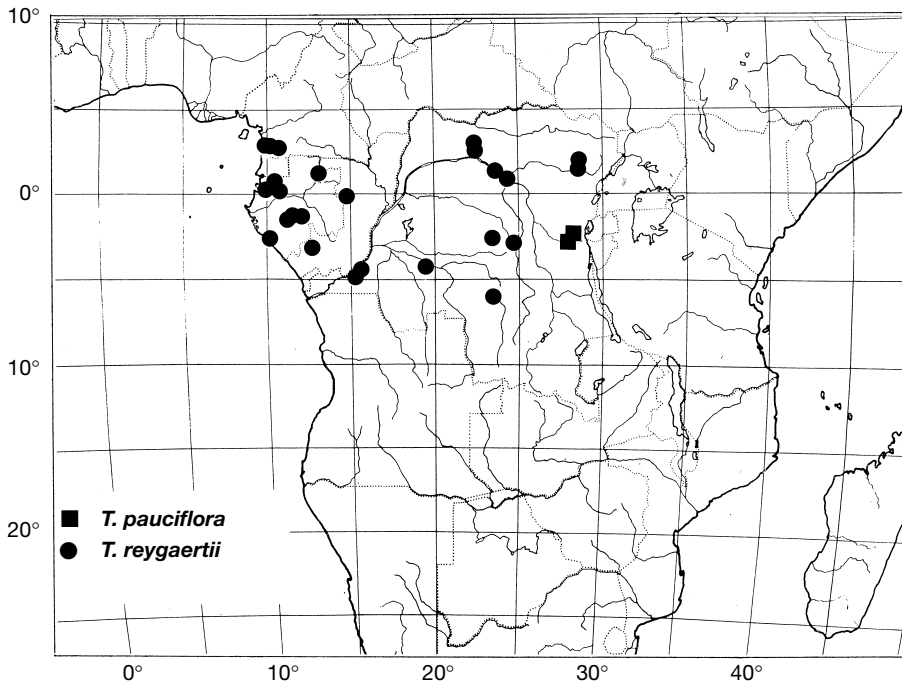


FIG. 13. — Distribution of *Trichoscypha* species 16, 17.

12-25(-30) × (3-)5-7 cm, with obtuse to subcordate base and long-acuminate apex; lateral nerves *c.* (10-)14-20 pairs. Inflorescence on the basal part of the trunk. Flowers (Feb.) red. Fruits (July) ± ellipsoid, 2.5-2.8 × 1.5-1.7 cm, glabrous. — Figs 2E; 13.

HABITAT AND DISTRIBUTION. — Montane forest in eastern Congo (Kinshasa). Alt. 800-1200 m.

SPECIMENS EXAMINED. — CONGO (Kinshasa): *A. Léonard* 5154, Tope-tope, fr. July (BR!); *Michelson* 895, Kamakobola-Kifuku, fl. Feb. (BR!).

17. *Trichoscypha reygartii* De Wild.

Bull. Jard. Bot. État 4: 368 (1914); Van der Veken, Fl. Congo Belge et Ruanda-Urundi 9: 83 (1960). — Type: *Reygart* 94, Congo (Kinshasa), Dundusana, ♂ fl. Feb. 1913 (holo-, BR!).

Trichoscypha lescrauwaetii De Wild., Bull. Jard. Bot. État 4: 368 (1914); Van der Veken, Fl. Congo

Belge et Ruanda-Urundi 9: 82 (1960). — Type: *Lescrauwaet* 181, Congo (Kinshasa), Lubi, ♂ fl. Sep. 1904 (holo-, BR!).

Trichoscypha mildbraedii Engl. & Brehmer, Bot. Jahrb. Syst. 54: 320 (1917); Van der Veken, Fl. Congo Belge et Ruanda-Urundi 9: 88 (1960); Bull. Jard. Bot. État 35: 464 (1966). — Type: *Mildbraed* 3558, Congo (Kinshasa), Kimuenza, juv. fr. Sep. 1910 (holo-, B, delet.; lecto-, designated here, HBG!).

Trichoscypha altescandens Van der Veken, Bull. Jard. Bot. État 29: 251 (1959); Fl. Congo Belge et Ruanda-Urundi 9: 87, fig. 9 (1960). — Type: *A. Léonard* 772, Congo (Kinshasa), Yangambi, ♀ fl. June 1958 (holo-, BR!).

Trichoscypha arborescens Van der Veken, Bull. Jard. Bot. État 29: 253 (1959); Fl. Congo Belge et Ruanda-Urundi 9: 84 (1960). — Type: *Lebrun* 6085, Congo (Kinshasa), between Kindu and Katakombé, ♂ fl. Aug. 1932 (holo-, BR!; iso-, K!).

Trichoscypha scandens Van der Veken, Bull. Jard. Bot. État 29: 259 (1959); Fl. Congo Belge et Ruanda-Urundi 9: 86 (1960). — Type: *Louis* 8976, Congo (Kinshasa), Yambao, ♂ fl. Apr. 1938 (holo-, BR!).

Shrub up to ± 5 m high, tree to 15 m tall with trunk 30-40 cm diam., or liana up to *c.* 15 cm thick. Leaves (2-)3-6(-7)-jugate. Foliolles

(sub)opposite to alternate, oblong-elliptic to lanceolate, (1.5-)2-4(-4.5) times as long as wide, (3.5-)9-18(-25) × (1.5-)3.5-7(-10) cm, glabrous above except for the impressed, usually pubescent midrib above, beneath sparsely appressed-puberulous to (sub)glabrous; apex usually caudate-acuminate, the acumen (1-)1.5-2(-3) cm long; lateral nerves (7-)9-14(-18) pairs. Inflorescences terminal to axillary or, more rarely, borne below the leaves, widely branched, up to at least 55 cm long, pubescent to puberulous, often mixed with a patchy, arachnoid to mold-like, white indumentum, this sometimes also present on leaflets beneath. Flowers (Feb.-Oct.) yellowish, 4(-5) merous. Fruits (July-Dec.), subglobose to obovoid-ellipsoid, 1.5-2.5 × 1.5-2 cm, smooth, glabrous. — Figs 2F; 13.

HABITAT AND DISTRIBUTION. — Rain forest of Cameroun, Gabon, Congo (Brazzaville) and Congo (Kinshasa). Not yet collected in Equatorial Guinea. Alt. up to *c.* 1000 m.

SELECTED SPECIMENS. — CAMEROUN: *Tchouto & Elad 3319*, Elephant Mt., fl. b. Oct. (WAG!); *Tchouto & Elad ONOX 219*, Onoyong, fl. b. Mar. (WAG!); *Van Andel et al. 4215*, Boussebeliga, fl. Oct. (WAG!). — CONGO (Brazzaville): *Descoings 8793*, Etoumbi region, fl. Aug. (BR!); *Sita 4732*, between Missandra and Koyi, fr. Nov. (BR!). — CONGO (Kinshasa): *Breyne 3157*, Ngaenke Lake, fr. Dec. (BR!); *Germain 4866*, Yangambi, fl. Apr. (BR!); *Germain 7507*, Mukumari, fr. June (BR!); *Goossens 2874*, Bumba, fl. May (BR!); *Goossens 2984*, Barumbu, fl. May (BR!, K!); *Hart 411*, Epulu, fl. (BR!); *Abena in Hart 1656*, Afarama, fl. Mar. (BR!, K!); *Lebrun 6085*, between Kindu and Katako Kombe, fl. Aug. (BR!, K!); *A. Léonard 772*, Yangambi, fl. June (BR!); *Lescauwaeit 181*, Lubi, fl. Sep. (BR!); *Louis 8976*, Yambao, fl. Apr. (BR!); *Mildbraed 3558*, Kimuenza, juv. fr. Sep. (HBG!); *Reygaert 94*, Dundusana fl. Feb. (BR!); *Vanderyst 12365*, Ipamu, fl. Oct. (BR!). — GABON: *Bernard 1391 SRF*, km 78 Kango Rd., fl. Aug. (LBV!); *Breteler c.s. 13126*, 20-30 km NNW Ndjolé, juv. fr. Oct. (WAG!); *Breteler et al. 14501*, Gamba, fl. July (LBV, WAG!); *Breteler & de Wilde 286*, near Assok, fl. Aug. (MO!, WAG!); *Breteler & de Wilde 659*, Bélinga, fl. Sep. (BR!, LBV, MO!, WAG!); *Gentry 33583*, Bélinga, fr. July (MO!, WAG!); *Le Testu 5986*, Etoughi, fl. July (BR!, P!, WAG!); *Le Testu 6055*, Mogoumou, fl. Sep. (BM!, BR!, P!, WAG!); *Le Testu 8353*, Mouila (Poubi), fl. Sep. (BM!, BR!, P!, WAG!); *Wieringa 1276*, Gamba, fl. July (WAG!).

NOTES. — The synonymy of this species reflects its extreme variation in habit from a medium sized tree (*T. lescauwaeitii*, *T. arborescens*) to a vigorous liana (*T. altescandens*, *T. scandens*). VAN DER VEKEN (1960) separated the species he recognized based on their habit only, which seems to me not acceptable. I have tried to find additional characters, but failed. Therefore I conclude that this variation has to be accepted as belonging to a single species. This is strongly supported by a pair of specimens collected in the Epulu area in Ituri, in eastern Congo (Kinshasa): *Hart 411* (a tree) and *Abena in coll. Hart 1656* (a liana). These specimens are otherwise so much alike that separation in two different species on account of their difference in habit seems quite unacceptable.

18. *Trichoscypha rubicunda* Lecomte

Bull. Soc. Bot. France 52: 656 (1906). — Type: *Klaine 251*, Gabon, near Libreville, ♂, ♀ fl. July (holo-, P; iso-, WAG!). See Notes.

Trichoscypha africana Lecomte, Bull. Soc. Bot. France 5: 652 (1906). — Type: *Klaine 1086 (as 1080)*, Gabon, near Libreville, ♂ fl. Sep. (holo-, P; iso-, WAG!).

Trichoscypha fusca Lecomte, Bull. Soc. Bot. France 5: 652 (1906). — Type: *Klaine 1444*, Gabon, near Libreville, fr. Nov. (lecto-, designated here P!; isolecto-, WAG!).

Trichoscypha klainei Lecomte, Bull. Soc. Bot. France 52: 651 (1906). — Type: *Klaine 3009*, Gabon, near Libreville, ♂ fl. July (holo-, P; iso-, WAG!).

Trichoscypha escherichii Engl., Bot. Jahrb. Syst. 54: 315 (1917). — Syntypes: *Escherich 336, 339*, Munigebiet, Neu-Kamerun (now Gabon), Bissubinan, fl. July 1913 (syn-, B, delet.). Neotype (designated here): *Eneme 471*, Equatorial Guinea, Jandyé, ♂ fl. July 1999 (WAG!; iso-, BRLU!).

Trichoscypha braunii Engl. var. *regularis* H. Lecomte, nomen, coll. Thollon 1114 (P!).

Shrub to medium sized tree, 1.5-26 m tall and trunk up to 25 cm dbh. Leaves (4-)5-12-jugate; leaflets ovate-lanceolate to oblong, up to *c.* 5 times as long as wide, (11-)17-25(-35) × (3-)5-7(-11) cm, with a 1-2 cm long acumen; midrib impressed above; lateral nerves 12-20 pairs. Inflorescence (sub)terminal to axillary, rarely borne below the leaves, the male ones up to at least 70 cm long, the female ones up to 110 cm long, pubescent to puberulous, often also with a more or less patchy, whitish arachnoid or mold-

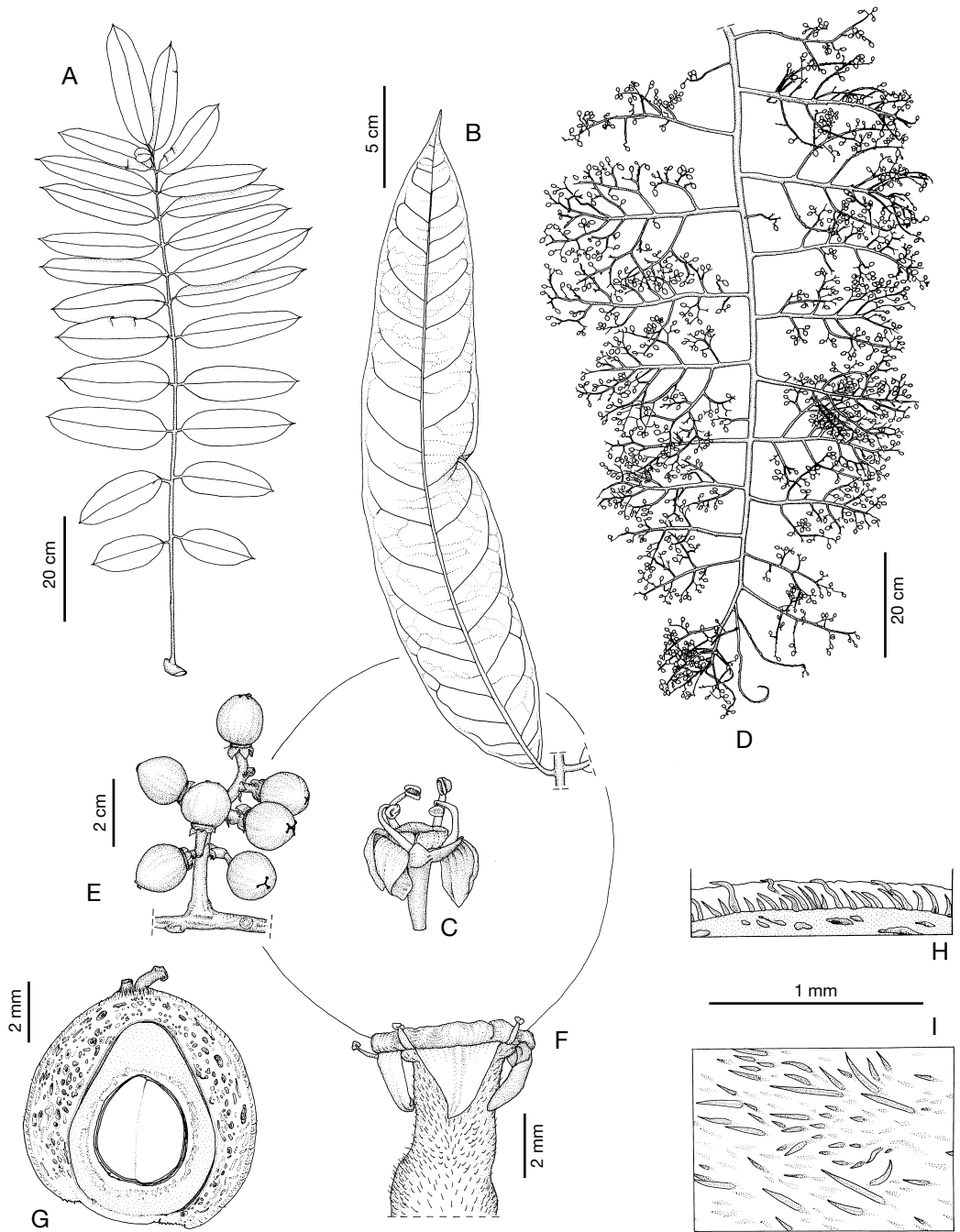


FIG. 14. — *Trichoscypha rubicunda* Lecomte; **A**, leaf; **B**, leaflet, lower surface; **C**, male flower; **D**, young infructescence; **E**, young fruits; **F**, young fruit enlarged to show remnants of female flower; **G**, young fruit in longitudinal section; **H**, **I**, details of fruit indumentum. A, B, D-I, *Reitsma et al.* 862; C, *Le Testu* 8848. Drawing by H. DE VRIES.

like indumentum. Flowers (Jan.-Apr., June-Sep.) 4-5-merous, pink to red. Fruits (Feb., Sep.-Nov.) red, ovoid-ellipsoid, 1.5-2 × 1-1.5 cm, appressed-short-hairy, usually also with a whitish, arachnoid to mold-like indumentum. — Figs 2G; 10; 14.

HABITAT AND DISTRIBUTION. — Rain forest of Cameroun, Equatorial Guinea, Gabon, and Congo (Brazzaville). Alt. up to 1200 m.

SELECTED SPECIMENS. — CAMEROUN: *Bos* 6797, 17 km N of Kribi, fl. Apr. (WAG!); *Cable et al.* 1573, Etinde, fl. Mar. (K!); *Elad* 135, Kupé Mt., Nyasso, fl. Mar. (K!); *Elad & Tchouto* 1360, Campo-Ma'an area, Mvini, fr. Feb. (WAG!); *Van Andel et al.* 4172, Elephant Mt., fr. Oct. (WAG!). — CONGO (Brazzaville): *Aké-Assi* 17049, Itsibou valley, fl. July (G!); *de Foresta* 1038, between Mvouti and Bamba Mt., fl. July (P!). — EQUATORIAL GUINEA: *Eneme* 471, Yandye, fl. July (BRLU!, WAG!). — GABON: *N. Hallé* 3159, Bélinga, fr. Nov. (P!); *Klaine* 251, near Libreville, fl. July (P!, WAG!); *Klaine* 1086, near Libreville, fl. Sep. (P!, WAG!); *Le Testu* 1584, Midounga, fl. Aug. (BM!, BR!, P!, WAG!); *Le Testu* 5468, Mouila, fl. July (BM!, BR!, P!, WAG!); *Le Testu* 8848, Pougou Matsima, fl. June (BM!, P!); *Reitsma et al.* 862, Oveng, juv. fr. May (BR!, MO!, WAG!); *Walker s.n.*, St. Martin, fl. July (P!, WAG!).

NOTES. — *Klaine* 251, the type of *Trichoscypha rubicunda* contains, male as well as female flowers. It is not clear whether flowers of both sexes were collected from the same individual, probably not, as they are found on different branches.

A few specimens assigned to this species have inflorescences borne on the leafy shoot as well as on the trunk, e.g., *de Foresta* 1038 and *Le Testu* 1584, a phenomenon that also occurs occasionally in the other non cauliflorous species.

The variation in habit seen in *T. rubicunda* is remarkable. Flowers and/or fruits have been collected from small shrubs as well as from medium sized trees of 25 m tall. In most species of *Trichoscypha* with variation in habit this differs somewhat, involving the presence of a lianescent habit along with shrubs or trees (see also under *T. reygartii*).

UNIDENTIFIED MATERIAL, POSSIBLY REPRESENTING NEW TAXA

1. *Le Testu* 8261, Gabon, Ipoungou, ♂ fl. Aug. (BM!, BR!, P!, WAG!).

NOTES. — Because of its completely glabrous flowers and strongly imbricate petals, this material was separated from *T. bijuga* under the provisional name *T. psilantha*. More material is needed to determine whether it represents indeed a new species.

2. *Van Andel & Mva* 4261, Cameroun, on forest road between Ebodje and Campo, fr. Nov. (WAG!).

NOTES. — This specimen was collected from a cauliflorous shrub. The texture of its leaflets with impressed lateral nerves above, the very small brown dots on the lower surface, and the valvate petals with papillate margins (as observed on flower remnants), suggest that it is related to *T. hallei* and *T. laxiflora*. The young leaflets, however, bear a white, arachnoid to mold-like indumentum, which is not seen in these species. Good flowering material is thus needed to assess the status of this material.

3. *Etuge et al.* 4504, Cameroun, Edip, leaves only (WAG!); *Tchouto et al.* EBLAX 17, Cameroun, Bibabimvoto, leaves only (WAG!); *Senterre et Ngomo* 3442, Equatorial Guinea, Chocolate Mt., leaflets only (WAG!).

NOTES. — These three specimens clearly represent the same species, most probably belonging to *Trichoscypha*. They are, however, distinct from all other material from Lower Guinea and Congolia by the white lower surface of their leaflets, which is caused by the very fine papillate indumentum.

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