



The genus *Clerodendrum* (Lamiaceae) in the flora of Central Africa (D.R. Congo, Rwanda, Burundi)

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Abstract

The revision of the genus *Clerodendrum* in D.R. Congo, Rwanda and Burundi is presented. Thirty-three taxa are accepted (28 species, 4 varieties, 1 form). Two new varieties are described (*Clerodendrum capitatum* var. *pubitubum*, *Clerodendrum johnstonii* var. *rubropunctatum*). Two new synonyms are proposed. A neotype is designated for *C. buchneri*, *C. buettneri*, *C. fuscum*, *C. melanocrater*, *C. poggei*. A lectotype is designated for *C. bipindense*, *C. cavum*, *C. conglobatum*, *C. consors*, *C. excavatum*, *C. goossensii*, *C. lupakense*, *C. tanganyikense* var. *microcalyx*, *C. triplinerve*, *C. welwitschii*. A second-step lectotype is designated for *C. silvanum*. A new combination is made (*Clerodendrum johnstonii* var. *marsabitense*). Two species are new to D.R. Congo and 2 species are new to Burundi. Four taxa are endemic to D.R. Congo (*C. capitatum* var. *vanderystii*, *C. capitatum* var. *pubitubum*, *C. dewittei*, *C. pynaertii*) and one taxon is endemic to Burundi (*C. fasciculatum*).

Keywords: Angola, Central Africa, *Clerodendrum capitatum* var. *pubitubum* Meerts, *Clerodendrum johnstonii* var. *rubropunctatum* Meerts, endemic, liana, neotype, rainforest, *Rothea*, taxonomy, Verbenaceae, *Volkameria*

Introduction

Clerodendrum L. (Linnaeus 1753: 637) (Lamiaceae) is a subtropical genus, distributed in Africa and Asia, with some species distributed as far south as to Australia (Yuan *et al.* 2010). It has long been included in Verbenaceae (Briquet 1895; Verdcourt 1992). However, it is now clear that it belongs in Lamiaceae, subfam. Ajugoideae (Wagstaff & Olmstead 1997; Harley *et al.* 2004; Li *et al.* 2016; Zhao *et al.* 2021). The circumscription of the genus *Clerodendrum* has changed considerably in the last decades. Molecular markers have shown that the genus, in its traditional circumscription (e.g. Briquet 1895, Lam 1919, Thomas 1936), is polyphyletic. To maintain the monophyly of *Clerodendrum*, the genus has been disintegrated, with some genera resurrected, e.g. *Rothea* and *Volkameria* (Steane *et al.* 1997, 1999, 2004; Yuan *et al.* 2010; Steane & Mabberley 2011). In its current circumscription, the genus comprises 150–180 species almost restricted to the Old World. Remarkably, Asian and African species form two monophyletic clades.

The last revision of the genus *Clerodendrum* for Africa is Thomas (1936), who divided the genus in different sections, mainly based on calyx structure. This system was endorsed and nomenclaturally validated by Verdcourt (1992). Thomas's system appears to be compatible with recent phylogenies, but a robust test of all the sections is still not possible due to limited species sampling (Steane *et al.* 1997). More recent, regional accounts relevant to central Africa include Huber (1963) in *Flora of West Tropical Africa*, Verdcourt (1992) in *Flora of Tropical East Africa*, Fernandes (2005) in *Flora Zambesiaca* and Pollard (2022) in the *Flore du Gabon*. For Central Africa (defined here as D.R. Congo, Rwanda, Burundi), only local accounts are available, including Malaise (1985) and Bloesch *et al.* (2009) for the *Flore du Rwanda* and Robyns (1947) for the Virunga National Park.

I present here a key to the species, and a synopsis with a revised synonymy and descriptions based on original observations on the materials collected in Central Africa.

Materials and methods

Herbarium specimens of *Clerodendrum* collected in D.R. Congo, Rwanda and Burundi were studied in BR which hosts the largest collection for that region (> 3000 specimens, available online (<https://www.botanicalcollections.be>)) and BRLU. Additional specimens, in particular from B, BM, COI, HBG, K, LISC, P, WAG were investigated using the JSTOR Global Plants facility (<http://plants.jstor.org>) and GBIF (<https://www.gbif.org>) and online databases of the respective herbaria. All cited specimens have been seen (except otherwise indicated). The specimens that have been physically investigated are indicated by “!”.

Many of original materials were deposited in B and may have been destroyed during World War II. Isotypes have been systematically traced. When no original materials were retrieved, neotypes have been designated.

Results and discussion

In total, 33 taxa are recognized for the study area, i.e. 28 species, 4 varieties, and 1 form (D.R. Congo: 27 species; Rwanda: 5 species; Burundi: 10 species). *Clerodendrum* species richness is somewhat higher than in the area of Flora Zambesiaca, and Flora of West Tropical Africa (22 and 25 species, respectively), and lower than in Flora of Tropical East Africa (31 species). Two species are new to D.R. Congo (*Clerodendrum inaequipetiolatum*, *C. polycephalum*) and one species is new to Burundi (*C. fasciculatum*). Two new varieties are described (*C. capitatum* var. *pubitubum*, *C. johnstonii* var. *rubropunctatum*). Two new synonyms are proposed. A neotype is designated for *Clerodendrum buchneri*, *C. buettneri*, *C. fuscum*, *C. melanocrater*, *C. poggei*. Lectotypes are designated for *Clerodendrum bipindense*, *C. cavum*, *C. conglobatum*, *C. consors*, *C. excavatum*, *C. goossensii*, *C. lupakense*, *C. tanganyikense* var. *microcalyx*, *C. triplinerve*, *C. welwitschii*. A second-step lectotype is designated for *C. silvanum*. A new combination is made: *Clerodendrum johnstonii* var. *marsabitense* (this taxon does not occur in our area). In the current state of knowledge, four taxa are endemic to D.R. Congo (*C. pynaertii*, *C. capitatum* var. *vanderystii*, *C. capitatum* var. *pubitubum*, *C. dewittei*) and one taxon is endemic to Burundi (*C. fasciculatum*).

In the following account, representative specimens are grouped according to phytogeographic districts as defined by Robyns (1948).

CLERODENDRUM Linnaeus (1753: 637)

Type:—*Clerodendrum infortunatum* Linnaeus (1753: 637).

Trees, shrubs, lianas, or more rarely perennial herbs; stem quadrangular. Leaves opposite or 3–4-whorled, usually petiolate, simple; lamina entire, undulate, repand, dentate or crenate; petiole articulated, sometimes the lower part persisting as a woody spine. Inflorescence of axillary cymes, generally grouped in racemose or corymbose thyrses; bracts often foliaceous, bracteoles small, mostly not exceeding calyx. Flower: calyx usually regular, campanulate to tubular or cup-shaped, ± deeply 5-lobed or truncate, sometimes 5-angled, usually persistent and accrescent in fruit; corolla symmetrical in bud or, if asymmetrical, usually expanding abruptly on upper side due to resupination, actinomorphic; tube ± long, narrowly cylindrical or funnel-shaped; limb of 5 equal or subequal spreading or reflexed lobes, larger than the others. Stamens 4, inserted on the corolla tube, usually long exserted; anthers versatile. Carpels 2, each incompletely divided into 2 loculi; locules 1-ovulate. Style terminal, stigma exserted, 2-fid, the lobes equal, short. Fruit drupaceous, obovoid or globose, generally 4-lobed, often appearing 1-lobed by abortion; endocarp separated into four 1-seeded pyrenes.

References:—Baker (1900); Briquet (1895); Fernandes (1998, 2005); Harley *et al.* (2004); Huber (1963); Lebrun & Stork (1997); Li *et al.* (2016); Moldenke (1985a); Pollard (2022); Robyns (1947); Thomas (1936); Malaise (1985); Verdcourt (1992).

Note:—Two species have been collected in cultivation in only one occasion and are not dealt with in the following account: *Clerodendrum trichotomum* Thunberg (1784: 256) (D.R. CONGO. Eala, 5 April 1932, *Corbisier-Baland 1361* (BR!)); *Clerodendrum chinense* (Osbeck 1757: 215) Mabblerley (1989: 707) (D.R. CONGO. Kinshasa, Gombe, 27 August 2001, *Pauwels 8540* (BR!)).

The species present in our territory belong in the following sections of the genus, as defined by Thomas (1936), validated and amended by Verdcourt (1992).

Sect. Capitata Verdc.

C. buchneri, *C. capitatum*, *C. excavatum*, *C. frutectorum*, *C. poggei*.

Sect. Eurycalyx Thomas ex Verdc.

C. bipindense, *C. melanocrater*, *C. thyrsoides*, *C. volubile*.

Sect. Macrocalyx Thomas ex Verdc.

C. baumii, *C. buettneri*, *C. fuscum*, *C. pynaertii*, *C. rotundifolium*, *C. thomsoniae*, *C. welwitschii*.

Sect. Microcalyx Thomas ex Verdc.

C. formicarum, *C. inaequipetiolatum*, *C. johnstonii*, *C. polycephalum*.

Sect. Oxycalyx Thomas ex Verdc.

C. buehneri, *C. splendens*, *C. umbellatum*.

Sect. Siphonocalyx Thomas ex Verdc.

C. dewittei, *C. fasciculatum*, *C. schweinfurthii*, *C. silvanum*, *C. tanganyikense*.

All the species in this account belong in the African clade except *C. buehneri*, an introduced species which belongs in the Asian clade as defined by Steane *et al.* (1997).

Key to the species of *Clerodendrum* in Central Africa (D.R. Congo, Rwanda, Burundi)

1. Corolla wholly orange to red..... Group 1
- Corolla white, cream, yellowish, greenish, occasionally red-spotted in throat or with one red lobe.....2
2. Inflorescence congested, capitate, with axis hidden by flowers; calyx membranous, petaloid, whitish, yellowish, purplish or mauve, 10–26 mm long..... Group 2
- Inflorescence looser, branched, or relatively compact but, in this case, calyx greenish, not petaloid, 3–10(–12) mm long.....3
3. Inflorescence congested, hemispheric to globose, with branches inconspicuous at anthesis Group 3
- Inflorescence of loose cymes, or elongate thyrses, with branches conspicuous at anthesis4
4. Calyx lobes at anthesis 0.5–3 mm long, < 50(–60)% of total calyx length..... Group 4
- Calyx lobes at anthesis (3–)5–25 mm long, > 50% of total calyx length..... Group 5

Group 1: Corolla wholly orange or red

1. Calyx whitish to yellowish, pentagonal, gibbose at base, 12–25 mm long.....2
- Calyx greenish or reddish, neither pentagonal nor gibbose, 3–10 mm long.....3
2. Stem and inflorescence branches densely pubescent, with brown hairs; leaves conspicuously pubescent *Clerodendrum fuscum*
- Stem and inflorescence branches subglabrous or puberulous; leaves glabrous *Clerodendrum thomsoniae*
3. Petiole 2–25 cm; lamina deeply cordate at base; lower surface of lamina tomentose *Clerodendrum buehneri*
- Petiole 0.3–2(–4) cm; lamina rounded to slightly cordate at base; lower surface of lamina glabrous or shortly pubescent on veins (rarely on whole surface)..... *Clerodendrum splendens*

Group 2: Inflorescence capitate, unbranched; calyx petaloid > 10 mm

1. Inflorescences on old defoliated shoots often near ground level; leaves glabrous..... *Clerodendrum excavatum*
- Inflorescences on leafy twigs; leaves pubescent at least on lower surface2
2. Suffrutex (0.10–)0.15–1 m in height, with shoots renewed every year; corolla tube 5–7.5 cm; leaf lamina < 11 × 5.5 cm *Clerodendrum buchneri*
- Shrub or liana 1–6 m, with persisting shoots; corolla tube 6–19 cm; lamina of variable size, often > 11 × 5.5 cm.....3
3. Shrub with unbranched or sparingly branched shoots; petiole base not persistent; leaves mostly grouped at shoot apex; lamina 9–48 × 6–45 cm, mostly cordate at base; petiole mostly > 6 cm4
- Shrub or liana with branched shoots; petiole base persistent, spiny; leaves not grouped near shoot tip; lamina < 17 × 11 cm, cuneate or rounded at base; petiole < 6 cm..... *Clerodendrum capitatum*

4. Inflorescence ovoid to subcylindric, 5–20 cm long (corolla excluded), markedly longer than wide; peduncle hollow, up to 10 mm thick; stem and petiole papillate, lacking long patent hairs; calyx purplish-violaceous *Clerodendrum poggei*
 - Inflorescence hemispheric to shortly ovoid, 3–5 cm in diam. (corolla excluded); peduncle not exceeding 5 mm in diam., mostly solid; stem and petiole with mixed indumentum of papilliform and long patent hairs; calyx mostly greenish, occasionally with a purplish tinge *Clerodendrum frutectorum*

Group 3: Inflorescence congested, hemispheric; calyx green at anthesis, < 10 mm long

1. Calyx 3–5 mm long; peduncle papillate, pubescent, or tomentose2
 - Calyx 5–9 mm long; peduncle glabrous to puberulous3
2. Corolla tube 25–35 mm long; petiole and young twigs glabrous or with patent stiff hairs; peduncle 4–22 cm, papillate, puberulous or shortly pubescent *Clerodendrum schweinfurthii*
 - Corolla tube 15–20 mm long; petiole and young twigs beige to fulvous tomentose; peduncle 1.5–4 cm, densely pubescent to tomentose *Clerodendrum fasciculatum*
3. Calyx narrowly tubular, 2–4 mm wide near throat, lobes not conspicuously veined; corolla tube 7–13(--18) mm long; stamens exerted 5--10(--15) mm; petiole glabrous; liana up to 10 m *Clerodendrum silvanum* f. *caulanthum*
 - Calyx funnel-shaped, ca. 5 mm wide near throat, lobes conspicuously 3-veined; corolla tube 15–22 mm long; stamens exerted 10–15 mm; petiole pubescent; suffrutex or small liana < 2 m in height *Clerodendrum dewittei*

Group 4: Inflorescence conspicuously branched; calyx lobes 0.5–3 mm long, < 50(–60)% of total calyx length

1. Calyx shortly campanulate to cupular, with depth equal to or smaller than diameter; calyx lobes spreading2
 - Calyx tubular to narrowly funnel-shaped, with depth markedly longer than diameter; calyx lobes erect5
2. Inflorescence on old defoliated shoots, often near the ground *Clerodendrum bipindense*
 - Inflorescence on leafy shoots3
3. Whole plant turning black in herbarium; corolla dark-spotted after anthesis (in the field); lamina base rounded to obtusely cuneate *Clerodendrum melanocrater*
 - Whole plant green to brownish in herbarium; corolla not dark-spotted after anthesis; lamina base cuneate4
4. Flower bud and corolla tube greyish-tomentellous; inflorescence main axis pubescent; inflorescence paniculiform; rachis 6–40 cm, with internodes 5–65 mm *Clerodendrum thyrsoidium*
 - Flower bud and corolla tube subglabrous; main axis of inflorescence subglabrous or puberulent only in the upper part; inflorescence corymbiform; rachis 1.5–6(–12) cm, with internodes < 10 mm *Clerodendrum volubile*
5. Leaves 3–4-whorled; lamina conspicuously 3-veined from base, glabrous; inflorescence umbelliform, rachis 1–2(–7) cm, inflorescence branches almost horizontally spreading, glabrous to puberulous; stem often conspicuously striate or sulcate *Clerodendrum formicarum*
 - Leaves opposite, or, more rarely, 3-whorled, but, in this case, pubescent; lamina 1-nerved at base; inflorescence thyriform or, rarely, umbellate; stem cylindric or slightly striate6
6. Calyx (3–)4–10 mm long, lobed ca. ¼ in length; corolla tube 7–20 mm7
 - Calyx 2.5–6 mm, lobed 40–50% in length; corolla tube 4–10(–11) mm8
7. Stem (at least near apex) and leaves (at least the petiole), more or less pubescent; upper surface of lamina dull, with reticulum not prominent *Clerodendrum tanganyikense*
 - Stem and leaves wholly glabrous; upper surface of lamina shiny, with reticulum prominent *Clerodendrum silvanum*
8. Calyx glabrous to puberulent; first-order inflorescence axes branched only near tip, spreading at a very open angle, forming an umbel; leaves often 3-whorled *Clerodendrum polycephalum*
 - Calyx pubescent, either hirsute or with dense indumentum of curly hairs; first order inflorescence axes more ramified, forming a corymbose to hemispheric inflorescence; leaves opposite9
9. Young twigs, inflorescence branches and calyx covered with short curly rusty or fulvous hairs; inflorescence 4–14 × 4–19 cm; petiole 1–9 cm; lower surface of lamina most often tomentose, with curly hairs, sometimes only on veins *Clerodendrum johnstonii*
 - Young twigs, inflorescence branches and calyx with straight or undulate, not curly, pale fulvous hairs; inflorescence 3–4 × 3.5–8 cm; petiole < 5.5 cm; lamina hispid on lower surface of veins *Clerodendrum inaequipetiolatum*

Group 5: Inflorescence branched; calyx divided over ca. 50% of its length, with lobes > (3–)5 mm

1. Liana or shrub; shoots perennial, branched, > 1 m long2
 - Suffrutex; shoots annual, unbranched, up to 1.2 m long7

2. Inflorescence terminal, rather dense, with branches < 2.5(–4) cm, not subtended by leafy bracts..... *Clerodendrum welwitschii*
 - Inflorescence in axillary cymes subtended by foliaceous bracts, branches > 3 cm, occasionally the uppermost ones grouped into a loose corymb or panicle.....3
3. Shoot and inflorescence with long patent, brownish-violaceous articulated hairs 2–5 mm long *Clerodendrum buettneri*
 - Shoot and inflorescence glabrous or shortly pubescent, with hairs not remarkable4
4. Corolla tube 6–11 cm long; calyx densely velvety-pubescent; leaf lamina tomentose on lower surface; pedicel 1–4 cm; stem hollow *Clerodendrum rotundifolium*
 - Corolla tube 1–3 cm; calyx glabrous to shortly pubescent; leaf lamina glabrous or slightly pubescent on lower surface; pedicel 0.4–1.8(–3.0) cm; stem solid.....5
5. Calyx cream to yellow; stem and inflorescence branches densely pubescent, with brown hairs; inflorescence branches subtended by foliaceous, subsessile, cordate, clasping bracts *Clerodendrum fuscum*
 - Calyx whitish to whitish-green, occasionally purple-tinged; stem and inflorescence axes puberulous to shortly pubescent; inflorescence branches subtended by ovate, petiolate, not clasping, foliaceous bracts6
6. Inflorescence comprised of small 3–5(10)-flowered axillary cymes on a peduncle 0.6–3 cm, in the 3–10 upper nodes of the stem, forming a very loose narrow thyse (9–32 × 3–6 cm); calyx gibbose at base, pentagonal, accrescent to 20 mm during anthesis.....
 *Clerodendrum pynaertii*
 - Inflorescence comprised of multiflorous corymbiform cymes, peduncle 1–9 cm, in the 2–3 upper nodes; calyx funnel-shaped or campanulate, neither gibbose nor pentagonal, < 12 mm long..... *Clerodendrum umbellatum*
7. Calyx gibbose, truncate at base, 10–16 mm long at anthesis, accrescent up to 18–23 mm long; inflorescence branches 1–2 cm; corolla tube ca. 10 cm long..... *Clerodendrum baumii*
 - Calyx funnel-shaped, neither gibbose nor truncate, 6–12 mm long; inflorescence branches 1–9 cm; corolla tube ca. 1.5 cm long...
 *Clerodendrum umbellatum*

1. *Clerodendrum baumii* Gürke (in Warburg 1903: 351); Thomas (1936: 62); Moldenke (1985c: 190); Lebrun & Stork (1997: 510); Fernandes (2005: 99); Goyder & Gonçalves (2019: 87).—Fig. 1.

Type:—ANGOLA. Am linken Longa-Ufer, oberhalb des Lazingua, 1220 m, 20 January 1900, *Baum 661* (holotype: B†; iso-: E00043057, G00366326, W19010006834, Z-000029570).

A geofrutex 0.6–1.2(–1.5) m in height. Stem quadrangular, shortly pubescent or papillate, generally unbranched, internodes shorter than leaves, often leafless in lower third at flowering. Leaves opposite or 3-whorled, upright, petiole 5–23 mm, shortly pubescent; lamina ovate to subdeltoïd, 2.5–5.5 × 1.0–3.4 cm, decreasing in size from base to top, base cuneate to truncate, shortly decurrent on the petiole, apex acute to shortly acuminate, shortly pubescent on both surfaces, punctate, 3–4 veins on either side, margin entire, recurved. Inflorescence a thyse, paniculiform, 5–20 × 3–8 cm (corolla excluded), occasionally with axillary cymes lower on the shoot, internodes 2–3 cm, rachis angled, branches 1–2 cm, shortly pubescent, bracts leaf-like but smaller. Flower: pedicel 20–30 mm, shortly pubescent; calyx campanulate, 10–16 mm long at flowering, 18–23 mm long in fruit, 12–16 mm broad at base, truncate at base, lobed to 1/3–1/2, lobes triangular, acute to acuminate, (3–)5–12 mm long in flower, sparsely pubescent to subglabrous; corolla tube ca. 100 mm, shortly pubescent, with glandular and eglandular hairs, lobes ca. 5 mm long, cream to yellowish, pubescent; stamen filaments exerted 10–25 mm, reddish. Fruit ca. 9 mm long (rarely observed).

Distribution in Central Africa:—D.R. Congo (Kasaï).

Distribution elsewhere:—Angola and Zambia.

Habitat:—Shrub and wooded savannah, *Uapaca* dry woodland, often of sandy soil; 600–700 m.

Selection of representative specimens:—D.R. CONGO. **Kasaï:** Mawanga, 28 April 1953, *Callens 4032* (BR!); 50 km S of Munene, 30 April 1948, *Duvigneaud 814* (BRLU!); Kwango, Panzi, 12 Jun. 1955, *Devred 1998* (BR!); Masabu, ca. 20 km SE Popokabaka, 27 April 1944, *Germain 2194* (BR!).

2. *Clerodendrum bipindense* Gürke (1900: 296); Baker (1900: 516); Thomas (1936: 72); Huber (1963: 444); Moldenke (1985c: 200); Lebrun & Stork (1997: 510); Pollard (2022: 22).

Type:—CAMEROON. Bipinde Urwaldgebiet, im schatigem Urwald, 16 December 1896, *Zenker 1217* (lectotype designated here: K000192854]; isolecto-: G00366314, HBG513425, LE00016565).

A slender liana to 7 m high. Stem reddish, with persistent petiole bases 5–8 mm long, twigs glabrous. Leaf: petiole 1.5–2.5 cm; lamina elliptic to obovate-elliptic, 12–18 × 5–8.5 cm, cuneate to rounded at base, acuminate, glabrous, 4–5 veins on either side, reticulum prominent on both surfaces, margin entire. Inflorescence on old defoliated shoots,

often near ground, an ample pyramidal paniculiform thyrse, 7–15 × 10–15 cm, with 3–5 nodes, internodes 1–4 cm, branches 2.5–5 cm, peduncle 5–9 cm, rachis angled, flattened at nodes, puberulent, bracts filiform ca. 4 mm long. Flower: pedicel 5–20(–30) mm, whitish, very shortly crispate-pubescent, calyx broadly infundibuliform, 2.5 mm long and wide, lobes deltoid, ca. 0.5 × 1.5 mm, whitish, subglabrous; corolla tube 15–22 mm, with glandular hairs, lobes 5–7 mm long, yellow to cream; stamens exerted 10–15 mm. fruit: ca. 9 × 7 mm, dark green (not seen).

Distribution in Central Africa:—D.R. Congo (extreme W).

Distribution elsewhere:—Cameroon, Republic of Congo, Gabon, Fernando Po, Nigeria.

Habitat:—Old rainforest with *Staudtia* and *Coelocaryon*; ca. 300 m.

Selection of representative specimens:—D.R. CONGO. **Mayombe:** without locality, 1913, *de Briey s.n.* (BR!), Réserve de la Luki, 11 August 1959, *Compère 8* (BR!).

Lecotypification of *Clerodendrum bipindense* Gürke. Thomas (1936) designated *Preuss 1358* as the lectotype, but that specimen has most likely been destroyed and no duplicate has been found. Most remaining original materials display the diagnostic traits of the species; *Zenker 1217* (K) is selected because duplicates have been widely distributed. Remaining syntypes:—CAMEROON. Im lichtem Urwald nordlich von Victoria, 22 November 1894, *Preuss 1358* (syn-: B†); bei Batanga auf feuchtem Waldboden, 5 October 1891, *Dinklage 1367* (syn-: B; isosyn-: HBG513423, HBG513423; an den Ebea-Fälle des Lokundje, 20 November 1889, *Dinklage 288* (syn-: HBG513424).

3. *Clerodendrum buchananii* (Roxburgh 1832: 60) Walpers (1845: 108); Lam & Bakhuizen van den Brink (1921: 91); White (1962: 365); Moldenke (1985d: 283); Smith (1991: 211); Fernandes (2005: 93).

Type:—INDIA. 1797, *Buchanan s.n.* (holotype: K, not seen).

= *Volkameria buchananii* Roxb. (Roxburgh 1832: 60).

= *Clerodendrum speciosissimum* auct. non Morren (1836: 322, pl. 68); Lejoly *et al.* (2010: 295).

= *Clerodendrum fallax* sensu De Wild. (De Wildeman 1912a: 468; 1912b: 132) non Lindl. (1844: t. 19).

Shrub, 1.5–3 m, much branched. Stem quadrangular, shortly pubescent to tomentellous. Leaf: petiole 2–25 cm, reddish, pubescent; lamina broadly ovate, 6–18 × 5–18 cm, deeply cordate at base, acute to obtuse at apex, 4–7 veins on either side, upper surface pubescent, lower surface softly pubescent to tomentose, margin undulate-crenate. Inflorescence paniculiform to corymbiform, 13–19 × 11–15 cm, of axillary cymes grouped at shoot apex, with 5–11(–16) nodes, peduncle of the cymes 2–6 cm, reddish, shortly brownish pubescent, cymes 7–11-flowered, the lowermost one in the axil of a foliaceous bract, the other bracts obovate, ca. 5 × 1 mm. Flower: pedicel 4–10 mm, pubescent; calyx funnel-shaped, 2.5–3 mm long, puberulent and with sessile glands, lobes narrowly triangular, 1.5 mm long, often outwardly recurved at tip, reddish; corolla: tube 12–17 mm, papillate, lobes obovate, 9–12 mm long, papillate and with sessile glands on outer surface; stamens protruding 15–25 mm, anther ca. 3 mm long. Fruit 4-lobed, ca. 5 × 8 mm, blue-black, more or less wrinkled, subtended by the persistent cup-shaped calyx ca. 3 × 8 mm.

Distribution in Central Africa:—D.R. Congo, introduced.

Distribution elsewhere:—Islands of SE Asia and W Pacific; introduced for ornamental purposes in the tropics worldwide.

Habitat:—Cultivated for ornamental purposes, apparently not yet recorded as a garden escape in Central Africa.

Selection of representative specimens:—D.R. CONGO. **Bas-Congo:** Jardin agronomique de Kisantu, 27 September 1930, *Vanderyst 25748* (BR!); **Kasaï:** Luluabourg [Kananga], s.d., *Vanderyst 21298* (BR!). **Forestier Central:** Eala, November 1923, *Goossens 4389* (BR!); Kisangani, jardin botanique de la Faculté des sciences, 8 July 1974, *Lejoly 5441* (BR!), Yangambi, poste de Yaosuka, 30 May 1938, *Louis 9578* (BR!). **Haut-Katanga:** Elisabethville [Lubumbashi], 1937, *Salésiens 725* (BR!, WAG).

Note:—This species has generally been referred to as *Clerodendrum speciosissimum*. *C. buchananii* and *C. speciosissimum* are closely related species native to SE Asia, the former sometimes treated as a variety of the latter (*C. buchananii* var. *fallax* (Lindl.) Bakh.). See Moldenke (1985d) for a discussion of the relations between *C. buchananii* and *C. speciosissimum*. Fernandes (2005) was the first to point out that most if not all African specimens better correspond to *C. buchananii*, due to the short calyx (2.5–5 mm long, vs. 6–8 mm in *C. speciosissimum*) and the smaller corolla (lobes 7–12 mm long, vs. 12–17 mm in *C. speciosissimum*). Further investigation is needed to clarify the taxonomy of Asian red-flowered *Clerodendrum* introduced to Africa.

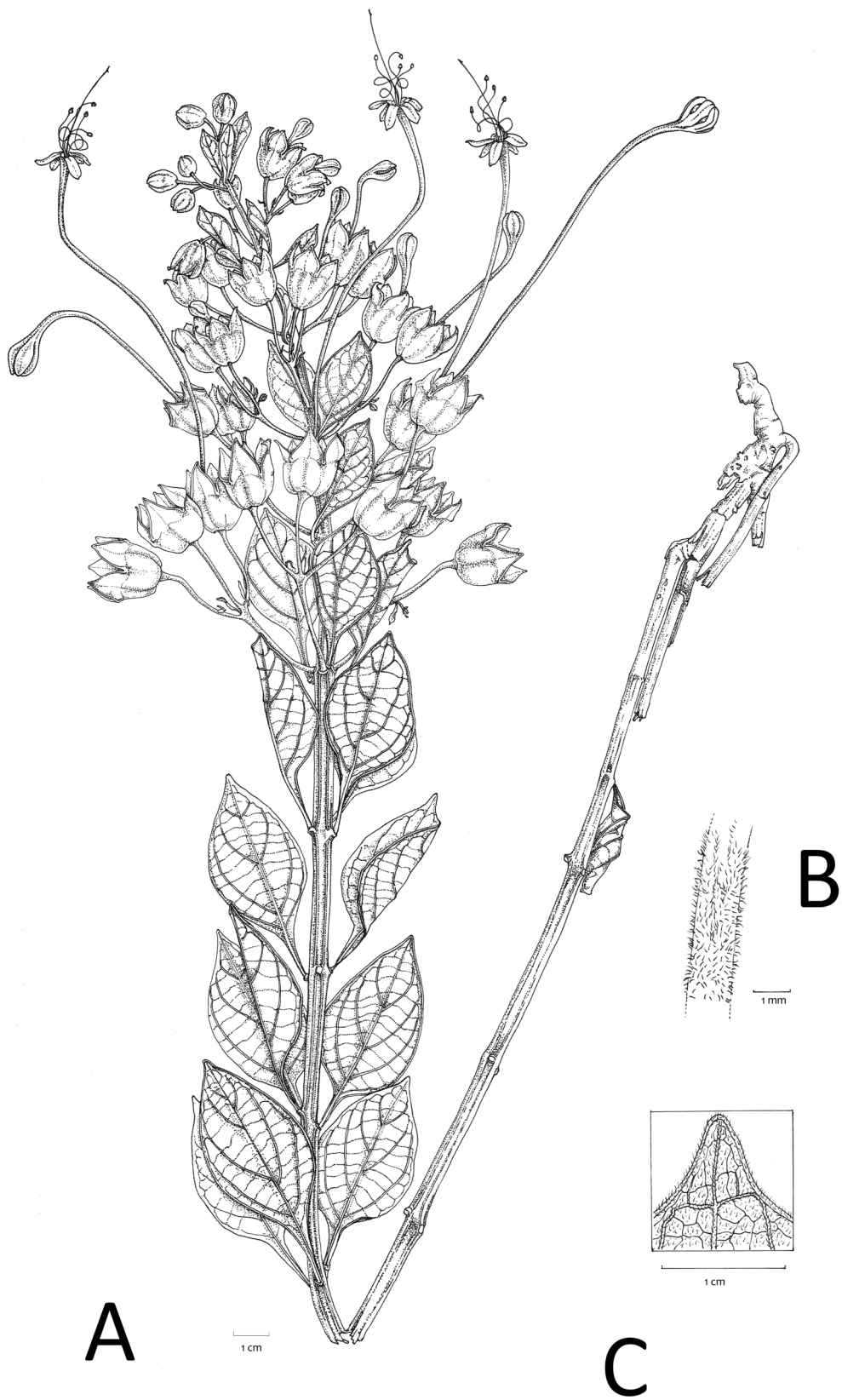


FIGURE 1. *Clerodendrum baumii* (Jernandez 26 and Devred 1998 (BR)). (A) Habit. (B) Leaf tip underside. (C) Portion of corolla tube. Drawing by Hilde Orye, Botanical Garden Meise (©).

4. *Clerodendrum buchneri* Gürke (1893: 172); Durand & Schinz (1896: 222); Baker (1900: 305); Durand & Durand (1909: 438); Thomas (1936: 64); White (1962: 367); Huber (1963: 442); Moldenke (1985d: 300); Verdcourt (1992: 102); Lebrun & Stork (1997: 510); Fernandes (2005: 101); Vollesen & Merrett (2020: 863).

Type:—ANGOLA. Malange, *Gossweiler 1050* (neotype designated here: K001008526).

= *Clerodendrum strictum* Baker (Baker 1900: 305). Type:—ANGOLA. Pungo Andongo, January 1957, *Welwitsch 5685* (holotype: K000192918, iso-: BM000798651, G00366331, P00442379).

= *Clerodendrum hockii* De Wild. (De Wildeman 1911a: 266). Type:—D.R. CONGO. Haut-Katanga, Vallée de la Luembe, Février 1910, *Hock s.n.* (holotype: BR0000008929280 & BR0000008929617).

= *Clerodendrum humile* Chiov. (Chiovenda 1922: 117); Thomas (1936: 64). Type:—D.R. CONGO. Haut-Katanga, Plateau des Bianos, October 1919, *Bovone s.n.* (holotype: ubi?).

A geofrutex with a thick horizontal rhizome, up to (10–)15–100 cm high, with annual shoots. Stem erect, mostly simple, tardily lignified at base, terete to slightly angled, shortly hispid, internodes 1.5–4 cm, 7–12 nodes; persistent petiole bases obsolete to ca. 2 mm. Leaves increasing in size from base to top, petiole ca. 0.5–1(–3) cm; lamina obovate to elliptic-obovate, 4.5–11 × (1.5–)2–5.5 cm, base obtuse, apex obtuse-rounded to abruptly acuminate, more rarely acute, margin entire, rarely undulate-crenate distally, upper surface shortly pubescent, roughish, lower surface shortly pubescent on veins; 3–4(–5) veins on either side, diverging at an acute angle, the lowermost pair from the base, impressed, prominent on lower surface. Inflorescence subsessile, capitate, 30(–40) mm diam. (corollas excluded), rarely ovoid (up to 50(–100) × 30 mm); bracts foliaceous, up to 18 mm long, branches short (< 5 mm). Flower: pedicel 3–5 mm, hispid; calyx 16–21 mm, tube obconical, 3–5 mm long, lobes ovate, acuminate, 5–7(–8) mm long, pale green to purplish, reticulum prominent, ciliate (cilia pallid, up to 1.5 mm); corolla: tube 5–6.5(–7.5) cm, greenish, with glandular hairs 0.5–1 mm, lobes ca. 10 × 6 mm, cream to pale yellow, stamens exerted 20–25 mm, anther ca. 2.5 mm long. Fruit: mericarps obovoid, ca. 13 × 8 mm.

Distribution in Central Africa:—D.R. Congo, Burundi.

Distribution elsewhere:—Angola, Botswana, Tanzania, Zambia, Zimbabwe.

Habitat:—Savannah, dry woodland, fallow field, also in degraded sites; 800–2200 m.

Selection of representative specimens:—D.R. CONGO. **Kasaï**: Panzi, 6 February 1952, *Callens 3107* (BR!); Feshi, Kwango, 13 March 1956, *Devred 2903* (BR!). **Lacs Edouard & Kivu**: Tanganyika Lake, 10 July 1908, *Kässner 5066a* (BR!). **Haut-Katanga**: Baya, 16 May 2006, *Faucon & Meerts 74* (BR!); Mont Mukwen, 21 March 1986, *Lumbu Simbi 11* (BR!, WAG); Lubumbashi, station agricole de Keyberg, March 1937, *Quarré 4838* (BR!); Route Pweto-Baudouinville, env. Kisabi, 1050 m, 22 April 1926, *Robyns 2069* (BR!); Route Kasumbalesa, 77 km from Lubumbashi, 29 November 1981, *Schajjes 1198* (BR!); Bianco, 34 km NNW of Tenke, 19 December 1982, *Schajjes 1671* (BR!); Bianco, à 22 km de Tenke, 30 January 1984, *Schajjes 2214* (BR!, with photo!); Marungu, Kasigi, 2200 m, 12 June 1939, *Vanden Brande 216* (BR!).—BURUNDI: **Rwanda-Burundi**: Mugera (territ. Ruyigi), 28 October 1966, *Lewalle 1164* (BR!, MO); Kininya Mosso, 28 June 1952, *Michel 3086* (BR!); Ruyigi, Kigamba, 1 April 1977, *Reekmans 5922* (BR!, FHI, WAG).

Notes:—1. The flowers are occasionally parasitized (fungus?) with corolla tube dilated up to 1 cm thick (e.g. *Hock s.n.*).

2. *C. humile* Chiov. is based on a specimen at the lowermost end of size range (calyx ca. 10 mm long, with lobes ca. 3 mm broad), without taxonomic value. The type specimen could not be located.

3. A specimen from Burundi (*Reekmans 3094*) is unusual in being a shrub (collecting notes: «shrub, 2 m high») and in having leaf upper surface more densely pubescent; it could represent *C. robustum* Klotzsch, an East African species; however, it lacks corollas, and more materials are needed to confirm the presence of *C. robustum* in Burundi.

Neotypification of *Clerodendrum buchneri* Gürke. *Büchner 572* was designated as the lectotype by Thomas (1936), but it has most likely been destroyed and no duplicate was found. The two other syntypes have not been found either (*Mechow 429*, *Mechow 557a*). We designate *Gossweiler 1050* as the neotype, i.e. a specimen collected in N Angola, in the same region as *Büchner 572*, and which was cited by Thomas (1936).

5. *Clerodendrum buettneri* Gürke (1893: 174); Baker (1900: 302); De Wildeman (1920b: 165; 1922: 258); Thomas (1936: 61); Huber (1963: 442); Moldenke (1985e: 353); Lebrun & Stork (1997: 510); Pollard (2022: 22).

Type:—GABON. Environs de Libreville, 1896, *Klaine 297* (neotype designated here: P03894497).

A liana. Stem up to 1 cm diam., twigs somewhat quadrangular, villose, with patent pale brown to fulvous hairs, up to 5 mm long, and short papilliform hairs; petiolar spines up to 3 mm. Leaf: petiole 1.0–5.0 cm, unequal, villose; lamina

ovate 4.5–12.5 × 3–8 cm, base rounded to subcordate, apex acuminate, hirsute on both surfaces (hairs ca. 2 mm), 3–4 veins on either side. Inflorescence: axillary cymes, at 3–4(–8) distal nodes, internodes ca. 5–14 cm, peduncle 1.5–7 cm, hairy like the stem, with 5–7(–11) flowers, bracts leaf-like but smaller. Flower: pedicel 8–15 mm, indumentum as peduncle; calyx 10–16 mm long, tube obconical 2–3 mm, abruptly dilated into ovate-acute or acuminate lobes, ca. 9–12 × 4–6 mm, hirsute, ciliate; corolla white, red-spotted in the centre, tube 18–20 mm, with long eglandular hairs and short glandular hairs, lobes ca. 9 mm long; stamens 25–35 mm, anther ca. 2.5 mm long. Fruit: ca. 1 × 1.2 cm.

Distribution in Central Africa:—D.R. Congo.

Distribution elsewhere:—Angola (Cabinda), Cameroon, Congo, Equatorial Guinea, Gabon, Nigeria.

Habitat:—Forest, more or less degraded; ca. 200–1520 m.

Selection of representative specimens:—D.R. CONGO. **Mayombe:** s.l., s.d., *Cabra 7* (BR!). **Forestier Central:** Lubutu, 27 January 1915, *Bequaert 6755* (BR!); Kivu, Territ. Kalehe, vers km 110 route Kavumu-Walikale Irangi, réserve IRSAC, 28 January 1957, *Christiaensen 1987* (BR!); Opala, June 1949, *Germain 5117* (BR!); Zone de Mambasa, Lenda, Ituri forest, 27 February 1998, *Amsini 095* (BR!, MO, WAG).

Neotypification of *Clerodendrum buettneri* Gürke:—The holotype (Gabon, Weg nach der Sibangefarm, September 1884, *Büttner 426* (B)) has most likely been destroyed and no isotype could be traced. One of the specimens cited by Thomas (1936) has been found (*Gossweiler "7898"* (typo for 7998)), but it was collected in Angola in fruiting state, while the holotype was collected in Gabon in flowering state. I select *Klaine 297* as the neotype, because it was collected at short distance from the type locality, and with well-developed corollas.

6. *Clerodendrum capitatum* (Willdenow 1800: 384) Schumacher in Hornemann (1819: 14); Hooker (1848: t.4355); Baker (1900: 305); De Wildeman (1910a: 401; 1912b: 91; 1920b: 165); Durand & Durand (1909: 438); Thomas (1936: 64); White (1962: 367); Huber (1963: 443); Geerling (1982: 327); Malaise (1985: 274); Verdcourt (1992: 103); Lebrun & Stork (1997: 511); Fernandes (2005: 103); Akoegninou *et al.* (2006: 985); Hawthorne & Jongkind (2006: 426); Bloesch *et al.* (2009: 624); Lisowski (2009: 363); Lejoly *et al.* (2010: 294).

Type:—GUINEA. Aquapim, 1786, *Isert s.n.* (holotype: B-WILLD B-W 11682-01 0; iso-: C10003557).

Key to the varieties of *C. capitatum*:

1. Calyx tube pubescent.....var. *pubitubum*
- Calyx tube glabrous.....2
2. Corolla tube glandular-pubescent; corolla lobes 7–15 mm long; stamens exserted 20–30(–40) mm.....var. *capitatum*
- Corolla tube glabrous; corolla lobes 6–10 mm long; stamens exserted 10–15 mm.....var. *vanderystii*

6a. *Clerodendrum capitatum* var. *capitatum*

= *Clerodendrum conglobatum* Baker (1900: 296). Type:—ANGOLA. Pungo Andongo, prope Cabondo, January 1857, *Wehwitsch 5629* (**lectotype designated here:** BM000798624; isolecto-: BM000798625, G00366315, K000192923, P00442337) ≡ *Clerodendrum capitatum* var. *conglobatum* (Baker) Thomas (Thomas 1936: 65); Moldenke (1985f: 436).

= *Clerodendrum capitatum* var. *subcordatum* De Wildeman (1903: 117; 1921: 166); Durand & Durand (1909: 438). Type:—D.R. CONGO. Haut-Katanga, March 1909, Lukafu, *Verdick 422* (holotype: BR0000016591882!).

= *Clerodendrum talbotii* Wernham in Rendle *et al.* (1913: 91). Type:—NIGERIA. Oban, 1911, *Talbot 341* (holotype: K000192839; iso-: BM000798622, K000192838) ≡ *Clerodendrum capitatum* var. *talbotii* (Wernham) Thomas (Thomas 1936: 65); Robyns (1947: 143); Moldenke (1985f: 440).

Sarmentose shrub or liana, up to 6 m. Stem terete, with a mixed indumentum of very short appressed hairs and long patent hairs (ca. 4 mm long); persistent petiole base 3–10 mm, straight to slightly curved. Leaf: petiole 0.7–3.5(–6.0) cm, of unequal length at a node, canaliculate, with patent hairs on upper side or glabrous; lamina obovate to elliptic, 7–17(–20) × 3–10.5 cm, base obtuse, rounded to subcordate, apex acuminate, margin entire, or, rarely distally undulate-crenate, upper surface pubescent to subglabrous, lower surface pubescent on veins, or subglabrous, 4–5 veins on either side, somewhat impressed on upper surface, reticulum slightly prominent above. Inflorescence on tip of shoot or on short lateral twigs, shortly pedunculate to subsessile, subtended by small leaves, capitate (2.0–)2.5–4 cm diam.; floral bracts narrowly ovate-elliptic, similar to sepals, glabrous or sparsely pubescent, ciliate (cilia ≥ 0.5 mm). Flower: pedicel ca. 3 mm, generally glabrous; calyx: 11–20 mm long, tube 3 mm, glabrous, lobes ovate 8–16 × 5–9 mm, acuminate into a fine point, whitish green, often purple tinged, surface glabrous except for a few hairs on main veins, margin ciliate at least in tip, cilia (0.5–)1–3 mm, often purplish, reticulum prominent; corolla: tube 50–90 mm,

pubescent (glandular hairs), lobes 7–15 mm long, hairy (glandular hairs); stamens exceeding tube by 20–30(–40) mm, anther 2 mm long. Fruit: 4-lobed, ca. 10 mm long.

Distribution in Central Africa:—D.R. Congo, Burundi, Rwanda? (see note).

Distribution elsewhere:—Widespread in sub-Saharan Africa.

Habitat:—Dense rainforest of various kinds, secondary forest, riparian forest, rock outcrops.

Selection of representative specimens:—D.R. CONGO. **Côtier:** Ile Mateba, 10 May 1959, *Wagemans 2337* (BR!). **Bas-Congo:** Fu (Plateau Bateke), 26 May 1982, *Breyne 4364* (BR!); Kimbuba, June 1954, *Callens 4574* (BR!). **Kasaï:** Tumba (Territoire Luisa), 19 February 1957, *Liben 2520* (BR!, P); Kapanga, s.d., *Overlaet 147* (BR!). **Bas Katanga:** Gandajika, 22 March 1957, *Liben 2788* (BR!); Haut Lomami, Kaniama, August 1947, *Mullenders 239* (BR!); Gandajika, 15 May 1957, *Risopoulos 576* (BR!). **Forestier Central:** Bas-Uele, 12 October 1934, *De Wulf 160* (BR!); Zone de Mambasa (Ituri Forest), Epulu, 22 November 1996, *Ewango 698* (BR!, WAG); Yangambi, réserve de flore d'Isalowe, 13 September 1937, *Louis 6022* (BR!); Parc National Albert [Virunga], Bukotsa, 23 September 1954, *de Witte 11126* (BR!, WAG). **Ubangui-Uele:** Kurukwata (Aba), 7 September 1957, *Gérard 3678* (BR!, WAG); Monga, February 1931, *Lebrun 2258* (BR!); Garamba, zone frontière du Soudan, 15 August 1952, *Troupin 1934* (BR!, WAG). **Lac Albert:** Bassin du Shari, 17 October 1951, *Smeyers 11* (BR!). **Lacs Edouard et Kivu:** Kamatumbe, 14 March 1934, *de Witte 1532* (BR!); Katibombo, riv. Lusilube, 14 September 1955, *Vanschuytbroeck in de Witte 12695* (BR!, WAG); Bendersa, barrage de la Kiyimbi, September 1959, *Schmitz 6490* (BR!). **Haut-Katanga:** Lukafu, March 1900, *Verdick 422* (BR!).—BURUNDI. **Rwanda-Burundi:** Bururi, Kigwene, 23 November 1969, *Lewalle 4091* (BR!).

Lectotypification of *C. conglobatum* Baker. Baker (1900) cited *Welwitsch 5629* as the type; this collection is represented by at least 5 specimens in four herbaria; however, since Baker described the species long after the splitting of Welwitsch's collection, he most likely worked on the materials kept in the United Kingdom. The specimen BM000798624 is the most complete one, displaying dissected floral materials, most likely studied by Baker; it is chosen as the lectotype. The protologue mentions ca. 8 mm (“1/3 inch”) for calyx length, out of the range of *C. capitatum*, certainly a typo; in all the original materials, calyx length is 12–16 mm. The remaining materials is best considered as consisting of syntypes, as pointed out by Albuquerque *et al.* (2009) (BM000798625, G00366315, K000192923, P00442337).

2. *C. capitatum* is variable for twig and leaf pubescence, leaf size and shape, length and number of calyx lobe cilia, pubescence of corolla tube, length of corolla lobes and stamens; however, those traits are poorly correlated and most of the infraspecific taxa that have been described appear to be of low taxonomic value. In D.R. Congo, however, two varieties deserves taxonomic recognition (var. *vanderystii* and var. *pubitubum*)

3. Three specimens, all from the same region in the north of D.R. Congo (*De Graer 708*, *Gérard 1854*, *Gérard 4652*) have unusually small calyx (6–9 mm long), with reticulum not prominent, and few-flowered inflorescence (<12 flowers); they could represent a distinct taxon, but more materials (especially corollas) are needed.

4. *C. capitatum* is recorded by the Flore du Rwanda (Malaise, 1985), based on Raynal 20764. However, we have not seen that specimen.

5. Records of *Clerodendrum cephalanthum* in our territory are erroneous, based on specimens of *C. capitatum* with calyx cilia sparser and shorter than usual.

6b. *Clerodendrum capitatum* var. *vanderystii* Moldenke (1951: 407; 1985f: 42).

Type:—D.R. CONGO. Ipamu, May 1921, *Vanderyst 9418* (holotype: BR0000008929952!).

Differs from the type variety by the following combination of traits: corolla tube glabrous, corolla lobes shorter (6–10 mm) and stamens more shortly exerted (10–15 mm); flower bud glabrous to pubescent, not glandular.

Distribution in Central Africa:—D.R. Congo (only in the south-west).

Distribution elsewhere:—Not known elsewhere; endemic of D.R. Congo.

Habitat:—As the type variety.

Selection of representative specimens:—D.R. CONGO. **Mayombe:** Bivovolo, 30 July 1923, *Wellens 292* (BR!); **Bas-Congo:** Kimbuba, June 1954, *Callens 4574* (BR!); Madiba (Entre Kimbambi et Mpese), 26 April 1960, *Compère 2015* (BR!). **Kasaï:** Kisungu, 21 April 1953, *Callens 2113* (BR!), Mapangu, 31 May 1978, *Dumont 225* (BR!), Madibi, 9 June 1904, *Lesclauwaet 87* (BR!).

Note:—Specimens with glabrous corolla tube are occasionally found elsewhere in W Africa; however, they generally have long corolla lobes and long stamens.

6c. *Clerodendrum capitatum* var. *pubitubum* Meerts, var. nov.—Fig. 2.

Type:—D.R. CONGO. Bas-Katanga, Upemba, Kanonga, forêt katangaise sur terrain argilo-sablonneux, ±675 m, 10 February 1949, *Van Meel in de Witte 5368* (holotype: BR0000016591011!; iso-: WAG.1613183).

Differs from the type variety by the calyx tube shortly pubescent and the margin of calyx lobes with shorter cilia (ca. 0.5 mm).

A shrub. Stem reddish with pale lenticels, mixed indumentum of short hairs (often retrorse) and long patent hairs; persistent petiole bases ca. 4 mm long. Leaf: petiole (0.5–)1.5–3.0 cm, pilose; lamina elliptic to obovate-elliptic, 6–13.5 × 2.5–8 cm, base cuneate, rounded or subcordate, apex acuminate, 4–5 veins on either side, upper surface strigulose, reticulum prominent, lower surface shortly hispid on veins, reticulum most prominent, margin entire, ciliate. Inflorescence capitate, 25–35 mm in diam. (corolla excluded), subtended by subsessile uppermost leaves. Flower: bracts 13–15 × 3–4 mm, pubescent, ciliate like calyx; pedicel 1–2 mm, pubescent; calyx 13–18 mm, tube 2–3 mm long, shortly pubescent (hairs ca. 0.5 mm), lobes ovate, 10–13 × 4–6 mm, acuminate into a fine point, pale whitish-green, with a purplish tinge, reticulum prominent, sparsely pubescent, margin shortly ciliate (cilia 0.2–0.7 mm, pallid); corolla: tube 80–100 mm, with glandular hairs, lobes obovate, ca. 12 × 6 mm long, obovate, with glandular hairs on the outer surface, flower bud ca. 11 × 9 mm, stamens projecting ca. 30 mm beyond throat, anther ca. 2 mm long. Fruit: not observed.

Distribution in Central Africa:—D.R. Congo (Bas-Katanga and Haut-Katanga).

Distribution elsewhere:—Not known elsewhere; endemic of D.R. Congo.

Habitat:—*Brachystegia* woodland; 675–1700 m.

Specimens studied:—D.R. CONGO. **Bas-Katanga:** Kanonga, forêt katangaise sur terrain argilo-sablonneux, ±675 m, 10 February 1949, *Van Meel in de Witte 5368* (BR!, WAG). **Haut-Katanga,** Lusunga, 29 March 1948, *de Witte 03555* (BR!, P).

Note:—The pattern of pubescence of the calyx is reminiscent of *C. cephalanthum* subsp. *montanum*; however, in the latter, the calyx tube is not contracted above ovary, calyx lobes do not have prominent reticulum, and the corolla tube is shorter (< 4 cm).

7. *Clerodendrum dewittei* Moldenke (1953b: 288; 1980: 218); Lebrun & Stork (1997: 511).—Fig. 3.

Type:—D.R. CONGO. Katanga, Lukulu, 30 April–5 May 1931, *de Witte 291* (holotype: BR00000008970596!; iso-: BR00000008970602!, K000192862 (fragm.); NY 00137337).

Suffrutex or small liana up to 140 cm long (or more?), from a thick woody rhizome. Twigs glabrous to thinly papillate, or puberulous, pale grey, striate, lenticellate; persistent petiole bases 2–5(–10) mm. Leaf: petiole 0.3–2.5 cm, canaliculate, pubescent on upper side; lamina ovate-elliptic to obovate, 3.8–14.0 × 1.8–8.0 cm, cuneate to almost round at base, apex acuminate, midvein somewhat canaliculate, 5–7 veins on either side, slightly impressed, upper side shiny, dark green, reticulum prominent, lower surface paler, sparsely pubescent on veins, margin entire. Inflorescence either on top of leafy twigs or lateral on old twigs, or near shoot base, a capitate cyme, ca. 2.5 × 3 cm, rachis 5–10 mm with 2 nodes, branches 2–4(–10) mm, puberulent to glabrous, flattened, bracts linear 10 × 1 mm, bracteoles 2–3 mm long, puberulent; peduncle 15–120 mm, papillate to puberulent. Flower: pedicel 2–5 mm, glabrous; calyx funnel-shaped 6–7 mm long, 5 mm broad at throat (when flattened in herbarium), lobes ovate-triangular, ca. 2 × 2 mm, occasionally slightly acuminate, 3-veined; corolla white, tube 15–22 mm, widening near throat, glabrous, lobes 5–8 mm long; stamens protruding 10–15 mm, anther ca. 1 mm long. Fruit not seen.

Distribution in Central Africa:—D.R. Congo.

Distribution elsewhere:—Not known elsewhere; endemic of D.R. Congo.

Habitat:—Forest, riparian forest, dry woodland; 500–700 m.

Selection of representative specimens:—D.R. CONGO. **Bas-Katanga:** Kiala, February 1954, *Thiébaud 339* (BR!); Lukulu, 30 April–5 May 1931, *de Witte 291* (BR!, K (fragm.), NY); Parc national de l'Upemba, près de Mabwe, 24 January 1949, *de Witte 05280* (BR!); Parc national de l'Upemba, rivière Kanongo, 12 February 1949, *de Witte 05431* (BR!).

Note:—This species is a narrow endemic of Bas-Katanga, known from only four gatherings, three of which from the Upemba National Park.

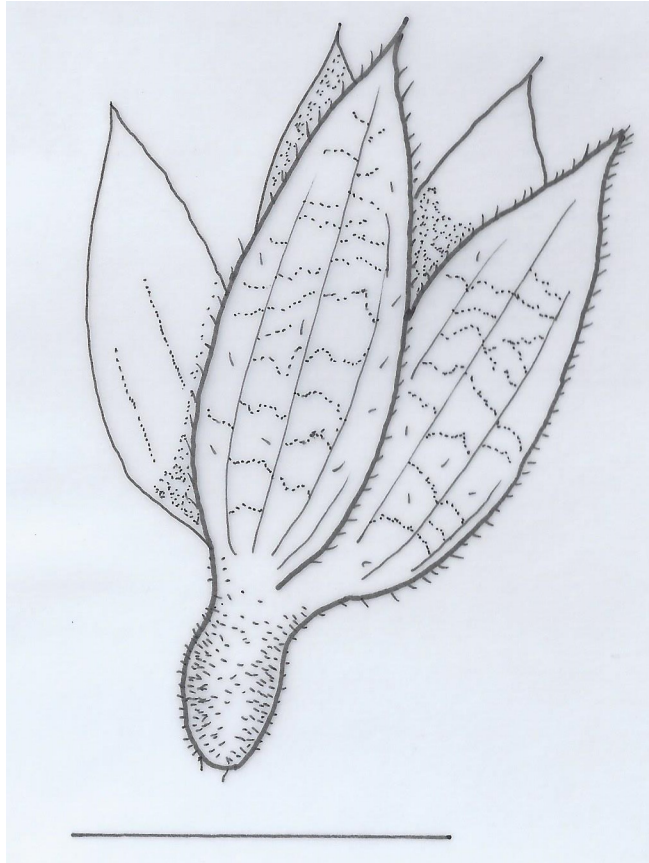


FIGURE 2. *Clerodendrum capitatum* var. *pubitubum* (Van Meel in de Witte 5368 (BR)). Fruiting calyx. Scale bar is 1 cm. Drawing by Pierre Meerts, Botanical Garden Meise (©).

8. *Clerodendrum excavatum* De Wildeman (1909: 132 & pl. XI; 1910a: 401; 1920b: 167); Moldenke (1986a: 355); Lebrun & Stork (1997: 511); Pollard (2022: 24).

Type:—D.R. CONGO. Env. Yambuya, 1906, *Solheid 379* (lectotype designated here: BR0000008976116!, BR0000008976130!).

= *Clerodendrum grandifolium* Gürke (1893: 173); Durand & Schinz (1896: 223); Baker (1900: 307); Durand & Durand (1909: 439); Lejoly *et al.* (2010: 294). **Type:**—Oberes Kongogebiet [D.R. CONGO], Land der Majakalla am Quango, November 1880, *Mechow 530* (holotype: B, not seen), *nom. illeg.* non *Clerodendrum grandifolium* Salisb. (Salisbury 1796: 108).

= *Clerodendrum excavatum* var. *cuneatum* De Wildeman (1909: 132, pl. XI, Fig 1-3) ≡ *Clerodendrum grandifolium* var. *cuneatum* (De Wild.) Thomas (1936: 63), *nom. illeg.* **Type:**—D.R. CONGO. Mogandjo, March 1906, *M. Laurent 1913* (holotype: BR0000008976154 (leaves)!, BR0000008971128 (flowers)!).

= *Clerodendrum excavatum* var. *rotundatum* De Wildeman (1909: 133, pl. XI Fig 4; 1912b: 192; 1920b: 167). **Type:**—D.R. CONGO. Env. Yambuya, 1906, *Solheid 379* (holotype: BR0000008976116!, BR0000008976130!), *nom. illeg.*

= *Clerodendrum globuliflorum* Thomas (1936: 99); Huber (1963: 443); Lebrun & Stork (1997: 511); Vande weghe *et al.* (2016: 743). **Type:**—FERNANDO PO. Nordseite d. Piks v. Sta. Isabel oberhalb Basilé, Wald über der Kakao-Region, *Mildbraed 6345* (holotype: B, not seen; iso-: HBG513436).

Shrub 1–3 m high or liana up to 15 m high and 2 cm thick. Twigs papillate when young, up to 2 cm thick when defoliated, hollow, inhabited by ants, with persistent petiole bases straight, 9–12 mm long. Leaf: petiole 2–11 cm, up to 2.5 mm thick, canaliculate, stiff, glabrous; lamina elliptic to obovate-elliptic, (8–)20–31 × (4–)10–16 cm, base cuneate to obtuse, apex acuminate, glabrous, margin entire to undulate, 5–7 pairs of veins slightly impressed above. Inflorescence axillary on defoliated shoots, capitate, 4–9 cm in diam. (corolla excluded), axis 1–2 cm, sometimes with secondary axes 5 mm. Flower: pedicel 3–15 mm, glabrous; bracteoles narrowly ovate to linear, 4–10 mm long, purplish or violaceous, shortly ciliate; calyx (13–)18–28 mm long, tube narrow, lobes ovate to ovate-elliptic, (10–)14–21 × (4–)5–8 mm, acute to acuminate, glabrous, purplish or violaceous, 5-veined, reticulum prominent, margin smooth or, more rarely, with a few cilia 0.5–1 mm in tip; corolla: tube 100–170 mm, greenish, generally with sessile glands, more rarely with glandular hairs, lobes elliptic ca. 15 mm long, subglabrous and with sessile glands on outer surface, cream, sometimes reddish tinged, stamens protruding 30–35 mm, anther ca. 3 mm long. Fruit: not observed.



FIGURE 3. *Clerodendrum dewittei*. (Thiébaud 339 (BR)). <https://www.botanicalcollections.be/specimen/BR0000015681454>

Distribution in Central Africa:—D.R. Congo.

Distribution elsewhere:—Central African republic, Nigeria, Equatorial Guinea, Gabon, Cameroon.

Habitat:—Rainforest of various types, sciaphilous species; 300–1000 m.

Selection of representative specimens:—D.R. CONGO. **Mayombe:** s.l., 1909, *Deleval s.n.* (BR!). **Bas-Congo:** Région de Kilemfu, s.d., *Gillet s.n.* (BR!); Kisantu, 20 December 1920, *Schouteden 126* (BR!). **Kasaï:** s.l., 1925, *Achten 761* (BR!); Kakenge, November 1937, *Gillardin 303* (BR!); Kapanga, July 1933, *Overlaet 985* (BR!). **Forestier Central:** Boyekoli Ebale Congo expedition 601, *Gille 269* (BR!); à 20 km de Yalibwa, 17 January 1936, *Louis 1035* (BR!). **Ubangui-Uele:** Bas-Uele, 27 December 1934, *De Wulf 522* (BR!); Entre Libenge et Zongo, November 1930, *Lebrun 1702* (BR!). **Lacs Edouard & Kivu:** Territ. Kalehe, Kabishula, 13 March 1954, *Christiaensen 397* (BR!).

Lectotypification of *Clerodendrum excavatum* De Wild. In the protologue, De Wildeman (1909: 132) considered that his new species comprised two varieties, which he referred to as “var. *cuneatum*” and “var. *rotundatum*”, respectively; therefore, one of the two names is illegitimate. Thomas (1936) and Moldenke (1986a) considered “var. *rotundatum*” as representing the type variety and I follow this interpretation here by designating *Solheid 379* as the lectotype of *Clerodendrum excavatum* De Wild. Therefore, *Clerodendrum excavatum* var. *rotundatum* De Wild. is illegitimate.

2. *Clerodendrum globuliflorum* Thomas (1936: 99) is a morphotype with corolla 60 mm long, shorter than the type, and corolla tube densely glandular-pubescent; Pollard (2022) regards it as a synonym. In our territory, the corolla is generally longer and with sessile glands or, more rarely, with sparse glandular hairs.

9. *Clerodendrum fasciculatum* Thomas (1936: 103); Moldenke (1980: 225; 1986b: 408); Lebrun & Stork (1997: 511).—Fig. 4.

Type:—BURUNDI. Busiga de l’Imbo, Parc national de la Kibira [Süd-Ruanda, Russiga-Gebirge, westhang], 1909, *Meyer 1000* (holotype B, not seen; iso-: JE00004313).

Suffrutex, shrub, or liana, 1–2 m high. Young shoot beige to fulvous-tomentose, becoming glabrous and grey, with pale lenticels; persistent petiole bases occasionally present, ca. 5 mm long. Leaf: petiole 0.5–2.3 cm, thick, beige tomentose; lamina obovate to elliptic, more rarely ovate, 5–17 × 3–9.5 cm, base cuneate to almost rounded, more rarely subcordate, apex obtuse, or rounded, or shortly acuminate, 4–6 veins on either side, somewhat impressed, upper surface dark green, dull to slightly shiny, mostly sparsely pilose, more densely so on main veins, reticulum prominent, lower surface more or less villose on veins (thin undulate hairs), margin irregularly undulate-crenate, often crispate. Inflorescence at shoot apex or in the axil of leaves or lateral on defoliated twigs, a dense, subcapitate thyrses 10–20(–50) × 20–30(–50) mm (corolla excluded), with 2–3 nodes, branches 2–4(–15) mm, shortly hispid, bracts narrowly elliptic to linear, 1–3 mm long, pubescent; peduncle 1.5–4 cm, thick, stiff, softly pubescent to tomentose. Flower: pedicel 2–4 mm, puberulent to fulvous-tomentose; calyx 3–4.5 mm long, narrowly campanulate, puberulent, shortly hispid to fulvous tomentose, more rarely glabrous, lobes triangular to broadly ovate-triangular, ca. 1 mm long, acute to shortly acuminate, more or less divergent; corolla: tube ca. 15–20 mm, widening at tip, glabrous to sparsely pilose, lobes ca. 5–7 mm long, glabrous or with sessile glands on outer surface; stamen protruding 10–23 mm, anther 1–1.5 mm long. Fruit: ca. 10 × 5 mm, subtended by the cupuliform calyx ca. 6 × 6 mm.

Distribution in Central Africa:—Burundi.

Distribution elsewhere:—Not known elsewhere; endemic of Burundi.

Habitat:—Savannah, fallow field, xerophilous scrub; 800–1500 m.

Selection of representative specimens:—BURUNDI. **Lacs Edouard et Kivu:** Plaine de la Rusizi, 23 October 1969, *Lewalle 3945* (BR!); Buhonga, 17 October 1967, *Lewalle 2080* (BR!, MO); Plaine de la Rusizi, 10 September 1980, *Reekmans 9419* (BR!, FHI, WAG); Kabezi, 12 May 1982, *Reekmans 11171* (BR!, WAG); Entre Usumbura [Bujumbura] et Isare, 21 May 1926, *Robyns 2273* (BR!, WAG). **Rwanda-Burundi:** Bururi, Makamba, 20 October 1977, *Reekmans 6543* (BR!, WAG); Parc national de la Kibira, Busiga de l’Imbo (ca. 10 km from Musigati), 1909, *Meyer 1000* (JE).

Notes:—1. *C. fasciculatum* is a critical taxon. Most of the materials in collections had been misidentified as *C. schweinfurthii*. The specimens that we refer to *C. fasciculatum* are variable, occasionally departing from the protologue; in particular, the upper surface of the lamina is often pubescent (protologue: glabrous), the base of the lamina is cuneate to rounded (protologue: cordate) and the inflorescence is lateral or terminal (protologue: terminal). However, the materials examined show a characteristic combination of traits, including tomentose young twigs and petiole, compact inflorescence on a thick peduncle, short calyx, and corolla tube < 20 mm. Some specimens with a less congested inflorescence are somewhat intermediate with *C. tanganyikense* (*Ankei 79/056*,

Symoens 1341). *Heine 297*, collected in a riparian forest, is somewhat aberrant, being almost glabrous; it could represent a different taxon, but more materials are needed.

2. The species is a new record to Burundi. It was previously recorded from Tanzania in error, probably due to misinterpretation of the type locality by Moldenke (1980: 225). For the location of the type locality, see Meyer (1984).

10. *Clerodendrum formicarum* Gürke (1893: 179); Durand & Schinz (1896: 223); Baker (1900: 297); De Wildeman (1910a: 401; 1910b: 255; 1912b: 91; 1920b: 167; 1921: 166; 1922: 262); Durand & Durand (1909: 438); Thonner (1915: 470, pl. 133); Thomas (1936: 74); Robyns (1947: 146); Huber (1963: 444), Malaise (1985: 274); Verdcourt (1992: 116); Lebrun & Stork (1997: 511); Fernandes (2005: 113); Hawthorne & Jongkind (2006: 422); Bloesch *et al.* (2009: 626); Lisowski (2009: 364); Lejoly *et al.* (2010: 294); Latham & Konda ku Mbuta (2010: 97); Pollard (2022: 25).

Type:—SOUTH SUDAN. Ghasal-Quellen Gebiet, lande der Monbuttu, 10 Apr. 1870, *Schweinfurth 3641* (lectotype: B†, designated by Thomas (1936), isolecto-: K000192899).

= *Clerodendrum triplinerve* Rolfe in Schumann *et al.* (1893: 87); White (1962: 367). **Type**:—ANGOLA. Malange, *Marques 50* (lectotype designated here: BR0000008715463!).

= *Clerodendrum lujaei* De Wildeman & Durand (in Durand & De Wildeman 1899b: 213); Durand & Durand (1909: 439); De Wildeman (1912b: 91). **Type**:—D.R. CONGO. Sona Gunga, 29 November 1898, *Luja 104* (holotype: BR0000016593862!; iso-: BR0000016593879!).

= *Clerodendrum yaundense* Gürke (1900: 297); Baker (1900: 516); Durand & Durand (1909: 442); De Wildeman (1912b: 180); Thomas (1936: 73); Moldenke (1980: 219). **Type**:—CAMEROON. Yaunde, 1890/92, *Zenker 319* (lectotype designated by Thomas (1936): B, not seen).

= *Clerodendrum triplinerve* var. *grandiflorum* Moldenke (1953a: 177). **Type**:—D.R. CONGO. Ferme Pirard, à Kilubi, 980 m, mars 1946, *Quarré 7768* (holotype: BR0000016596719!).

= *Clerodendrum formicarum* var. *sulcatum* Thomas (1936: 74); Robyns (1947: 146). **Type**:—TANZANIA. Uluguru-Gebirge, (=Morogoro), 1300 m, 9 January 1933, *Schlieben 3217* (holotype: B†, iso-: BR0000008714879!; K000192879; LISC011435), *nom inval.*

Suffrutex with tufted annual shoots 0.2–1.3 m from a horizontal rootstock (in savannah and woodland), or sarmentose shrub or liana up to 6 m high and 1.5 cm diam. (in dense humid forest). Stem reddish with pale lenticels, puberulous, either solid and terete, or hollow and with 6–8 ridges; persistent petiole bases present or not, 2–5(–9) mm; rhytidome of old shoots (in lianose forms) greyish. Leaves 3 or 4-whorled; petiole 0.5–2.0(–3.5) cm, canaliculate, puberulous on angles; lamina obovate-elliptic to obovate-oblong, 3.5–11(–13) × 1.5–4.5(–6.5) cm, base rounded to cuneate, apex acuminate, 4 pairs of veins, the lowermost one often more conspicuous, glabrous or, occasionally somewhat puberulous on lower surface of main veins, upper surface shiny, lower surface gland-dotted, margin recurved, occasionally shortly ciliate in tip. Inflorescence umbelliform, 6–12(–20) cm diam. in the apex of the shoot, sessile or with peduncle up to 3 cm; rachis 1–7 cm long, with 4–7 nodes, each node with 3 branches almost perpendicular to rachis, bracts linear to filiform; branches up to 4–5.5 cm, puberulous, bearing small cyme. Flower: pedicel 2–8 mm; calyx tubular-campanulate, 2.5–3.5 mm long, lobes 1–1.5 mm long, triangular, puberulous, gland-dotted; corolla: tube 4–7 mm, glabrous, lobes 2–3(–5) mm long, puberulous and with sessile glands on the outer surface, whitish to greenish yellow, bad-smelling; stamens protruding 3–5(–8) mm, anther ca. 1 mm long. Fruit obovoid, 7–15 mm long, dark green to black, shiny, subtended by cup-shaped to flat persistent calyx 6–9 mm diam; seeds with orange aril.

Distribution in Central Africa:—D.R. Congo, Burundi, Rwanda.

Distribution elsewhere:—Angola, Cameroon, Central African Republic, Congo, Egypt, Equatorial Guinea, Gabon, Ghana, Guinea, Ivory Coast, Kenya, Liberia, Nigeria, Sudan, Tanzania, Uganda, Zambia.

Habitat:—Savannah, often on sandy soil, dry woodland, termite mound, dense forest; 500–1600 m.

Selection of representative specimens:—D.R. CONGO. **Bas-Congo**: Thysville [Mbanza Ngungu], 3 June 1915, *Bequaert 7734* (BR!); Kisantu, November 1951, *Callens 2905* (BR!); Kilenga, 25 October 1958, *Pauwels 353* (BR!, WAG). **Kasaï**: Sangaie (territ. Lusambo), February 1939, *Gillardin 507* (BR!); Kikwit, 21 November 1990, *Masens 581* (BR!). **Bas-Katanga**: Basase, 13 October 1936, *Matagne 226* (BR!); Haut-Lomami, Kaniama, 29 October 1947, *Mullenders 1423* (BR!); Kiala (Manono), February 1954, *Thiébaud 729* (BR!). **Forestier Central**: Eala, 16 March 1931, *Corbisier-Baland 949* (BR!); Yangambi, 22 August 1959, *Jeanty 151* (BR!); Djugu, Kibali, September 1931, *Lebrun 3918* (BR!); Yangambi, plateau de la Lusambila, 1 May 1936, *Louis 1792* (BR!). **Ubangui-Uele**: Région de Gwane, 8 July 1955, *Boutique 158* (BR!); Tukpwo, 13 April 1954, *Gérard 1228* (BR!). **Lac Albert**: Mboga, 18 March 1914, *Bequaert 3012* (BR!); Réserve de Djugu, 29 October 1951, *Smeyers 59* (BR!); Lekwa (Djugu), 10 July

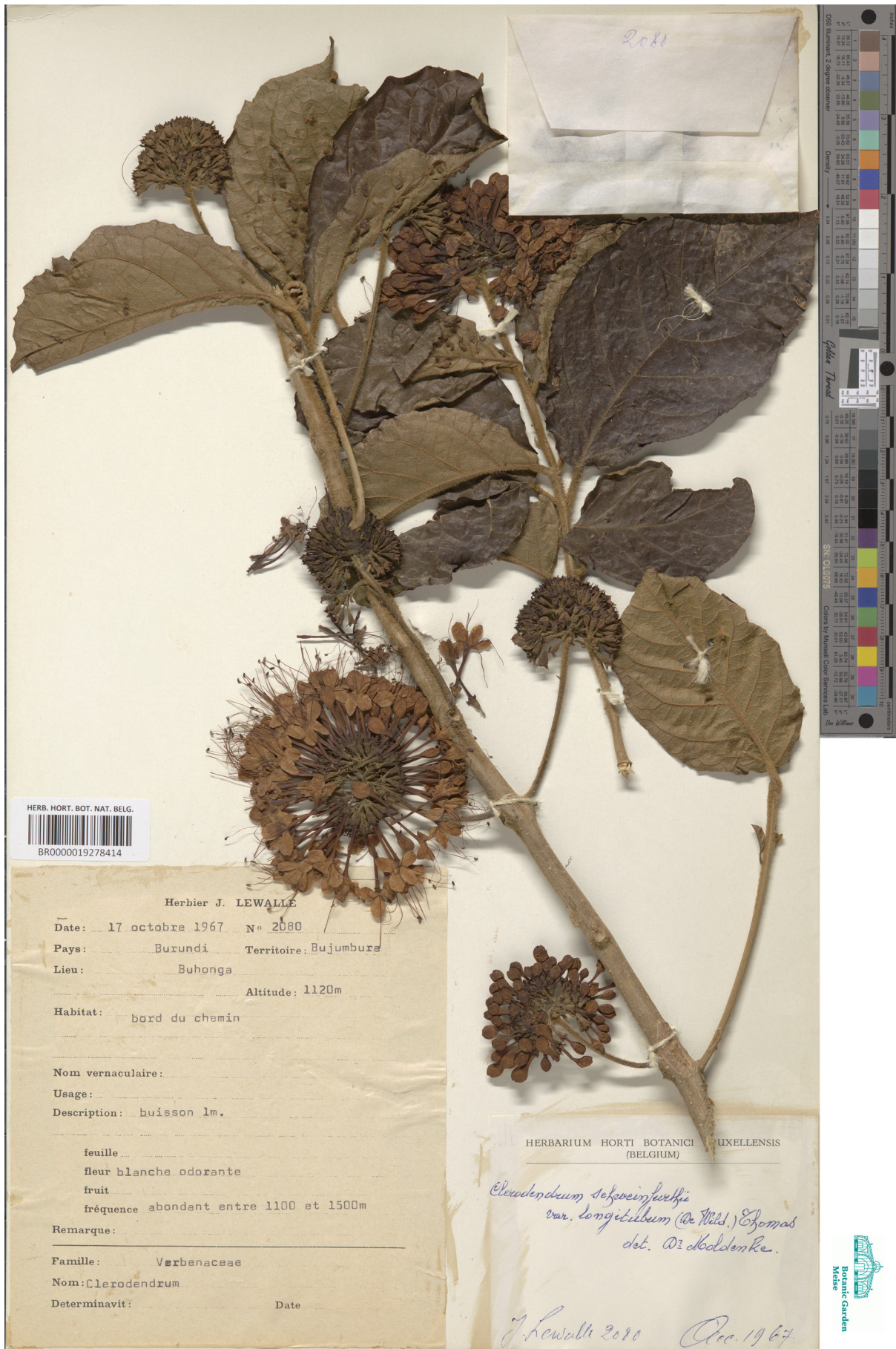


FIGURE 4. *Clerodendrum fasciculatum*. (Lewalle 2080 (BR)). <https://www.botanicalcollections.be/specimen/BR0000019278414>

1946, *Taton 162* (BR!); **Lacs Edouard et Kivu**: Territ. Mwenga, Mudubwe, 21 May 1959, *A. Léonard 4286* (BR!); Parc National Albert [Virunga], 24 July, 1954, *de Witte 10761* (BR!); Mulungu, Kisharo, 8 June 1959, *Pierlot 3059* (BR!). **Haut-Katanga**: Plateau de la Manika, env. Katentania, November 1912, *Homblé 818* (BR!); Plateau de Muhila, Kansimba, 5 October 1986, *Kisimba & Muzinga 17* (BR!); 8 km from Kolwezi, 17 August 1986, *Schajies 3042* (BR!).—RWANDA: **Lacs Edouard et Kivu**: Forêt de Nyungwe environs du Kamiranzovu, September 1971, *Bouxin 1200* (BR!, WAG). **Rwanda-Burundi**: Nshiri (Kibungo), 28 June 1978, *Troupin 16155* (BR!).—BURUNDI. **Lacs Edouard et Kivu**: Gihanga, 3 December 1958, *Van der Ben 2369* (BR!). **Rwanda-Burundi**: Muremera, crête vers Kayangozi, 29 October 1966, *Lewalle 1186* (BR!, MO); Kwitaba, 13 December 1977, *Reekmans 6750* (BR!, L, LG). **Lectotypification of *Clerodendrum triplinerve* Rolfe**. The protologue cited three collections: *Marques 50*, *Welwitsch 5622*, *Welwitsch 5661*. However, the latter two were previously cited in the original materials of *Clerodendrum formicarum* Gürke. Therefore, it is preferable to designate *Marques 50* as the lectotype.

Note.—*Clerodendrum formicarum* is polymorphic for growth form, from suffrutescent with annual shoots in frequently burnt savannah (Bas-Congo, Kwango, Katanga), to lianose in rainforest (Forestier central, Ubangui-Uele, Lac Albert, Lacs Edouard et Kivu). It comprises forms with smooth, terete stems, and forms with 6- to 8-ridged thickened bark. The latter have been described as “var. *sulcatum*” by Thomas (1936: 74), an invalid name (no latin diagnosis). The presence of ridges is partly correlated with growth form, being more frequently observed in long-lived lianose shoots; however, ridges are also occasionally found in young shoots in suffruticose forms, including in the type of “var. *sulcatum*” (*Schlieben 3217*) and, vice versa, there exist lianescent specimens with terete shoots (e.g. *Schmitz 8030*). The taxonomic significance of this character needs further investigation. Selected specimens with ridged shoots in our territory:—D.R. CONGO. **Kasaï**: Région de Djumu, February 1921, *Vanderyst 8913* (BR!). **Forestier Central**: Djugu, September 1931, *Lebrun 3918* (BR!); Weko, route de Yambao, 23 March 1939, *Louis 14050* (BR!). **Ubangui-Uele**: Région de Gwane, 8 July 1955, *Boutique 158* (BR!). **Lac Albert**: Entre Mboga et Lesse, 18 March 1914, *Bequaert 3012* (BR!); Lekwa (Djugu), 10 July 1946, *Taton 162* (BR!). **Lacs Edouard et Kivu**: Parc de Kahuzi-Biega, 12 June 2010, *Shalukoma 46* (BR!).—RWANDA. **Rwanda-Burundi**: Nshiri (Kibungo), 28 June 1978, *Troupin 16155* (BR!).—BURUNDI. **Lacs Edouard et Kivu**: Bugarama, 25 May 1969, *Lewalle 3867* (BR!). **Rwanda-Burundi**: Territ. Kitega, 20 km en aval de Karuzi, 15 July 1958, *Van der Ben 2175* (BR!).

Remaining syntypes of *Clerodendrum formicarum*.—ANGOLA. Golungo Alto, Queta mountains, Nov. 1854, *Welwitsch 5622* (COI00005736, K000192934, LISU223608, LISU223609, P00442349); Golungo Alto, Queta mountains, July 1856, *Welwitsch 5661* (COI00005737, K000192933, LISU223606, LISU223607, LISU223610, P00442350); Seengebiet, Bukoba, 21 November 1891, *Stuhlmann 1026* (B†); Kampine, bei Malange, April 1877, *Buchner 77* (B†); Malange, August 1879, *Mechow 192* (JE00004300).—D.R. CONGO. Oberes Kongo Gebiet, Mussumba des Muata Jamwo, February 1876, *Pogge 338* (B†). In addition, the protologue cites: Ghasal-Quellen Gebiet, bei Munsu, 8 April 1870, *Schweinfurth 3483*; however, this is probably a typo, because *Schweinfurth 3483* (K000234220) is *Taczeeza pedicellata* K.Schum. (Asclepiadaceae).

Remaining syntypes of *Clerodendrum yaundense* Gürke.—CAMEROON. 15 July 1891, *Zenker 561* (B†); 14 October 1894, *Zenker & Staudt 485* (B†); 27 March „1895“ (in protologue, 1896 on label), *Zenker 813* (G00366320, K000192855, K000192856, P00442393).

11. ***Clerodendrum frutectorum* Moore** (1919: 249); Thomas (1936); Moldenke (1986c: 472); Verdcourt (1992:103); Lebrun & Stork (1997: 511); Fernandes (2005: 102); Coates Palgrave (2005: 989).

Type.—D.R. CONGO. Shiwele, 19 February 1908, *Kässner 2473* (holotype: K000192844; iso.: BM000798645, BM000798646 (fragm.), BR0000008971333!, E00043060, HBG513434).

= *Clerodendrum capitatum* var. *subdentatum* De Wildeman (1903: 117; 1921: 166); Durand & Durand (1909: 438). **Type**.—D.R. CONGO. Haut-Katanga, Plateau des environs de Lukafu, February 1900, *Verdick 409* (holotype: BR0000016597402!).

Perennial woody herb, or shrub, occasionally sarmentose, 2–3 m; rootstock thick, suckering. Stem simple to sparingly branching, up to 5 mm diam. under inflorescence, hollow, striate, with mixed indumentum of short, almost papilliform hairs and longer patent hairs, without persistent petiole bases. Leaves clustered near shoot apex; petiole: 2–9.5(–11.5) cm, indumentum like stem; lamina ovate, or broadly ovate to elliptic or broadly obovate, (6–)9–20 × (3–)6–15 cm, base rounded to subcordate, somewhat asymmetric, apex rounded, or obtuse, or acute to shortly acuminate, discolorous, pubescent on both surfaces (hairs ca. 0.5 mm), more concentrated on lower surface of veins, 4–6 veins on either side, prominent on lower surface, margin undulate to repand, sometimes entire. Inflorescence at shoot tip, subsessile, subtended by 2 to 5 subsessile foliaceous bracts (2–7 cm long), a hemispheric to shortly ovoid head, 3–5 cm diam. (corollas excluded), bracts ovate to obovate up to 2 cm long, decreasing in length from base to tip, acuminate, pale

whitish green, hispid, veins prominent; bracteoles narrowly ovate-elliptic, ca. 15 × 2 mm. Flower: pedicel ca. 2 mm, hispid; calyx 17–23 mm long, tube narrowly campanulate, 6–8 mm long, shortly hispid, lobes narrowly ovate-elliptic, acuminate, 4–5 mm broad, pale green to whitish-green, rarely purple-tinged, pubescent without, veins prominent; corolla: tube 100–130 mm, glandular-pubescent, lobes obovate-elliptic, 13–18 × ca. 7 mm, white, puberulent without to subglabrous; stamens protruding 30–35 mm, anther 3–4 mm long. Fruit ca. 10 mm long.

Distribution in Central Africa:—D.R. Congo, Burundi.

Distribution elsewhere:—Tanzania, Zambia, Zimbabwe.

Habitat:—Savannah, termite mounds in dry woodland, riparian forest, dry evergreen forest, ravine with *Euphorbia dawei*; 850–1300 m.

Selection of representative specimens:—D.R. CONGO. **Bas-Congo:** *Gillet s.n.* (see note). **Forestier central:** Bambesa, 1 April 1934, *Brédo 1048* (BR!) (see note). **Bas-Katanga:** Musongoi, June 1950, *Desenfans 1485* (BR!). **Lacs Edouard et Kivu:** Plaine de la Ruzizi, Mont Kalambo, 24 February 1950, *Germain 6275* (BR!). **Haut-Katanga:** 19 km NW Lubumbashi, 19 February 1982, *Malaisse & Robbrecht 1819* (BR!); Lubumbashi, Kasapa, 24 January 1970, *Lisowski 210* (BR!); Près d'Elisabethville [Lubumbashi], March 1933, *Quarré 3102* (BR!, WAG).—BURUNDI. **Lacs Edouard et Kivu:** Cibitoke, 7 March 1971, *Reekmans 255* (BR!); Bujumbura, 25 February 1970, *Lewalle 4484* (BR!, MO); Territ. Bubanza, vallée Katunguru, 5 April 1972, *Lewalle 6653* (BR!).

Notes:—1. This species is the Zambezian counterpart of the Congolian *C. poggei*; the differences between the two species are mostly quantitative (*C. poggei* is larger). A good discriminant character is the indumentum of shoots and petioles, which comprises both long patent hairs and short papilliform hairs (*C. poggei*: short hairs only). Ambiguous specimens occur near the contact zone of the two species (*Lewalle 4585*, *Thiébaud 325*).

2. This is the first record of this species for Burundi.

3. *C. frutectorum* has often been misidentified as *C. capitatum* or *C. rotundifolium* in collections.

4. *Gillet s.n.* (BR00000020442507), from Bas-Congo, ca. 800 km west of the nearest localities, is probably this species, but the specimen is sterile. *Brédo 1048*, from a locality in the north of D.R. Congo, very distant from the main range, is a poor specimen, but the identification is almost certain.

12. *Clerodendrum fuscum* Gürke (1893: 175); Durand & Schinz (1896: 223); Baker (1900: 304); De Wildeman (1903: 72; 1910b: 255; 1910a: 402); Durand & Durand (1909: 438); Thomas (1936: 61); Robyns (1947: 143); Malaisse (1985: 274); Moldenke (1986c: 475); Verdcourt (1992: 99); Lebrun & Stork (1997: 511); Fischer & Killmann (2008: 232); Bloesch *et al.* (2009: 626); Lejoly *et al.* (2010: 294), Vande weghe *et al.* (2016: 743); Pollard (2022: 28).

Type:—UGANDA, Kigezi District, Echuya Forest Reserve, 7820 ft., 8 August 1960, *Paulo 671* (**neotype designated here:** K (without barcode!); iso-: BR0000016597464!).

= *Clerodendrum fuscum* var. *attenuatum* Moldenke (1953a: 176; 1986c: 478). **Type:**—D.R. CONGO. Eala, 7 July 1932, *Corbisier-Baland 1609* (holotype: BR0000008976161!, iso-: BR0000008976123!).

= *Clerodendrum macrocalyx* De Wildeman (1920b: 172; 1922: 264). **Types:**—D.R. CONGO. Avakubi, 20 January 1914, *Bequaert 2031* (syntype: BR0000008976109!, BR0000008976093!); Masisi, Walikale, 4 January 1915, *Bequaert 6492* (syntype: BR0000008976086!; NY 00137361); Bomili, 26 December 1913, *Bequaert 1637* (syntype: BR0000008971692!, iso-: BR0000008971074!), *nom. illeg. non Lam* (1919: 293).

= *Clerodendrum grandicalyx* Bruce (1934: 306); Thomas (1936: 61). **Type:**—UGANDA. Shores of lake Mutanda, 10 January 1933, *Rogers 319* (holotype: BM000798633; iso-: K000192888).

Shrub, sarmentose shrub, or liana 1–8 m high. Stem pubescent with purplish-brown articulated hairs 0.4–1.2 mm; persistent petiole base generally lacking, more rarely present (1–4 mm). Leaf: petiole 0.2–6.0 cm, markedly decreasing in length towards apex, pubescent as the stem; lamina ovate to suborbicular, 7–15(–20) × 5–13(–15.5) cm, base cordate, apex obtuse to acute, or abruptly contracted in a short acumen, mucronate, 3–4 veins on either side, reticulum prominent on lower surface, more or less pubescent on both surfaces, more densely so on lower surface of veins, slightly roughish, margin entire, ciliate. Inflorescence comprised of axillary corymbiform dichasial cymes 3–12 cm wide on the 1–3(–4) uppermost nodes, spaced 5–10 cm, the lowermost pair subtended by subsessile leaf-like bracts, broadly ovate, 3–6 × 3–6 cm, cordate, somewhat clasping, obtuse and abruptly contracted into a short point; peduncle of the cymes 3–10 cm, purplish-brown pubescent to tomentose. Flower: pedicel 5–15(–30) mm, shortly pubescent, bracteoles filiform; calyx (9–)12–25(–28) mm, tube obconical, 2 mm long, greenish, abruptly dilated into the campanulate, gibbous, pentagonal limb, cream to yellow, sometimes turning rose to violaceous, 8–23 mm long, 5-lobed, shortly fused over 2–7 mm,

triangular to ovate-triangular, (8–)11–22 × (3–)5–9(–10) mm, acute to long attenuate, shortly pubescent (brown hairs), occasionally subglabrous; corolla: tube 20–25 mm, glandular-pubescent, lobes 6–10 mm long, cream, one or several lobes red-notched near base or entirely red; stamens: greenish filament, exerted 20–25(–40) mm, anther ca. 2 mm long. Fruit obovoid, 4-lobed, ca. 12 × 15 mm, black, shiny, seed blackish, aril abaxial, oblong, ruminant, orange.

Distribution in Central Africa:—D.R. Congo, Rwanda, Burundi.

Distribution elsewhere:—Gabon, Uganda, Republic of Congo, Angola.

Habitat:—Rainforest (e.g. *Scorodophleetum zenkeri*; *Brachystegletum laurentii*), montane forest, secondary forest and shrub savannah with *Hymenocardia ulmoides*, dry «bateke» forest on kalaharian sand, mountain scrub with Ericaceae and ferns; 300–2930 m.

Selection of representative specimens:—D.R. CONGO. **Mayombe:** Bata-Ziala, mission Tshela, 6 August 1975, *Breyne 2770* (BR!); Mt. Kionzo, 29 July 1948, *Donis 1949* (BR!). **Bas-Congo:** Tampa, 22 June 1952, *Callens 3651* (BR!); Kimuenza, 25 July 1957, *Robyns 4393* (BR!). **Kasaï:** Mapangu, 25 July 1978, *Dumont 244* (BR!); Kahemba, route vers l'Angola, *Duvigneaud 956C1* (BRLU!); Port Francqui [Ilebo], May 1938, *Gillardin 373* (BR!). **Forestier Central:** Ituri, Mongbwalu, 22 January 2011, *Bytebier 3243* (BR!); Lac Tumba, December 1920, *Goossens 1554* (BR!); Yangambi. Le long de la rivière Lusambila, 29 July 1958, *A. Léonard 1029* (BR!); Yangambi, 23 December 1935, *Louis 876* (BR!); Territ. Mambasa, Ituri Forest, Lenda, 25 January 2001, *Mokbondo, Bujo & Madidi 377* (BR!, EPU, K, MO, WAG); Territ. Kalehe, vers km 110 route Kavumu-Walikale, Irangi, *Troupin 6299* (BR!, US). **Ubangui-Uele:** s.l., 1906, *Seret 460* (BR!). **Lac Albert:** Réserve de Djugu, 21 March 1952, *Smeyers 191* (BR!). **Lacs Edouard et Kivu:** env. Mt. Nguli, 17 February 1956, *de Wilde 643* (BR!); Beni, Entre Kihanga et Mabuye, February 1939, *Gille 193* (BR!); Plaine au sud du Lac Edouard, May-June 1929, *Humbert 8682* (P).—RWANDA. **Lacs Edouard et Kivu:** Préfecture de Cyangugu, Commune de Kirambo, Forêt de Uwinka, 7 April 2000, *Ewango 2244* (BR!); Rangiro, 12 June 1978, *Raynal 20488* (P); Env. Uwinka, Territ Shangugu, 12 August 1960, *Troupin 12713* (BR!). **Rwanda-Burundi:** Forêt de Rugege (Cyangugu), au km 103 de la route Butare-Cyangugu, 25 July 1974, *Auquier 3433* (BR!); Forêt de Nyungwe, plantation de Gisakura, 12 March 1971, *Bouxin 440* (BR!).—BURUNDI. **Lacs Edouard et Kivu:** Bubanza, route de Butara, 23 March 1966, *Lewalle 604* (BR!, MO); Territ. Bubanza, Mabaye, Lua, 22 June 1969, *Lewalle 3776* (BR!).

Neotypification of *Clerodendrum fuscum* Gürke. The lectotype designated by Thomas (1936) i.e., UGANDA. West-Mpororo, Berge von Kajonsa [Kayonza], 1600 m, 28 January 1892, *Stuhlmann 3061* (B, not seen) has been lost, as well as the remaining syntypes (*Pogge 335*, *Stuhlmann 3096*). The species is variable across its range (see note hereafter); therefore, it is wise to select the neotype from the same region as the lectotype. The neotype (*Paulo 671*) matches the protologue and was cited by Verdcourt (1992).

Notes:—1. Length and shape of calyx lobes are very variable; morphs with narrow (3–4 mm wide), long attenuate calyx lobes have been described as var. *attenuatum* Moldenke; morphs with very long calyx lobes (20–25 mm) have been described as *C. macrocalyx* De Wild. These forms are striking; however, variation is continuous and these taxa are not recognized here.

2. The indumentum of lower leaf surface is very variable; from very shortly pubescent with the hairs concentrated on veins (the most widespread condition), to appressed pubescent with long thin hairs (1 mm) over the whole surface (e.g. *Bamps 429*, *Louis 5839*, *10044*, *12781*, *13065*).

13. ***Clerodendrum inaequipetiolatum*** Good (1930: 141); Thomas (1936: 75); Huber (1963: 444); Moldenke (1986d: 270); Lebrun & Stork (1997: 511).

Type:—ANGOLA. Cuanza Norte, Quisque Ngage, 13 January 1918, *Gossweiler 7384* (holotype: BM000583247; iso-: COI00068436).

Liana or sarmentose shrub, up to 3 m high. Stem terete, densely hispid, with pale fulvous hairs 0.5–2 mm; internodes 1.5–6 cm; persistent petiole bases occasionally present, 5–10 mm. Leaf: petioles unequal in length at the same node, one generally spreading, short (ca. 1.5 cm), the other generally upright, longer (4.5–5.5 cm), pubescent like the stem; lamina broadly ovate, ovate-elliptic to obovate, 7–15(–18) × 4.5–10.5(–12) cm, base cordate, apex rounded-obtuse, abruptly contracted into a short acumen, upper surface pubescent (hairs ca. 1 mm), roughish, lower surface hispid on veins, reticulum prominent on lower surface, margin entire. Inflorescence at shoot apex, corymbose to hemispheric, 3–4 × 3.5–8 cm, peduncle 4–12 cm, fulvous hispid; bracts filiform to linear, 5–15 mm. Flower: pedicel 0–1(–3) mm, pubescent; calyx 4–6 mm long, tube obconical 2–3 mm long, limb funnel-shaped, ca. 3 mm long, hispid; lobes ovate-triangular ca. 2 mm long, acute, with long fulvous hairs; corolla: tube 9–10 mm, glabrous; lobes ca. 3–7 mm long, with long spreading hairs on the outer surface; stamens exerted 5–10 mm, anther ca. 0.8 mm long. Fruit not seen.

Distribution in Central Africa:—D.R. Congo.

Distribution elsewhere:—Angola, Benin, Cameroon.

Habitat:—Riparian forest; 1000–1250 m.

Specimens examined:—D.R. CONGO. **Bas-Katanga.** Sapeza, February 1951, *Desenfans 1819* (BRLU!). **Haut-Katanga:** Kayo, chute de la Kalule Nord, 29 January 1986, *Bamps & Malaisse 8385* (BR!).

Notes:—1. This species is new to D.R. Congo. The new localities are situated ca. 1000 km east of the previously known distribution range.

2. See Note under *C. johnstonii*.

14. *Clerodendrum johnstonii* Oliver (1887: 346); Baker (1900: 300); De Wildeman (1920b: 170; 1922: 262); Robyns (1947: 145, 146); White (1962: 367); Malaisse (1985: 274); Verdcourt (1992: 118); Lebrun & Stork (1997: 512); Fernandes (2005: 115); Bloesch *et al.* (2009: 626).

Type:—TANZANIA. Kilimandjaro, 5000 ft, *Johnston s.n.* (holotype: K000192878).

Key to the varieties of *C. johnstonii*:

1. Lower surface of leaf uniformly tomentose..... var. *johnstonii*
- Lower surface of leaf with indumentum only on veins, short to curly.....2
2. Lower surface of leaf with glands inconspicuous, pellucid; flower bud puberulent, with pale glands..... var. *marsabitense*
- Lower surface of leaf conspicuously red-gland dotted; flower bud pubescent, red gland-dotted..... var. *rubropunctatum*

14a. *Clerodendrum johnstonii* Oliv. var. *johnstonii*

= *Clerodendrum johnstonii* subsp. *johnstonii* (Verdcourt 1992: 118); Bloesch *et al.* (2009: 626).

=? *Clerodendrum johnstonii* var. *rubrum* Thomas (1936: 75). **Type:**—TANZANIA. Morogoro, 12 July 1933, *Schlieben 4130* (holotype: B, not seen; iso-: LISC011436), *nom inval.*

Subshrub, sarmentose shrub, 1.5–6 m, or, more rarely, liana up to 12 m high and 10 cm diam. Stem quadrangular, stiff and robust up to inflorescence (5 mm thick), pale fulvous to rusty tomentose, persistent petiole bases 2–4(–20) mm; old shoots brownish with numerous pale lenticels. Leaf: petiole (0.5–)1.0–9.0 cm, often unequal in length at a node; lamina broadly ovate to ovate-elliptic, (5–)6–19 × (4–)5–15 cm, base rounded to cordate, more rarely obtuse, apex acute to obtuse, contracted into a short point, or acuminate, 4–6(–7) veins on either side, upper surface dark green, shortly pubescent (reddish hairs ca. 0.5 mm), roughish, lower surface markedly discolorous, uniformly beige- or greyish-tomentose, Inflorescence at shoot apex, corymbose to hemispherical, 4–14 × 4–19 cm, comprising compact axillary cymes in the 3–4(–5) uppermost nodes, rarely more widely spaced in the axils of vegetative nodes, lowermost branches 3–8 cm, subtended by leaves; branches fulvous, rusty or beige tomentose, bracts linear to very narrowly obovate-elliptic, 2–10 mm long. Flower: pedicel 0.5–7 mm; calyx campanulate (2.5–)3–6(–7) mm long, lobes 1–2 mm long, triangular, shortly greyish, rusty, to beige-tomentose; corolla white, occasionally rose-tinged, scented, tube (5–)7–11 mm, glabrous, or with sessile glands, lobes 2–3 mm long, tomentose and with golden glands on outer surface; stamens exerted 3–8 mm, anther ca. 1 mm long. Fruit 8–11 × 5–9 mm, subtended by the accrescent cupuliform calyx up to 9 mm wide.

Distribution in Central Africa:—D.R. Congo, Rwanda, Burundi.

Distribution elsewhere:—Ethiopia, Somalia, Sudan, Kenya, Tanzania, Uganda, Malawi, Zambia.

Habitat:—Montane rainforest, sclerophyllous montane forest, montane fallow field (*Lobelia giberroae*), *Hyparrhenia* savannah, bamboo forest, secondary forest with *Neoboutonia macrocalyx*; 1400–2710 m.

Selection of representative specimens:—D.R. CONGO. **Lac Albert:** Territ. Mahagi, Djalasindi, 23 July 1945, *Germain 4062* (BR!); Nioka, 8 August 1952, *Liben 355* (BR!); Mahagi, August 1931, *Lebrun 3746* (BR!). **Lacs Edouard et Kivu:** Ruwenzori, Butagu, 13 April 1914, *Bequaert 3620* (BR!, US); Parc national Albert [Virunga], Mt. Runyoni, 29 January 1955, *de Witte 11593* (BR!), Parc National Albert [Virunga], Mikeno, 20 February 1945, *Germain 3540* (BR!).—RWANDA. **Lacs Edouard et Kivu:** Rwaza (SE de Ruhengeri), 23 February 1972, *Auquier 2682* (BR!); Kigeme (Gikongoro), 8 January 1980, *Bridson 144* (BR!, WAG); Mulungu, km 25, road Bukavu-Goma, 1959, *Pierlot 2799* (BR!).—BURUNDI. **Lacs Edouard et Kivu:** Territ. Mwisare. Gakara, mine de la Karonge, 3 March 1967, *Lewalle 1637* (BR!, MO). **Rwanda-Burundi:** Ntega (Kirundo), 10 June 1986, *Bouharmont 18106* (BR!); Mugongomanga, 19 November 1972, *Reekmans 2099* (BR!); Entre Bukeye et Muremera, 25 May 1926, *Robyns 2327* (BR!, WAG).

14b. *Clerodendrum johnstonii* var. *rubropunctatum* Meerts var. nov.

Type:—BURUNDI. Territoire Muramvya, Bugarama, 1950 m a.s.l., forêt secondaire, 29 February 1971, *Lewalle 5216* (holotype: BR0000019275567!; iso-: WAG1612814).

Differs from the type variety by the lower surface of lamina less pubescent, the indumentum concentrated on veins, very short to curly, areolae subglabrous with numerous sessile dark red glands; flower bud tomentose, with dark red sessile glands.

Distribution in Central Africa:—D.R. Congo, Rwanda, Burundi.

Distribution elsewhere:—Tanzania (*Milne-Redhead & Taylor 8983* (BR!)).

Habitat:—Same as type variety.

Selection of representative specimens:—D.R. CONGO. **Lacs Edouard et Kivu:** Territ. Uvira, Kitiga, 25 May 1994, *Bashonga 140* (BR!); Bishoke, rivière Susa, 11 February 1935, *de Witte 2225* (BR!); Bukulumisa, 30 January 1938, *F.L.Hendrickx 482bis* (BR!).—RWANDA. **Lacs Edouard et Kivu:** Forêt de Nyungwe, environs de Cyurugaya, 14 March 1971, *Bouxin 479* (BR!); Gikongoro, vallée du Mont Gahiro, 25 July 1999, *Ewango 2143* (BR!, GIS, M, MO, WAG); Env. Uwinka, 7 July 1960, *Troupin 12021* (BR!); Cyungu-meer, 25 February 1972, *van der Veken 9587* (BR!). **Rwanda-Burundi:** Rutovu, km 62 de la route Astrida-Shangugu, 14 April 1958, *Reynders 297* (BR!).—BURUNDI. **Lacs Edouard et Kivu:** Teza, 10 January 1993, *Breyne 5936* (BR!, WAG); Forêt de Nyungwe, environs de Rukuzi, 19 May 1971, *Bouxin 801* (BR!); Ijenda, 21 November 1967, *Petit 1788* (BR!).

Note:—This variety departs from var. *marsabitense* by the dark red glands on lower leaf surface and outer surface of corolla lobes. Some specimens have very sparse or pale coloured glands, approaching var. *marsabitense* (*Frédéricq in de Witte 8035; Lebrun 4953*).

14c. *Clerodendrum johnstonii* var. *marsabitense* (Verdcourt 1992: 118) Meerts, *comb. et stat. nov.*

Basionym: *Clerodendrum johnstonii* subsp. *marsabitense* Verdc. (Verdcourt 1992, Fl. Trop. East Africa, Verbenaceae: 118). **Type:**—KENYA. Northern frontier Province, Marsabit, *Gillett 15100* (holotype: K000333102, iso-: BR0000008715524!).

Clerodendrum johnstonii is variable for indumentum of lower surface of lamina, and Verdcourt (1992) treated that variation at subspecies level. However, leaf indumentum is not correlated to other traits, and a varietal rank seems more appropriate.

Distribution in Central Africa:—Not present (but see note under var. *rubropunctatum*).

Distribution elsewhere:—Kenya.

Habitat:—Same as type variety.

15. *Clerodendrum melanocrater* Gürke (1893: 180); Baker (1900: 299); De Wildeman (1912b: 180); Thomas (1936: 72); Robyns (1947: 144); Huber (1963: 444); Malaise (1985: 274); Verdcourt (1992: 113); Lebrun & Stork (1997: 512); Bloesch *et al.* (2009: 626); Lejoly *et al.* (2010: 295); Pollard (2022: 30).

Type:—D.R. CONGO. Ituri, Kamatembe, forêt primaire, 14 April 1934, *de Witte 1538* (neotype designated here: BR0000019276236!, iso-: BR0000019276243!).

= *Clerodendrum seretii* De Wildeman (1910b: 256; 1920b: 174; 1922: 268). **Type:**—D.R. CONGO. Injolo, 20 August 1908, *Seret 996* (holotype: BR0000008964069!).

Sarmentose shrub or small liana, turning black when bruised and on drying. Stem markedly quadrangular, with angles pale-coloured, occasionally narrowly winged, puberulous, persistent petiole bases curved, ca. 5 mm. Leaf: petiole 1.5–3.7 cm, canaliculate, glabrous; lamina membranose, ovate to elliptic, or obovate-elliptic, 7–13 × 3.5–8.5(–10) cm, rounded to truncate or cuneate at base, apex acuminate, 3–5 veins on either side, reticulum inconspicuous, glabrous on both surfaces (except for upper side of main vein), occasionally sparsely pubescent on upper surface, margin entire. Inflorescence at shoot apex, a pyramidal thyrse, 7–25 × 6–14(–20) cm, rachis with 4–10 nodes, peduncles 7–35(–50) mm long, decreasing in length upwards, subtended by foliaceous bracts decreasing in size upwards; cymules dichotomous, divided at three nodes, axes thinly ash grey puberulent. Flower: pedicel 2–9 mm, ash-grey puberulent, bracteoles filiform, ca. 1 mm; calyx 2–3.5 mm long, greenish white, turning black after anthesis, tube campanulate, lobes triangular, spreading, 1–1.5 mm long, subglabrous; corolla: tube 4–8 mm, thinly glandular, lobes 2 mm long, puberulous, white to yellowish, turning black; stamens exerted 5–7 mm, anther 1 mm long, blackish. Fruit ca. 8 × 8–9 mm, subtended by cupular calyx 6–8 mm diam.

Distribution in Central Africa:—D.R. Congo, Rwanda, Burundi.

Distribution elsewhere:—Nigeria, Central African Republic, Cameroon, Gabon, Isles of Golf of Guinea, Sudan, Kenya, Tanzania, Uganda.

Habitat:—Rainforest, flooded rainforest with *Symphonia*, *Pycnanthus marchalianus*, *Mitragyna macrophylla*, secondary forest with *Musanga*; riparian forest, montane rainforest (*Psychotrio-Chrysophylletum gorungosani*); 400–2500 m.

Selection of representative specimens:—D.R. CONGO. **Kasaï:** Lac Léopold II [lac Mai-Ndombe], July 1925, *Goossens 5018* (BR!). **Bas-Katanga:** Kasongo, 1910, *Claessens 600* (BR!). **Forestier Central:** Walikale, Lubutu, 11 January 1915, *Bequaert 6565* (BR!); Yalibwa, October 1938, *Louis 13240* (BR!); Yangole, à plus ou moins 20 km à l'W de Yangole, 8 August 1939, *Louis 15723* (BR!, P, US). **Ubangui-Uele:** Doruma, riv. Mongoli, 28 September 1934, *De Graer 365* (BR!). **Lac Albert:** Djugu, September 1931, *Lebrun 3988* (BR!); Ituri Distr, Lodjo Camp, 27 October 2010, *Luke 14724* (BR!, EA, EPU, K). **Lacs Edouard et Kivu:** Kolomubuni, 26 July 1954, *de Witte 10718* (BR!, WAG); Bwito. Station Kikuku. Colline Muriki, 24 June 1954, *Deru 326* (BR!); Mont Biega, à l'ouest du Lac Kivu, March 1929, *Humbert 7579* (P); Entre Masisi et Walikale, March 1932, *Lebrun 5146* (BR!).—RWANDA. **Lacs Edouard et Kivu:** Forêt de Nyungwe, environs de Kigogo, 26 May 1971, *Bouxin 933* (BR!); Env. De Rangiro, piste vers le Mont Ruhero, 7 February 1980, *Bridson 335* (BR!, WAG); Env. Uwinka, 9 March 1959, *Troupin 9815* (BR!).—BURUNDI. **Lacs Edouard et Kivu:** Mabaye (territ. Bubanza), 2 March 1969, *Lewalle 3250* (BR!, WAG).

Neotypification of *Clerodendrum melanocrater* Gürke. The lectotype (Deutsch-Ost Afrika [TANZANIA]. Bukoba, February 1892, *Stuhlmann 3322* (lectotype: B, designated by Thomas (1936)) and the three remaining syntypes (*Stuhlmann 2698, 3720, 3891*) have been lost. I designate as the neotype a specimen collected in the same region (i.e. the eastern part of the species' distribution range), which was cited by Thomas (1936) and annotated by him.

16. *Clerodendrum poggei* Gürke (1893: 171); Durand & Schinz (1896: 223); Baker (1900: 309); Durand & Durand (1909: 440); De Wildeman (1912b: 280); Verdcourt (1992: 100); Lebrun & Stork (1997: 512); Pollard (2022: 31).

Type:—D.R. CONGO. Yangambi, réserve d'Isalowe, sous-bois de forêt primitive ombrophile, 20 October 1937, *Louis 6394* (**neotype designated here:** BR0000013255565!, iso-: BR0000020441388!).

= *Clerodendrum angolense* Gürke (1900 [May]: 291) (nomen novum for *Clerodendrum speciosum* Gürke (1893) *nom. illeg.*, non Bull (1869: 44)); De Wildeman (1910a: 401; 1910b: 255; 1912a: 467; 1912b: 91; 1920b: 163; 1922: 256); Moldenke (1985b); Lejoly *et al.* (2010: 294). **Type:**—ANGOLA. Pungo Andongo, January–April 1879, *Mechow 121* (lectotype selected by Thomas: S07-4845, S-G-10139).

= *Clerodendrum orbiculare* Baker (1900 [June]: 307). **Type:**—ANGOLA. Pungo Andongo, prope Quilanga, April 1857, *Welwitsch 5688* (holotype: K000192941, iso-: BM000798642).

= *Siphonanthus sanguineus* Hiern (1900 [August]: 839). **Type:**—ANGOLA. Pungo Andongo, Cazella, January 1857, *Welwitsch 5705* (syntype: BM000798643, LIS056939 (not seen), LISU223638); Quilange, April 1857, *Welwitsch 5688* (syntype: BM000798642, LISU223636, LISU223637, LISU223639).

= *Clerodendrum capitatum* var. *butayei* De Wildeman (1903: 117); Durand & Durand (1909: 438). **Type:**—D.R. CONGO. Bas-Congo, 1902, *Butaye s.n.* (holotype: BR0000008978554!).

Shrub 1–3 m, sparingly ramified. Stem hollow, up to 16 mm diam., inhabited by ants, papillate, often with persistent petiole bases ca. 10 mm long. Leaf: petiole 1–30 cm, papillate, 2.5–5 mm thick, hollow; lamina broadly ovate to almost rounded, 18–48 × 21–45 cm, cordate at base, acute to shortly acuminate at apex, 5–7 veins on either side, the lowermost 2 from the base (lamina seemingly palminerved), subglabrous or sparsely pilose on upper side, papillate or shortly hispid on veins underneath, reticulum somewhat impressed, prominent underneath, margin entire to repand. Inflorescence: a congested thyrse, ovoid to subcylindric, 5–20 × 2.5–6 cm (corolla excluded), subtended by 1–3 reduced leaves (7–20 cm long), subsessile; peduncle thick (up to 10 mm diam.), hollow, papillate; rachis with branches 2–10 mm long, bearing 2–5 flowers. Flower: pedicel 4–7 mm, shortly pubescent; bracts narrowly obovate-elliptic, pubescent, petiolate, sometimes with larger bracts subtending the branches, broadly ovate ca. 3 × 2 cm; calyx: 15–25(–29) mm long, tube narrowly obconic-campanulate, ca. 3 mm long, limb fused at base over a length of 1–6 mm, lobes ovate-elliptic to elliptic, 12–16 × (3–)5–7 mm, acuminate, reticulum prominent or not, pubescent on outer surface especially near margin, reddish, purplish or violaceous tinged; corolla: tube 130–190 mm, with red-brown glandular hairs, lobes dirty white, 15–18 mm long, shortly pubescent; stamens ca. 30 mm, anther ca. 3 mm long. Fruit: ca. 10 × 10 mm, black, smooth.

Distribution in Central Africa:—D.R. Congo.

Distribution elsewhere:—Angola, Cameroon, Central African Republic, Ethiopia, Gabon, Sudan, Tanzania, Uganda.

Habitat:—Rainforest, secondary forest, riparian forest; a shade-loving species; 300–1200 m.

Selection of representative specimens:—D.R. CONGO. **Mayombe:** Temvo, 8 February 1919, *Vermoesen 1783* (BR!, US); Temvo, 26 February 1919, *Vermoesen 1694* (BR!, US). **Kasaï:** Muetshi, 70 Km WNW de Lusambo, December 1981, *Casier 214* (BR!); Ibali, 3 November 1903, *E.&M. Laurent s.n.* (BR!). **Bas-Katanga:** Kasongo, 1910, *Claessens 649* (BR!), Kamina, 20 April 1956, *Schmitz 5269* (BR!). **Forestier Central:** Penghe, 4 April 1914, *Bequaert 2288* (BR!); Yangambi, reserve d'Isalowe, 19 January 1940, *Germain 103* (BR!); Yangambi, reserve d'Isalowe, 20 October 1937, *Louis 6394* (BR!, US). **Ubangui-Uele:** Rivière Mongoli, 27 October 1937, *De Graer 954* (BR!); Route Dungu-Bafuka, 14 November 1906, *Seret 698* (BR!). **Lac Albert:** Kurukwata (Aba), 16 September 1957, *Gérard 3714* (BR!). **Lacs Edouard et Kivu:** Parc National Albert [Virunga], Mt. Hoyo, 30 July 1955, *Vanschuytbroeck in de Witte 12628* (BR!); Territ. Masisi, Yehe, Bukombo, 11 February 1958, *Guttzwiler 3431* (BR!, P). **Haut-Katanga:** Dilolo, June 1908, *Sapin s.n.* (BR!).

Note:—Previous records of *C. poggei* in Burundi (e.g. Lewalle 1972: 60) are errors for *C. frutectorum* S.Moore; see observations under the latter species.

Neotypification of *Clerodendrum poggei* Gürke. Gürke cited three syntypes from D.R. Congo (*Stuhlmann 2702, 2710, Pogge III6*), but Verdcourt (1992) cited only *Pogge III6* as the “holotype”, in error. All of these specimens have disappeared. I select a specimen from D.R. Congo which is consistent with the protologue (*Louis 6394* (BR!)).

Remaining syntypes of *Clerodendrum angolense*:—ANGOLA. Pungo Andongo, 29 March 1875, *Soyaux 230* (syntype: K000192942, isosyn-: LE00016566).

17. *Clerodendrum polycephalum* Baker (1895b: 116; 1900: 300); Thomas (1936: 75); Huber (1963: 444); Lebrun & Stork (1997: 512); Akoegninou *et al.* (2006: 985); Hawthorne & Jongkind (2006: 426); Lisowski (2009: 364); César & Chatelain (2019: 731).

Type:—NIGERIA. Ogbomoshaw in Yoruba, Eastern Lagos, 1893, *Rowland s.n.* (holotype: K000192841; iso-: P00442365).

Small liana or shrub 1–3 m. Stem stiff, fulvous to rusty hispid, with persistent petiole bases ca. 3 mm. Leaves opposite or 3-whorled; petiole 0.5–4.0 cm, unequal at the same node, pubescent like the stem; lamina ovate to elliptic or obovate, 5–12.5(–15.5) × 3.5–6.5(–9) cm, coriaceous, base rounded to slightly cordate, apex shortly acuminate, discolorous, upper surface pubescent (multicellular hairs ca. 0.5 mm), lower surface shortly hispid on veins and pale gland-dotted, 5–7 veins on either side, reticulum prominent on lower surface, margin entire. Inflorescence at shoot apex, corymbose to umbellate, 3–10 × 8–16 cm, with 3–4 nodes, each bearing 2 or 3 branches 1–7 cm long, the lowermost ones in the axils of foliaceous bracts (ca. 6 × 2.5 cm); cymes rather dense, ca. 1 × 1–2 cm, axes pubescent; bracts narrowly obovate, 2–10 × 0.5–1 mm. Flower: pedicel 0–4 mm; calyx 2.5–4 mm long, comprising a narrow tube ca. 1.5 mm long, sparsely pubescent, and a funnel-shaped limb ca. 1.5 × 4 mm subglabrous, lobes triangular ca. 1 × 1 mm; corolla: tube 4–5(–7) mm, glabrous, lobes 2–3 mm long, shortly pubescent without, white; stamens protruding 5–8 mm, anther ca. 0.8 mm long, brownish. Fruit ca. 9 × 8 mm, subtended by persistent cup-shaped calyx ca. 5 × 9 mm.

Distribution in Central Africa:—D.R. Congo.

Distribution elsewhere:—Angola (Cabinda), Benin, Burkina, Cameroon, Ghana, Guinea, Ivory Coast, Liberia, Nigeria, Sierra Leone, Togo.

Habitat:—Unknown in Central Africa; elsewhere: shrub savannah and woodland; 0–500 m (?).

Selection of representative specimens:—D.R. CONGO. **Mayombe:** Kuimba, s.d., *Bittremieux 377* (BR!).

Notes:—1. This species is new to D.R. Congo. The new locality is situated at short distance from the nearest localities in Angola (Cabinda). Previous records of this species in D.R. Congo are errors, based on specimens collected in Angola (Cabinda) (formerly referred to as “Portuguese Congo”) (e.g., *Gossweiler 9136, 9179*).

2. *C. polycephalum* is related to *C. inaequipetiolatum*, from which it differs by the shorter indumentum of calyx, and the less dense inflorescence, to *C. dusenii*, from which it differs by the pubescent upper surface of leaf, and to *C. johnstonii*, from which it differs by the calyx lacking a dense rusty tomentose indumentum.

18. *Clerodendrum pynaertii* De Wildeman (1909: 135 & pl. XXIII; 1910b: 255; 1912b: 91; 1922: 266); Thomas (1936: 60); Lebrun & Stork (1997: 512).—Fig. 5.

Type:—D.R. CONGO. Bas-Congo, 20 June 1906, *Pynaert 156* (holotype: BR0000008978547!; BR0000008978561!; iso-: MO, NY 00137379 (fragm.)).

Small slender liana, occasionally creeping, length unknown. Stem quadrangular, slender, papillate to puberulent, persistent petiole bases ca. 4 mm. Leaf: petiole 1.2–4.2 cm, often unequal in length at a node, papillate to puberulent; lamina membranaceous, thin, ovate to ovate-elliptic, 4–10.5 × 1.5–7 cm, cordate and somewhat asymmetric at base, apex acuminate, puberulent to thinly pubescent on both surfaces, especially on veins, margin entire to irregularly sinuate-crenate, 3–4 veins on either side, reticulum inconspicuous. Inflorescence: a lax thyrse 9–32 × 3–7 cm (corolla excluded), comprising 3–9 nodes spaced 3–9 cm, rachis flattened at nodes, cymules lax, 3- to 5(10)-flowered (1- to 3-flowered in upper nodes), peduncles 0.6–3 cm, in the axil of foliaceous bracts of decreasing size upwards; bracts filiform, 2 mm. Flower: pedicel 10–20 mm; calyx campanulate, ca. 8 mm long (tube 2 mm, lobes 6 mm) before anthesis, markedly accrescent during anthesis up to 20 mm (tube ca. 10 mm, lobes ca. 10 mm), gibbose at base, lobes triangular acute, ca. 6–10 × 5–8 mm, glabrous to puberulous, whitish with a purplish tinge; corolla: tube 10–25 mm, with sessile or shortly stipitate glands, lobes 3–7 mm long, pale yellow, glandular like the tube; stamens exerted ca. 15 mm, anther ca. 2 mm long. Fruit ca. 9 mm long, subtended by the persistent reticulate, chartaceous calyx.

Distribution in Central Africa:—D.R. Congo.

Distribution elsewhere:—Not known elsewhere; endemic of D.R. Congo.

Habitat:—Old growth forest with *Millettia laurentii*, secondary forest, riparian forests; 300–400 m.

Selection of representative specimens:—D.R. CONGO. **Bas-Congo**: Léopoldville [Kinshasa], Kimuenza, dans la forêt de pente, August 1956, *Carlier 91* (BR!); Mputu. Versant Ouest du bassin de la Nsele-Lukunga, 9 June 1960, *Compère 2132* (BR!, MO); Léopoldville [Kinshasa], 18 May 1915, *Bequaert 7657* (BR!, MO); Kimwenza, March 1901, *Gillet 2093* (BR!, MO); Léopoldville [Kinshasa], 7 July 1946, *E. Jans s.n.* (BR!); Kimuenza, 3 June 1968, *Pauwels 5115* (BR!, MO, WAG); Stanley-Pool, June 1899, *Schlechter 12504* (BR!, K, L, WAG).

Note:—This species is known from 14 gatherings, probably representing less than 10 localities; its area of occurrence is restricted to the region of Kinshasa, which has been subjected to extensive urbanization.

19. *Clerodendrum rotundifolium* Oliver (1875: 132); Baker (1900: 308); De Wildeman (1912b: 326); Thomas (1936: 61); Robyns (1947: 143); Lebrun *et al.* (1948: 117); Malaise (1985: 276); Verdcourt (1992: 99); Lebrun & Stork (1997: 513); Fernandes (2005: 98); Bloesch *et al.* (2009: 628); Burrows *et al.* (2018: 846). **Type**:—TANZANIA. Bukoba district, Karagúé, March 1862, *Speke 461* (holotype: K000192885).

= *Clerodendrum guerkei* Baker (1900: 308); Moldenke (1980: 218). **Type**:—TANZANIA. [German East Africa, Usambara], Kwa Mshuza, *Holst 8908a* (holotype: B(?) not seen, iso-: HBG-513445).

= *Clerodendrum cavum* De Wildeman (1920a: 582) ≡ *Siphonanthus cavus* De Wildeman (1920b: 164; 1922: 259). **Type**:—D.R. CONGO. Mboga, 12 July 1914, *Bequaert 5002* (**lectotype designated here**: BR0000020442521!; isolecto-: BR0000020442545!; NY00137331 (fragm.); US 02773877).

Suffrutex or shrub, occasionally sarmentose, 0.5–4 m. Stem terete, hollow, velvety-tomentose, with pale lenticels. Leaves occasionally 3-whorled; petiole: (1–)3–9 cm, shortly tomentose; lamina broadly ovate to deltoid, 4.5–19 × 4–13 cm, base obtuse, rounded or slightly cordate, apex shortly acuminate, discolorous, upper surface somewhat roughish, shortly pubescent, lower surface hispid-tomentose, especially on veins, 4–7 veins on either side, reticulum prominent on lower surface, margin entire to undulate-crenate. Inflorescence in the axils of leaves, in lax dichasia, 2.5–10 cm long (including peduncle), 5–7(–15)-flowered, the uppermost ones grouped in a loose panicle; bracts filiform to narrowly obovate-elliptic, 5–20 mm long, up to 2 mm wide; axes tomentellous. Flower: pedicel 10–40 mm, densely pubescent; calyx funnel-shaped, 11–20(–23) mm long, tube 2–9 mm, lobes narrowly ovate to triangular, acute to acuminate, (2–)3–5 mm wide, densely pubescent, occasionally purple tinged; corolla: tube (50–)70–110 mm, with eglandular and glandular hairs, lobes 10–15 mm long, white to yellowish; stamens exerted 25–30 mm, anther ca. 3 mm long. Fruit ca. 12 × 12 mm, dark olive green, subtended by the persistent chartaceous calyx up to 20 mm.

Distribution in Central Africa:—D.R. Congo, Rwanda, Burundi.

Distribution elsewhere:—Cameroon, Congo, Kenya, Malawi, Mozambique, Sudan, Tanzania, Uganda.

Habitat:—Savannah, shrub savannah, especially *Hyparrhenia diplandra*-*Entada abyssinica* savannah and *Loudetia arundinacea*-*Hymenocardia acida* savannah; more rarely riparian forest, fallow field, xerophilous scrub; 900–1900 m.

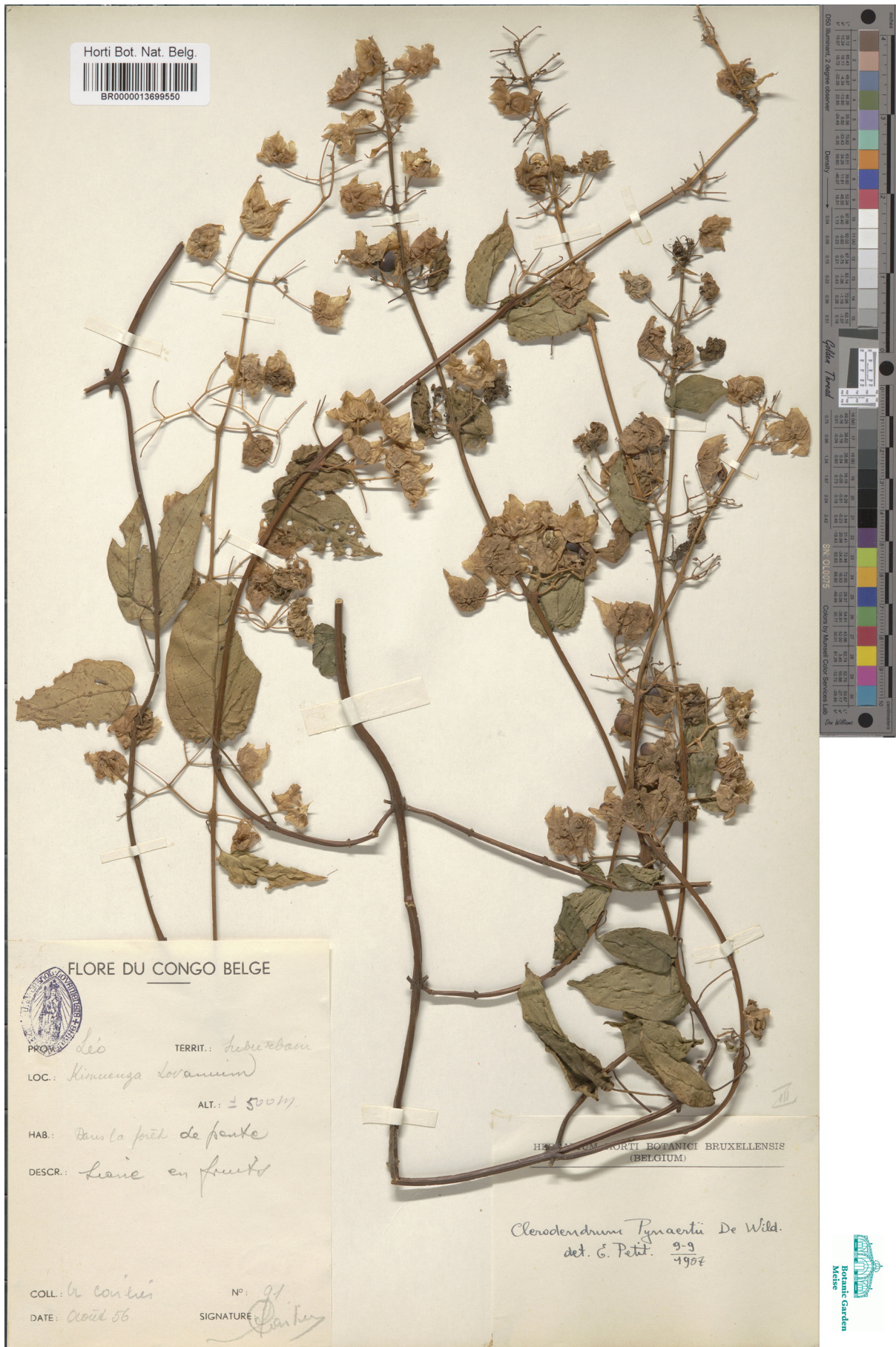


FIGURE 5. *Clerodendrum pynaertii*. (Carlier 91 (BR)). <https://www.botanicalcollections.be/specimen/BR0000013699550>

Selection of representative specimens:—D.R. CONGO. **Lac Albert:** Mboga, 12 July 1914, *Bequaert 5002* (BR!); Nioka, 4 June 1952, *Liben 317* (BR!). **Lacs Edouard et Kivu:** Entre Beni et Kasindi, 9 August 1914, *Bequaert 5205* (BR!); Rumangabo, Zone Lubero, 13 July 1982, *Breyne 4383* (BR!); Kivu, Territ. Katana, 5 December 1953, *Christiaensen 269* (BR!); Museya, près d'Ishango, 18 May 1954, *de Witte 10209* (BR!); territ. Beni, Lomera, 3 November 1954, *de Witte 11348* (BR!, WAG); Plaine au sud du lac Edouard, May–June 1929, *Humbert 8233* (P).—RWANDA. **Lacs Edouard et Kivu:** Route Kibuye-Cyangugu, à env. 30 km de Kibuye, 6 February 1980, *Bridson 330* (BR!, WAG). **Rwanda-Burundi:** Parc National de l'Akagera, bords du lac Ihema, 1 May 1969, *Bouxin & Radoux 397* (BR!); Lugarama, SE Gabiro, 4 December 1944, *Germain 2893* (BR!), Parc national de l'Akagera, Plaine Kabalele, January 1938, *Lebrun 9756* (BR!, P); Région du Mutara, env. Mimuli, 22 December 1957, *Troupin 5629* (BR!, WAG).—BURUNDI. **Rwanda-Burundi:** Mukarehe, March 1935, *Becquet 900* (BR!); Kanyinya près du lac Rugwero, 27 December 1965, *Lewalle 148* (BR!, MO); Gitega, Rutonde, 3 March 1968, *Lewalle 2915* (BR!, MO); Musinga, Kobero, 26 August 1980, *Ndabaneze 1098* (BR!); Gitega, 2 January 1975, *Reekmans 4275* (BR!, WAG).

Lectotypification of *Clerodendrum cavum* De Wild. De Wildeman (1920a) cited three syntypes, i.e. *Bequaert 5002*, *Bequaert 5205*, *Bequaert 5534*. I select as the lectotype the specimen with the largest leaves (*Bequaert 5002*, BR0000020442521!), because the protologue (De Wildeman 1920a: 582) describes leaves as being 18–22 cm long. Remaining syntypes: D.R. CONGO. Entre Beni et Kasindi, 9 August 1914, *Bequaert 5205* (syntype: BR0000020442859!, BR0000020442873!, BR0000020442880!); Rutshuru, 4 September 1914, *Bequaert 5534* (syntype: BR0000008978677! & BR0000008978684!).

20. *Clerodendrum schweinfurthii* Gürke (1893: 177); Durand & Schinz (1896: 223); Baker (1900: 296); Durand & Durand (1909: 440); De Wildeman (1905: 310; 1910b: 255; 1912b: 91; 1920b: 174; 1922: 267); Robyns (1947: 144); Huber (1963: 443); Verdcourt (1992: 112); Lebrun & Stork (1997: 513); Lejoly *et al.* (2010: 295); Pollard (2022: 33).

Type:—SOUTH SUDAN. Lande der Niamniam, 17 March 1870, *Schweinfurth 3224/3021* (lectotype designated by Thomas (1936): K000192900).

= *Clerodendrum bakeri* Gürke (1893: 175); Baker (1900: 296); Durand & Durand (1909: 438); Prain (1913: t. 8474); De Wildeman (1920b: 165) = *Clerodendrum schweinfurthii* var. *bakeri* (Gürke) Thomas (1936: 71); Moldenke (1980: 219) = *Clerodendrum congense* Baker (1892: 127) *nom. illeg.* non *Clerodendrum congense* Engler (1886: 65). **Type:**—D.R. CONGO. Stanley Pool, September 1893, *H.H. Johnston* (holotype: K000192853).

= *Clerodendrum longitubum* De Wildeman & Durand (in Durand & De Wildeman 1900: 74); Baker (1900: 517); De Wildeman (1905: 310; 1912b: 91, 200); Durand & Durand (1909: 439) = *Clerodendrum schweinfurthii* var. *longitubum* (De Wild.) Thomas (1936: 71); Lewalle (1972: 128); Moldenke (1980: 219). **Type:**—D.R. CONGO. Kisantu, 1899, *Gillet 100* (holotype: BR0000008978578!).

Small liana, often straggling, or shrub 0.75–3(–7) m high. Stem sparsely spreading pubescent to subglabrous, solid; old stems up to 15 mm diam., striate, lenticellate; persistent petioles bases 7–10(–15) mm. Leaf: petiole 0.3–1.2(–2.6) cm, shortly hispid, rarely glabrous, wrinkled; lamina obovate to elliptic, more rarely ovate, 8–22 × 4–12 cm, base cuneate, more rarely obtuse-rounded, apex acuminate, 7–9 veins on either side, upper surface dull, glabrous, reticulum prominent, lower surface glabrous except for papillate to sparsely hispid mid-vein, margin entire, or undulate or coarsely crenate. Inflorescence lateral on old defoliated shoots often near the ground, rarely terminal, a condensed hemispheric thyse 2–4 × 2.5–5 cm (corolla excluded), rarely with a pair of branches lower on peduncle, rachis 1–2 cm, with 2–3 nodes, branches ca. 5 mm, pubescent to subglabrous, peduncle 4–22(–30) cm, stiff, often lignified, papillate, puberulent or pubescent, bracts linear, ca. 5 mm long, pubescent. Flower: pedicel 1–5 mm, glabrous to puberulous, bracteoles filiform, 1–2 mm; calyx campanulate, 3.5–4.5(–5) mm long, glabrous or puberulous, lobes triangular, 1–1.5 mm long; corolla white to creamy-white, bad-smelling, tube 25–35 mm, glabrous, lobes 5–8 mm long; stamens exerted 10–15(–20) mm, anther ca. 1.5 mm long. Fruit: 10 × 8 mm, dark green, subtended by the cupuliform, white, fleshy, calyx 4–8 × 6–10 mm; seeds with orange arilla.

Distribution in Central Africa:—D.R. Congo, Burundi.

Distribution elsewhere:—Angola, Cameroon, Central African Republic, Congo, Gabon, Ivory Coast, Sierra Leone, Sudan, Tanzania, Uganda.

Habitat:—Rainforest (in particular Piptadeniastro-Celtidetum mildbraedii), riparian forest, seasonally flooded forest; 200–1420 m.

Selection of representative specimens:—D.R. CONGO. **Bas-Congo:** Kindompolo, 13 August 1902, *Cabra & Michel 34* (BR!); Territ. Nsele, Buma, 1 June 1980, *Nkunga in Pauwels 6363* (WAG); Nyanga, April 1932, *Vanderyst 29149* (BR!). **Kasai:** Rives du Kwango, 2 August 1944, *Germain 2581* (BR!); Kikwit, 10 August 1991, *Masens 995*

(BR!, WAG); Hemptinne, s.d., *Vanderyst 23654* (BR!). **Bas-Katanga:** Kamunza, September 1957, *Schmitz 5805* (BR!); Merode, s.d., *Vanderyst 23133* (BR!). **Forestier Central:** Environs de Coquilhatville [Mbandaka], August 1930, *Lebrun 1167* (BR!, P); Yangambi, Ile Esali, 31 December 1935, *Louis 922* (BR!); Yangambi, Ile Tukuku, 3 August 1938, *Louis 10683* (BR!); Environs de Coquilhatville [Mbandaka], 15 September 1925, *Robyns 577* (BR!). **Ubangui-Uele:** Parc National de la Garamba, 23 December 1949, *Demoulin 8* (BR!); Parc National de la Garamba, 18 December 1951, *De Saeger 1571* (BR!); Env. Amadi, 14 December 1905, *Seret 356* (BR!). **Lac Albert:** Irumu, 4 March 1914, *Bequaert 2707* (BR!). **Lacs Edouard et Kivu:** près de Mutsora, 25 February 1954, *de Witte 9877* (BR!); Katamangu, 15 February 1955, *de Witte 11864* (BR!, WAG); territ. Beni, Matwanga, 5 January 1955, *de Witte 11819* (WAG). **Haut-Katanga:** Plateau de Muhila, Kansimba, 5 October 1986, *Kisimba & Muzinga 1* (BR!).—BURUNDI. **Rwanda-Burundi:** Kigwena, 22 October 1976, *Reekmans 5484* (BR!); Mosso-Ruyigi, 17 September 1951, *Michel & Reed 390* (BR!).

Note:—This species has sometimes been confounded with forms of *C. silvanum* with a capitate inflorescence; *C. schweinfurthii* is easily distinguished by its longer corolla tube and shorter calyx. 2. A form with glabrous petiole has been described as *C. schweinfurthii* var. *bakeri* (Gürke) Thomas, but it is not recognized here.

Remaining syntypes of *Clerodendrum schweinfurthii* Gürke:—BURUNDI [Seengebiet]. Ihangiro, 10 November 1890, *Stuhlmann 897* (B†); D.R. CONGO, Undussuma, 1050 m, July 1891, *Stuhlmann 2596* (B†);—D.R. CONGO, an der Ituri-Fähre, 900 m, 20 August 1891, *Stuhlmann 2632* (B†); Lendu-Plateau, 1100 m, 17 September 1891, *Stuhlmann 2701* (B†).

21. ***Clerodendrum silvanum*** Henriques (1892: 148); Baker (1900: 299 as “*silvaeanum*”); Verdcourt (1992: 110); Lebrun & Stork (1997: 513); Fernandes (1998: 18; 2005: 109); Pollard (2022: 34) ≡ *Clerodendrum preussii* var. *silvanum* (Henriq.) Thomas (1936: 70) (as “*silvaeanum*”) ≡ *Clerodendrum silvanum* var. *silvanum* (Fernandes 1998: 21; 2005: 111).

Type:—SAO TOME. Bacia do Io Grande, January 1886, *Quintas 995* (lectotype designated by Thomas (1936); **second-step lectotype designated here:** COI00104957, iso-: COI00104958).

= *Clerodendrum buchholzii* Gürke (1893: 176); Baker (1900: 301); De Wildeman (1912a: 467; 1912b: 216; 1920b: 165; 1922: 258); Huber (1963: 443); Malaise (1985: 272); Moldenke (1985d: 294); Lejoly *et al.* (2010: 294) ≡ *Clerodendrum silvanum* var. *buchholzii* (Gürke) Verdcourt (1992: 110); Lebrun & Stork (1997: 513); Hawthorne & Jongkind (2006: 424); Bloesch *et al.* (2009: 630); Lisowski (2009: 363). **Type:**—CAMEROON. Barombi Station, 22 August 1890, *Preuss 404* (lectotype: B, designated by Thomas (1936), not seen; isolecto-: COI00005742, HBG513426, LE00016571, M0104840).

= *Siphonanthus botryoides* Hiern (1900: 843) ≡ *Clerodendrum botryoides* (Hiern) Baker (1900: 516 as “*botryodes*”); Moldenke (1985c: 204); Lebrun & Stork (1997: 510) ≡ *Clerodendrum silvanum* f. *botryoides* (Hiern) R.Fern. (Fernandes 1998: 21). **Type:**—ANGOLA. Prope Menha Luila Mussenque, September 1856, *Welwitsch 5662* (lectotype designated by Thomas (1936: 70): K000192925; iso-: BM000798636, LISU223646, LISU223647).

= *Siphonanthus nuxioides* S.Moore (in Baker *et al.* 1905: 197) ≡ *Clerodendrum nuxioides* (S.Moore) Thomas (1936: 69); Robyns (1947: 144); Moldenke (1980: 219) ≡ *Clerodendrum silvanum* var. *nuxioides* (S.Moore) Verdc. (Verdcourt 1992: 111); Lebrun & Stork (1997: 513); Bloesch *et al.* (2009: 630). **Type:**—UGANDA. 4 March 1904, *Bagshawe 579* (holotype: K000192880; iso-: BM000798641).

= *Clerodendrum goossensii* De Wild. (De Wildeman 1920b: 168). **Type:**—D.R. CONGO. Ganda-Sundi, 340 m, August 1919, *Goossens 1204* (**lectotype designated here:** BR00000089296791; iso-: BR00000089300021; P00442358 (fragm.); NY00137349 (fragm.)).

= *Clerodendrum laxicymosum* De Wildeman (1920b: 171; 1922: 262); Thomas (1936: 68); Moldenke (1980: 219); Malaise (1985: 274); Lejoly *et al.* (2010: 295). **Type:**—D.R. CONGO. Avakubi, 19 January 1914, *Bequaert 1844* (holotype: BR00000089787901, BR00000089787831; iso-: NY00137357 (fragm.)).

= *Clerodendrum silvanum* var. *brevitubum* Fernandes (1998: 22). **Type:**—ANGOLA. Lunda Norte, Dundo, 26 Jun. 1948, *Gossweiler 14126* (holotype: K001008521, iso-: BM, not seen).

= ?*Clerodendrum silvestre* Thomas (1936: 69); Lebrun & Stork (1997: 513). **Type:**—CAMEROON. Bipindihof, Mimfia Nkuambe, Urwald, December 1912, *Zenker 4391* (holotype: B, not seen; iso-: E00193467, K000192848).

Key to the forms of *C. silvanum*

1. Inflorescence a loose thyrses..... f. *silvanum*
- Inflorescence congested, hemispheric or capitate f. *caulanthum*

21a. *Clerodendrum silvanum* f. *silvanum*

Sarmentose shrub or liana up to 20 m. Stem glabrous to papillate, pale greyish-brown, lenticellate, up to 3 cm diam., solid, with persistent petiole bases up to 15 mm long. Leaf: petiole 0.7–3.0(–5.5) cm, canaliculate, glabrous, wrinkled; lamina elliptic, obovate-elliptic, more rarely ovate, 6–20 × 2–12 cm, base cuneate, apex acuminate, wholly glabrous, 5–7 veins on either side, upper surface dark green, generally glossy, reticulum prominent, lower surface paler, margin entire. Inflorescence terminal on leafy twigs and/or lateral on old wood, often near the ground; peduncle 3–25 cm, glabrous to papillate; a thyse 3–13 × 3–4.5 cm, mostly lax and longer than wide, occasionally more or less condensed to hemispheric or subcapitate; rachis brownish-grey, lenticellate, smooth or papillate or puberulous, 4–10 nodes, lateral branches at right angles, 5–12(–26) mm, sometimes thickened and flattened due to coalescent pedicels, cymules 3–10-flowered. Flowers: pedicel 2–5 mm, glabrous, papillate, or, more rarely, puberulent; calyx tubular to narrowly campanulate, 5–9 mm long, 2–4 mm wide at throat in herbarium, thinly striate, lobes triangular 1.5–2 mm long; corolla white to cream, tube 7–18 mm, glabrous, lobes 3–5 mm long, with sessile glands on outer surface; stamens exerted 5–15 mm, anther ca. 1 mm long, brown-violet. Fruit 10–12 × 7–8 mm, dark green turning black, subtended by cupuliform, whitish, fleshy calyx ca. 9 × 8 mm.

Distribution in Central Africa:—D.R. Congo, Rwanda, Burundi.

Distribution elsewhere:—Angola, Cabinda, Cameroon, Central African Republic, Congo, Gabon, Ghana, Guinea, Gulf of Guinea Is., Ivory Coast, Kenya, Liberia, Nigeria, Sierra Leone, Tanzania, Uganda, Zambia.

Habitat:—Rainforest, riparian forest, various types of secondary forest, forest fringe; 100–2500 m.

Selection of representative specimens:—D.R. CONGO. **Mayombe:** Luali, 26 August 1913, *Bequaert 635* (BR!); Luki, 15 October 1948, *Donis 2047* (BR!); Ganda-Sundi, August 1919, *Goossens 1204* (BR!). **Kasaï:** Zongo, 19 July 1953, *Callens 4171* (BR!); Kiyaka, Kwango, 14 March 1956, *Devred 2894* (BR!). **Bas-Katanga:** Région de Mobanga, Sumaili, 17 June 1952, *Germain 7869* (BR!). **Forestier Central:** Kisangani, 13 September 1971, *Bokdam 3194* (WAG); Yabahondo, October 1952, *Germain 8113* (BR!); Kipapashi-Madiwe, October 1938, *Gille 138* (BR!); Kisangani, 28 August 1980, *Nyakabwa Mutabana 3122* (BR!). **Lac Albert:** Djugu, September 1931, *Lebrun 3914* (BR!). **Lacs Edouard et Kivu:** Territ. Kalehe. Km 40 route Kavumu-Walikale, 23 June 1955, *Christiaensen 924* (BR!); N'Lulu (?), 11 February 1934, *de Witte 1397* (BR!); Presqu'île Kasirusiru, 11 April 1951, *Pierlot 128* (BR!). **Haut-Katanga:** Parc National de l'Upemba. Lusinga, 19 March 1948, *de Witte 3554* (BR!); Route Katanga-Mangombo, 9 September 1986, *Malaisse 13826* (BR!); Keyberg, 13 February 1963, *Schmitz 8169* (BR!).—RWANDA. **Rwanda-Burundi:** Mbuye, 28 June 1978, *Raynal 20765* (BR!).—BURUNDI. **Rwanda-Burundi:** Kiofi Mosso, 15 March 1952, *Michel & Reed 1378* (BR!); Kininya Mosso, 18 June 1952, *Michel 2925* (BR!); Marais de l'Akagoma, Ngozi, 11 June 1986, *Bouharmont 18128* (BR!).

Notes:—1. **Distinction of *C. silvanum* and *C. tanganyikense*.** *C. silvanum* is very closely related to *C. tanganyikense*, as already pointed out by Verdcourt (1992), and intermediate specimens are occasionally found. Inflorescence position (cauliflorous at shoot base, or terminal on leafy twigs) and habit (liana or shrub) are variable within either species. After examining copious materials, we consider the following combination of traits as the most efficient to discriminate the two species:

	<i>C. silvanum</i>	<i>C. tanganyikense</i>
Twig pubescence	glabrous	pilose to pubescent, at least in uppermost nodes
Leaf pubescence	glabrous, including petiole	Petiole and lower surface of lamina pilose to pubescent, at least on midvein
Upper surface of lamina	Shiny; reticulum prominent	Dull; reticulum not prominent
Pubescence of inflorescence rachis	Papillate to puberulous (no patent hair)	Shortly pubescent to hispid (at least a few patent hairs)

Based on this combination of traits, *Clerodendrum thonneri* Gürke, previously synonymized with *Clerodendrum silvanum*, is better placed in *Clerodendrum tanganyikense* (petiole pilose). *Clerodendrum silvestre* B.Thomas can be interpreted as an intermediate between the two species.

2. **Intraspecific variation of *Clerodendrum silvanum*.** *C. silvanum* is quite variable for length of calyx and corolla, and architecture of the thyse (lax or congested). Verdcourt (1992) recognized two varieties based on corolla tube length (var. *nuxioides* and var. *buchholzii*) but did not define them in comparison with the type. Fernandes (1998) proposed another infraspecific treatment, based on the relative length of corolla and calyx (var. *silvanum* and var. *brevitubum*). Actually, variation in the length of the calyx and the corolla is continuous and none

of the aforementioned taxa can be satisfactorily circumscribed. Inflorescence density is variable; morphs with congested inflorescence were initially described at species rank; I agree with Fernandes (1998) that such variation does not deserve more than the rank of form (f. *caulanthum*).

3. Much material hitherto referred to as “*Clerodendrum buchholzii*” in Burundi and Rwanda (e.g. in Malaise (1985)) actually belongs in *Clerodendrum tanganyikense*.

4. Specimens from Rwanda and Burundi tend to have lamina smaller and more ovate than in other regions.

Second-step lectotypification of *Clerodendrum silvanum* Henriq. Henriques (1892) cited two syntypes: SAO THOME. Bacia de Contador, alt. 1500 m, *Quintas*; SAO THOME. Nos Angolares na Bacia do Io Grande, alt. 100 m, *Quintas*. These appear to correspond to three collection numbers: Bacia do Io Grande, 100 m, January 1886, *Quintas* 995 (COI00104957, COI00104958; O-V2250468); Bacia do Io Grande, January 1886, *Quintas* 1011 (COI00104956, BR0000008718396!); Bacia de Contador, July 1888, *Quintas* 1347 (COI00104955). Thomas (1936) selected *Quintas* 995 as the lectotype; two sheets have been found in COI, which correspond to that specimen. I select here the most complete specimen as the second-step lectotype (COI00104957).

Lectotypification of *Clerodendrum botryoides* (Hiern) Baker. Thomas (1936: 70) designated *Welwitsch* 5662 (K) as the lectotype. This is surprising, because that specimen comprises no inflorescence and therefore does not display the key feature of the taxon; the isotypes in BM and LISU, however, are flowering specimens displaying the congested inflorescence described in the protologue. Remaining syntypes of *Clerodendrum botryoides*:—ANGOLA. Golungo Alto, Quibölo, May 1856, *Welwitsch* 5711 (BM000931421; LISU223648); Sobato de Mussengue, August 1855, *Welwitsch* 5714 (BM000931415, BM000931414; LISU223634; LISU223649); Golungo Alto, Sobatos Bumba and Bango, September 1855, *Welwitsch* 5738 (BM000931413; LISU223650).

Lectotypification of *Clerodendrum goossensii* De Wild. The protologue (De Wildeman 1920b: 168) cited two syntypes (*Goossens* 1151 & 1204). Each of them is represented by two sheets in BR. I select *Goossens* 1204 as the lectotype, more specifically the sheet with well-developed inflorescences at shoot base and at shoot tip, with the long corolla and long stamens mentioned in the protologue. Remaining syntype:—D.R. CONGO. Ganda-Sundi, 25 July 1919, *Goossens* 1151 (BR0000008970589!, BR0000008970886!; NY, P00442359 (fragm.)).

21b. *Clerodendrum silvanum* f. *caulanthum* (Exell 1930: 143) Fernandes (1998: 22).

Type:—ANGOLA. Mayumbe, Bucu Zau, 19 July 1916, *Gossweiler* 6507 (holotype: BM000583239; iso-: COI00068424, LISC not seen).

≡ *Clerodendrum caulanthum* Exell (1930: 143); Thomas (1936: 70); Lebrun & Stork (1997: 511).

= *Clerodendrum wildemannianum* Exell (1930: 143); Thomas (1936: 70); Moldenke (1980: 219); Lebrun & Stork (1997: 514) ≡ *Clerodendrum cauliflorum* De Wildeman (1920b: 165; 1922: 258) *nom. illeg.* non *Clerodendrum cauliflorum* Vatke (1882: 538).

Type:—D.R. CONGO. Mayombe, Luali, 26 August 1913, *Bequaert* 635 (holotype: BR0000008979384! & BR0000008979391!; iso-: NY00137401 (fragm.)).

Differs from the type variety by the congested, hemispheric inflorescence.

Distribution in Central Africa:—D.R. Congo.

Distribution elsewhere:—Angola.

Habitat:—Rainforest, riparian forest; ca. 200 m (?)

Selection of representative specimens:—D.R. CONGO. **Mayombe:** Luali, 26 August 1913, *Bequaert* 635 (BR!).

Notes:—Congested inflorescence seems to be restricted to the westernmost part of the species’ distribution range. Intermediates between f. *silvanum* and f. *caulanthum* are occasionally found; they correspond to f. *botryoides* (Hiern 1900: 843) Fernandes (1998: 21).

22. *Clerodendrum splendens* Don (1824: 349); Baker (1900: 300); De Wildeman (1905: 310; 1909: 137; 1910a: 403; 1911b: 43; 1912b: pl. 31; 1920b: 175; 1922: 268); Durand & Durand (1909: 441); Thomas (1936: 56); Huber (1963: 444); Lebrun & Stork (1997: 513); Fernandes (2005: 94); Akoegninou *et al.* (2006: 985); Hawthorne & Jongkind (2006: 424); Lisowski (2009: 364); Lejoly *et al.* (2010: 295); Vande weghe *et al.* (2016: 744). Pollard (2022: 36).

Type:—SIERRA LEONE. In montibus, 1822, *Don s.n.* (lectotype selected by Thomas (1936): K000192834; iso-: BM000798613).

Key to the varieties of *C. splendens*:

1. Lower surface of leaf glabrous var. *splendens*
- Lower surface of leaf puberulous to pubescent on veins or on the whole surface var. *pubescens*

22a. *Clerodendrum splendens* G. Don var. *splendens*

= *Clerodendrum gillettii* De Wildeman & T. Durand (in Durand & De Wildeman 1899a: 113); Baker (1900: 302); Durand & Durand (1909: 439); De Wildeman (1912b: 91) ≡ *Clerodendrum splendens* var. *gillettii* (De Wild. & T. Durand) Thomas (1936: 58); Moldenke (1980: 219). Type:—D.R. CONGO. Env. De N'Dembo, 1898, *Gillet s.n.* (holotype: BR0000008978806!).

= *Clerodendrum splendens* var. *longicuspe* Moldenke (1953a: 289; 1980: 219). Type:—D.R. CONGO. Kisantu, 01(?) November 1924, *Vanderyst 13894* (holotype: BR0000008978608!; iso-: NY 00137388 (fragm.)).

Shrub 1–3 m high, or liana up to 10 m. Stem quadrangular, shortly pubescent, hollow; persistent petiole bases 1–5 mm. Leaf: petiole 0.2–2.5 mm, puberulent; lamina ovate-elliptic, 7–19(–22) × (2.7–)4–13(–15) cm, base rounded to subcordate, apex acuminate, the uppermost ones somewhat clasping, 5 to 9 veins on either side, upper surface shiny and glabrous, lower surface paler and densely gland-dotted, margin entire, ciliolate. Inflorescence corymbiform, comprising axillary cymes in the 2 distal nodes, 2.5–7 × 4–9 cm, occasionally with subsidiary axillary cymes on 1–2 lower nodes, axes shortly pubescent to subglabrous, peduncle 1–10 cm; individual cymes ca. 3–4 × 4–8 cm. Flower: pedicel 1–5(–15) mm, glabrous or puberulous; calyx narrowly campanulate, 5–9(–12) mm long, 3–4 mm wide at throat, glabrous, base obtuse, lobes narrowly triangular, very acute, 3–4.5(–7) mm long, reddish; corolla: tube 14–20 mm, glabrous, with a few sessile golden yellow glands, lobes 10–11 mm long, glabrous, with sessile golden yellow glands; stamens exerted 20–40 mm, anther 2–3 mm long. Fruit 9–12 × 11–12 mm, deeply 4-lobed, smooth, subtended by cupuliform dark red calyx 9 × 10 mm.

Distribution in Central Africa:—D.R. Congo.

Distribution elsewhere:—Angola, Benin, Cabinda, Cameroon, Central African Republic, Congo, Equatorial Guinea, Gabon, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Liberia, Nigeria, Senegal, Sierra Leone.

Habitat:—Fallow field, savannah, young regrowth, secondary forest, degraded forest; a heliophilous species; 0–1000 (?) m.

Selection of representative specimens:—D.R. CONGO. **Mayombe:** Temvo, 10 February 1919, *Vermoesen 1799* (BR!); Kangu, 4 March 1921, *Wellens 51* (BR!). **Bas-Congo:** Milu, Maluku, 29 August 1975, *Breyne 2810* (BR!); M'vuazi, 13 August 1957, *Delhaye 232* (BR!); M'vuazi, Vallée de la Kokosi, 7 October 1958, *Compère 523* (BR!); Kisantu, 10 August 1935, *Louis 16* (P). **Kasaï:** Vallée de la Kamtsha, July 1921, *Vanderyst 10079* (BR!); Port-Francqui [Ilebo], May 1938, *Gillardin 379* (BR!); Kintuminika, 13 August 1959, *Pauwels 4023* (BR!, WAG). **Bas-Katanga:** Thielen, s.d., *Vanderyst 22054* (BR!). **Forestier Central:** Bokondji, 23 March 1959, *De Wanckel 12* (BR!); Bondo, Uélé-Itimbiri, March 1931, *Lebrun 2441* (BR!, P); Yangambi, 25 February 1937, *Louis 1383* (BR!); Mobwasa, Itimbiri, 28 January 1909, *Thonner [1?]21* (BR!).

Notes:—1. Var. *gillettii* (De Wild.) Thomas is based on a type with unusually narrow, oblong-elliptic leaves, ca. 3 times longer than broad. Specimens with such leaves are found occasionally (e.g., *A. Léonard 4875*), but do not appear to deserve taxonomic recognition.

2. Records of *C. splendens* in Burundi are errors for *C. umbellatum*.

22b. *Clerodendrum splendens* var. *pubescens* Moldenke (1953a: 176; 1980: 219).

Type:—D.R. CONGO. Banana, 4 August 1920, *Schouteden 47* (holotype: BR0000008978622!).

= var. *puberulentum* Moldenke (1953a: 176, 1980: 219). Type:—D.R. CONGO. Ganda Sundi, 7 July 1919, *Goossens 1049* (holotype: BR0000008978615!).

Differs from the type variety by the lower surface of lamina shortly pubescent on veins, or, more rarely, on the whole surface, and the puberulous calyx tube.

Distribution in Central Africa:—D.R. Congo.

Distribution elsewhere:—Angola, Republic of Congo (Brazzaville).

Habitat:—Scrub and thicket, sand dunes, sea cliff, savannah, often near the coastline; 0–350 m.

Selection of representative specimens:—D.R. CONGO. **Côtier:** Kisongo (Banana), 15 September 1913, *Bequaert 776* (BR!), Vista [Nsiam Fumu], s.d., *Flamigni 10492* (BR!); Vista [Nsiam Fumu], 11 August 1920, *Schouteden 73* (BR!). **Mayombe:** Sandanda, Shiloango, 10 August 1913, *Bequaert 601* (BR!), Luki, 2 August 1947, *Devred 3440* (BR!); Ganda Sundi, 25 July 1919, *Goossens 1106* (BR!). **Forestier Central:** Eala, 28 September 1937, *Couteaux 336* (BR!).

Notes:—1. Many species of *Clerodendrum* are variable for leaf pubescence and, generally, such variation has no taxonomic significance. However, the pubescent populations of *C. splendens* in D.R. Congo are ecogeographically well circumscribed, being almost restricted to the westernmost part of the country, often near the coastline, where

the glabrous phenotype is lacking or very rare. In the contact zone between the two varieties, populations with puberulent leaves occur, most likely derived from introgression; such populations have been described as var. *puberulentum* Moldenke, which we include in var. *pubescens*.

2. Var. *pubescens* is reported here for the first time for Angola (*Marques 258 sér. III*), and Congo (Brazzaville) (*Dechamps 13102*).

23. *Clerodendrum tanganyikense* Baker (1895a: 71; 1900: 298); Thomas (1936: 68); White (1962: 367); Verdcourt (1992: 111); Lebrun & Stork (1997: 513); Fernandes (2005: 111).

Type—TANZANIA. Fwambo, Lake Tanganyika, 1894, *Carson 52* (holotype: K000192926).

= *Clerodendrum thonneri* Gürke (1900: 292); Baker (1900: 517); Durand & Durand (1909: 441); De Wildeman (1909: 137; 1912b: 132); Thomas (1936: 68); Lejoly *et al.* (2010: 295). **Type**—D.R. CONGO. Boyangi, 400 m, 7 September 1896, *Thonner 69* (holotype: BR0000008978592!), **synon. nov.**

= *Clerodendrum dubium* De Wildeman (1914: 144; 1921: 166); Thomas (1936: 67) = *Clerodendrum tanganyikense* var. *dubium* (De Wild.) Moldenke (1953a: 177; 1980: 219). **Type**—D.R. CONGO. Upper Katanga, Elisabethville [Lubumbashi], 7 April 1912, *Bequaert 322bis* (holotype: BR0000008979254!).

= *Clerodendrum lupakense* Moore (1919: 247). **Type**—D.R. CONGO. Lupaka river, 6 February 1908, *Kassner 2458* (in part!) (**lectotype designated here**: BM000798639).

= *Clerodendrum consors* Moore (1919: 248); Thomas (1936: 68). **Type**—D.R. CONGO. Lupaka river, 6 February 1908, *Kassner 2458* (in part!) (**lectotype designated here**: BM000798638).

= *Clerodendrum bingaense* Moore (1919: 248); Thomas (1936: 68); Moldenke (1985c: 199); Lebrun & Stork (1997: 510). **Type**—D.R. CONGO. Binga, *Kassner 2627* (holotype: BM000798637; iso-: HBG512168).

= *Clerodendrum tanganyikense* var. *microcalyx* Moldenke (1953a: 177; 1980: 219); Schmitz (1963: 391). **Type**—D.R. CONGO. Munama. 8 March 1926, *Robyns 1577* (**lectotype designated here**: BR0000008979414!).

= *Clerodendrum bequaertii* De Wildeman (1914: 144; 1921: 165); Thomas (1936: 67); Schmitz (1963: 254); Lebrun & Stork (1997: 510) = *Clerodendrum tanganyikense* var. *bequaertii* (De Wild.) Moldenke (1953a: 177; 1980: 219) not *Clerodendrum bequaertii* De Wildeman (1920b: 185). **Type**—D.R. CONGO. Upper Katanga, Elisabethville [Lubumbashi], *Bequaert 322* (lectotype designated by Thomas (1936): BR0000008979445! & BR0000008979360!).

Suffrutex, shrub, sarmentose shrub or liana up to 6 m. Stem puberulent, pubescent or hispid, at least in the uppermost part and at nodes (beige-fulvous hairs), pale brown, with pale lenticels, persistent petiole bases ca. 2 mm. Leaves occasionally 3-whorled, petiole 0.5–4.5 cm, canaliculate, pilose; lamina obovate to elliptic, more rarely ovate to suborbicular, generally somewhat asymmetric, 5–13(–16) × 2.5–8.0 cm, base cuneate, obtuse to rounded, apex acuminate, or rounded and abruptly acuminate, 5–7 veins on either side, generally impressed, upper surface dark green, dull, subglabrous, reticulum not prominent, lower surface with pubescence extremely variable, from almost glabrous to brown-tomentose on the whole surface, most often spreading-pilose on main veins, sometimes only at the base of midvein; margin entire to undulate or crenate, occasionally crispate (in the most pubescent forms). Inflorescence: 4–9-flowered cymes on 7–10 mm long peduncle, either solitary in leaf axils, more often grouped in thyrses, either terminal on leafy shoots, or lateral on old defoliated twigs, rachis shortly pubescent to hispid, with 5–6 nodes, bracts linear to narrowly obovate, sometimes foliaceous, peduncle 2–16 cm, more or less pubescent; flower: pedicel 2–4 mm, shortly pubescent to hispid, bracteoles linear, fulvous puberulent; calyx tubular to narrowly campanulate, (3–)5–8 mm long, 3–4 mm wide at throat, glabrous, puberulent, pubescent, or, more rarely tomentose, lobes ovate to triangular, 1–1.5(–2) mm long; corolla scented, tube (10–)13–20 mm, glabrous or very rarely pilose, lobes 3–4 mm long, gland-dotted; stamens exerted 6–8 mm, anther ca. 1 mm long. Fruit 11 × 8 mm, subtended by cupuliform calyx 11 × 10 mm, whitish, striate.

Distribution in Central Africa—D.R. Congo, Rwanda, Burundi.

Distribution elsewhere—Cameroon, Uganda, Tanzania, Zambia, Angola.

Habitat—Savannah, wooded savannah, dry semi-deciduous woodland, dry evergreen forest, more rarely rainforest, mountain forest, riparian forest; up to 2480 m.

Selection of representative specimens—D.R. CONGO. **Kasai**: Kambangu. Galerie de la Kaziala, 11 February 1952, *Callens 3243* (BR!); Muetschi, 70 Km WNW of Lusambo, 1982, *Casier 219* (BR!). **Forestier Central**: Eala, 11 August 1932, *Corbisier-Baland 1644* (BR!); Bokuma, 5 March 1941, *Hulstaert 125* (BR!); Eala, 1 June 1905, *M. Laurent 743* (BR!). **Lac Albert**: Djugu, 1 October 1957, *Deville 125* (BR!). **Lacs Edouard et Kivu**: Prov. Twangiza, Mwama River Valley near Kashane, 17 April 2008, *Bytebier & Luke 3097* (BR!, EA); Plaine de la Ruzizi, January 1950, *Germain 5820* (BR!), Mulungu (Sud Kivu), 4 May 1959, *Pierlot 2870* (BR!). **Haut-Katanga**: Mont Mukwen,

15 March 1986, *Lumbu Simbi* 5 (BR!, WAG); Bianco, 30 January 1984, *Schaijes* 2224 (BR!, with photo); Elisabethville [Lubumbashi], December 1922, *de Giorgi* 336 (BR!); Kilubi, ferme Pirard, March 1946, *Quarré* 7760 (BR!).—BURUNDI. **Lacs Edouard et Kivu:** Matana, territ. Bururi, 3 February 1968, *Lewalle* 2752 (BR!); Territ. Muramvya. Mont Teza, 9 April 1972, *Lewalle* 6699 (BR!); Mont Teza, 19 April 1980, *Reekmans* 8925 (BR!, WAG); Bugarama, 25 January 1981, *Reekmans* 9526 (BR!, WAG). **Rwanda-Burundi:** Territ. Kitega. Chefferie Bweru, Karuzi, 26 March 1958, van der Ben 1994 (BR!).—RWANDA. **Lacs Edouard et Kivu:** Forêt de Nyungwe, environs de Gahate, 12 May 1971, *Bouxin* 688 (BR!); Route Kibuye-Cyangugu, env. De Gishyita (\pm 30 km de Kibuye), 13 February 1980, *Bridson* 396 (BR!, WAG); 20 km from Gatumba to Kibuye, 15 February 1972, *Troupin* 14436 (BR!). **Rwanda-Burundi:** Rubona, 24 December 1958, *Michel* 5970 (BR!); Entre Nyabisindu et Gitwe, 10 March 1973, *Troupin* 14570 (BR!). **Notes:**—1. *C. tanganyikense* is very closely related to *C. silvanum* (see notes under the latter species) and intermediates are occasionally found (e.g. Burundi: *Reekmans* 10055; D.R. Congo: *Christiaensen* 559, *Hart* 1681, *Liben* 2597). *Clerodendrum thonneri* Gürke has been synonymized with *C. silvanum* in recent databases. However, in the circumscription of *C. tanganyikense* and *C. silvanum* followed in the present work, *Clerodendrum thonneri* is closer to *Clerodendrum tanganyikense* owing to the pubescent petiole, and the synonymy is changed accordingly.

2. Inflorescence architecture and position, leaf shape and pubescence are very variable in this species. Calyx indumentum is also very variable, from wholly glabrous to almost tomentose. The most pubescent forms occur in Katanga (“var. *dubium*”), but variation is continuous and this variety is not recognized here.

3. Corolla tube is most often glabrous, but specimens with sparsely pilose corolla tube occasionally occur in Katanga (e.g. Kipopo, 10 March 1985, *Breyne* 4912 (BR!); Route Lubumbashi-Likasi, km 12, 18 February 1970, *Lisowski* 27284 (BR!); Keyberg, February 1937, *Quarré* 4756 (BR!); Poste de Kasenga, 55 km NE Lubumbashi, 11 March 1984, *Schaijes* 2252 (BR! with photo); they correspond to *Clerodendrum bequaertii* De Wild. (De Wildeman 1914, not De Wildeman 1920!) but this taxon is not recognized here.

Lectotypification of *Clerodendrum consors* Moore and *Clerodendrum lupakense* Moore. *Clerodendrum lupakense* and *Clerodendrum consors* were described at the same time (Moore 1919), based on the same gathering (*Kassner* 2458), in which Moore recognized two new species, based on spurious differences, as already noted by Thomas (1936). The type materials are kept in BM, E and K; however, only BM holds two sheets to which a copy of the protologue is attached (*C. consors*: BM000798638; *C. lupakense*: BM000798639); I designate these two sheets as the lectotypes of *C. consors* and *C. lupakense*, respectively. The duplicates in E (E00193473) and K (K000192847) are labelled “*C. consors*”, but it is unclear if they have been seen by Moore.

Lectotypification of *Clerodendrum tanganyikense* var. *microcalyx* Moldenke. Moldenke (1953a) indicated *Robyns* 1577 as the type. This collection corresponds to three sheets in BR, one sheet in NY, and one sheet in WAG. Only one of them (BR0000008979414) bears a determination label “var. *microcalyx*” by Moldenke and shows the short calyx described in the protologue; it is designated here as the lectotype. The other two sheets bear a determination label by Moldenke as “var. *bequaertii*” (BR0000008979438 and BR0000008979469) and should therefore be excluded; the specimens in WAG (WAG1718465) and NY (NY00137393) depart from the protologue in having a long calyx and should be excluded.

24. *Clerodendrum thomsoniae* Balfour f. (1862: 233); Hooker (1862: pl. 5513); Baker (1900: 303); Thomas (1936: 60); Deuse (1960: 65); Huber (1963: 442, fig. 307); Verdcourt (1992: 87); Lebrun & Stork (1997: 513); Fernandes (2005: 94); Lisowski (2009: 364); Lejoly *et al.* (2010: 295).

Type:—NIGERIA. Plant cultivated at Edinburgh Botanic Garden, from a plant collected at Old Calabar by Thomson (holotype: E00193470, iso-: E00193471).

Liana up to 9 m. Stem papillate to puberulent, obtusely tetragonal, persistent petiole base ca. 1 mm long. Leaves: petiole 0.5–3.5 cm, papillate to puberulent; lamina ovate, 4.5–18 \times 2–8 cm, base rounded to subcordate, apex acute to acuminate, membranous, 2–4 veins on either side, upper surface subglabrous to scabridulous, lower surface subglabrous, margin entire to slightly crenate. Inflorescence in axillary cymes, those of the uppermost 2–3 nodes grouped in a terminal corymb 11–15 \times 14–20 cm; cymes 5–9 \times 4–8.5 cm very lax, 7–17 flowered, peduncle 2.5–5.5 cm, basal bracts narrowly elliptic, attenuate at base, ca. 22 \times 8 mm. Flower: bracteoles linear, 3 mm long, pedicel 3–13 mm, puberulent; calyx 16–22(–30) mm, tube obconical 2–3 mm long, puberulent, abruptly dilated into a pentagonal limb, white at first, turning yellowish to rose, lobes ovate-triangular, 14–20 \times 7–9 mm, acute, puberulent, shortly ciliate; corolla red, tube 20–25 mm, lobes 6–10 mm long, with short glandular hairs; stamens exerted 20–25 mm. Fruit not observed.

Distribution in Central Africa:—D.R. Congo.

Distribution elsewhere:—Cameroon, Gambia, Ghana, Gulf of Guinea Is., Nigeria, Senegal, Sierra Leone. Introduced to tropical Asia and America.

Habitat:—Apparently only a garden escape.

Selection of representative specimens:—D.R. CONGO. **Bas-Congo:** “région de l’Equateur”, au Jardin d’Yudu (?), 27 June 1925, *Gillet in Robyns 13* (BR!). **Haut-Katanga:** Lubumbashi, Pépinières P. Van Kerkhoven, July 1937, *Schrooten in Salésiens 197* (BR!).

Note:—1. It is unclear if *C. thomsoniae* is native in Central Africa; the few specimens in collections appear to be cultivated plants, or garden escapes.

2. The specimen *Bytebier & Luke 2763* (BR!) is closely related to *C. thomsoniae*; however it has corolla cream-coloured with only one red lobe, and the calyx is densely lepidote. It could represent a different taxon.

25. *Clerodendrum thyrsoides* Gürke (1900: 293); Baker (1900: 516); De Wildeman (1905: 310; 1910a: 403; 1912b: 91); Durand & Durand (1909: 441); Thomas (1936: 73); Huber (1963: 444); Lebrun & Stork (1997: 513); Akoegninou *et al.* (2006: 985); Hawthorne & Jongkind (2006: 426); Lisowski (2009: 364); Lejoly *et al.* (2010: 295); César & Chatelain (2019: 731); Pollard (2022: 37).

Type:—D.R. CONGO. Bokakata, 6 February 1896, *Dewèvre 812* (holotype: B?, not seen; iso-: BR0000008979322!).

Sarmentose shrub or liana up to 8 m. Stem glabrous or puberulous, greyish to reddish, with pale lenticels; persistent petiole bases 2–15 mm. Leaves: petiole 0.5–3.0 cm, slender, glabrous, rarely pilose; lamina: elliptic to ovate-elliptic, 4–14 × 2–6 cm, base cuneate, apex acuminate, upper surface glossy, glabrous on both surfaces, 3–4 veins on either side, tertiary veins scalariform, prominent on both surfaces, lower surface gland-dotted, margin entire, recurved. Inflorescence terminal, a pyramidal thyrses, 6–40 × 6–13 cm, internodes 5–65 mm, cymules 2–15 flowered, 10–35 × 10–35 mm, lax, upwardly decreasing in size, peduncle 10–30 mm, perpendicular to rachis, in the axils of foliaceous bracts, branches greyish tomentellous. Flower: pedicel 5–20 mm, greyish tomentellous, bracts filiform 1–2 mm long; calyx 4–6 × 6–8 mm, whitish to glaucous green, glabrous to puberulent, gland-dotted, tube campanulate, 1.5–3 mm, limb spreading, lobes 2–3 × 2–3 mm, triangular; corolla yellowish, tube 7–11 mm, tomentellous, lobes 4–5 mm, reflexed, greyish tomentellous without; stamens exerted ca. 10 mm, greenish, anther ca. 1 mm long, blackish to ochraceous. Fruit subglobose, 7–9 × 7–8 mm, subtended by cupuliform calyx ca. 8 × 10 mm, striate.

Distribution in Central Africa:—D.R. Congo.

Distribution elsewhere:—Benin, Burkina, Cameroon, Central African Republic, Chad, Congo, Gambia, Guinea, Guinea-Bissau, Liberia, Mali, Nigeria, Sierra Leone.

Habitat:—Flooded forest, sphagnum bog, riparian forest; ca. 200–400 m.

Selection of representative specimens:—D.R. CONGO. **Bas-Congo:** Boko, July 1949, *Callens 2094* (BR!). **Kasaï:** Kisenge, Kwango-Sud, 24 July 1955, *Devred 2327* (BR!), Entre Selenge et Lokolela, July 1925, *Goossens 6010* (BR!). **Forestier Central:** Bogoy (territ. Boende), 4 January 1958, *Evrard 3197* (BR!); Yandja, 1 January 1940, *Germain 81* (BR!); Ile Mongayiolo (riv. Ruki), 9 September 1925, *Robyns 494* (BR!, WAG).

26. *Clerodendrum umbellatum* Poirlet in de Lamarck (1804: 166); Huber (1963: 442); Adam (1975: 1470); Verdcourt (1992: 97); Lebrun & Stork (1997: 514); Akoegninou *et al.* (2006: 985); Hawthorne & Jongkind (2006: 424); Lisowski (2009: 364); Lejoly *et al.* (2010: 295); Vande weghe *et al.* (2016: 744); Pollard (2022: 38), *nom. cons. prop.* **Type:**—NIGERIA, près d’Oware, *Palisot de Beauvois* (G00366283), *typ. cons. prop.* (see notes).

= *Clerodendrum scandens* Palisot de Beauvois (1808: 6, pl. 62); Baker (1900: 304); De Wildeman (1905: 310; 1910a: 402; 1910b: 255; 1914: 191; 1920b: 173); Durand & Durand (1909: 440); Thomas (1936: 58) ≡ *Clerodendrum umbellatum* f. *scandens* (P. Beauv.) Moldenke (1983: 330). **Type:**—NIGERIA, près d’Oware, *Palisot de Beauvois* (holotype: G00366283).

= *Clerodendrum scandens* var. *asperifolium* Thomas (1936: 59); Moldenke (1980: 219). **Type:**—REP. CONGO. Nola, 15 September 1913, *Tessmann 2030* (holotype: B, not seen), *nom. inval.*

= *Clerodendrum congense* Engler (1886: 65); Baker (1900: 301); Durand & Durand (1909: 438); De Wildeman (1912b: 47) ≡ *Clerodendrum umbellatum* var. *congense* (Engl.) Moldenke (Moldenke 1980: 219). **Type:**—D.R. CONGO. Boma, 5 September 1974, *Naumann s.n.* (syntype: B, not seen); Ponta da lenha, s.d. *Naumann s.n.* (syntype: B, not seen).

= *Clerodendrum subreniforme* Gürke (1900: 291); Baker (1900: 518); Durand & Durand (1909: 441); De Wildeman (1912b: 317); Thomas (1936: 56); Moldenke (1980: 219). **Type:**—D.R. CONGO. Sine loco, *Dewèvre 917* (holotype: B? (not seen); iso-: BR0000008979452! (fragm.)).

= *Clerodendrum fuscum* var. *lanceolatum* Moldenke (1953a: 176). **Type:**—D.R. CONGO. Bas-Uele, savane, 10 March 1935, *Dewulf 755* (holotype: BR0000008976147!), *synon. nov.*

= *Clerodendrum cordifolium* (Hochstetter 1842: 227) Richard (1850: 170); Baker (1900: 304); De Wildeman (1909: 132); Thomas (1936: 56). ≡ *Volkameria cordifolia* Hochst. Type:—ETHIOPIA. Near R. Tacazze, 8 December 1839, *Schimper 1132* (First-step lectotype designated by Cufodontis (1962); second-step lectotype inadvertently designated by Verdcourt (1992): TUB (3 sheets: TUB003785, TUB003786, TUB003787); iso-: P00466157; G00366287, S08-10966; S08-10965).

Suffrutex, or small liana, (0.2–)0.3–4 m. Stem quadrangular, subglabrous, puberulent or, more rarely, pubescent; persistent petiole bases present, ca. 3 mm. Leaf: petiole (0.5–)1–7(–8.5) cm, glabrous, papillate or shortly pubescent; lamina ovate, 4–16 × 2.5–11 cm, cordate to truncate at base, more rarely rounded to obtuse, apex acuminate, membranose or coriaceous, 3–4(–5) veins on either side, upper surface dull to shiny, glabrous, puberulent, scabridulous or, more rarely, pubescent, reticulum inconspicuous or, more rarely, prominent, lower surface gland-dotted, glabrous, or papillate to pubescent on veins, more rarely pubescent throughout, margin entire. Inflorescence in axillary cymes, on the 2–5 upper nodes, 2–5 × 3–8 cm, 11–19(–40) flowers, peduncle 1–9 cm, branches puberulent to shortly pubescent, lowermost cymes subtended by foliaceous bracts; flower: pedicel 5–13(–15) mm, papillate to puberulent; calyx funnel-shaped to narrowly campanulate, 6–12(–15) mm long, tube 2–4 mm, obconical, glabrous to shortly pubescent, green, lobes ovate-triangular to triangular, acute, or, more rarely, acuminate, (3–)4–9(–11) × 1.5–4(–5) mm, gland-dotted, whitish, occasionally rose-tinged after anthesis, glabrous, or, more rarely, puberulent; corolla pleasantly scented, tube 12–22 mm, with sessile to shortly stipitate glands, lobes 7–13 mm long, with sessile glands on outer surface, white, with a red spot near throat; stamens exerted 20–40 mm, anther 2–3 mm. Fruit 10–13 × 11–12 mm, 4-lobed, black, shining, subtended by cup-shaped reddish calyx; seeds sunk in a yellow pulp.

Distribution in Central Africa:—D.R. Congo, Burundi.

Distribution elsewhere:—Benin, Cameroon, Central African Republic, Congo, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Gulf of Guinea Is., Ivory Coast, Kenya, Liberia, Nigeria, Senegal, Sierra Leone, Sudan, Tanzania, Togo, Uganda.

Habitat:—Forests, woodlands, fallow fields, cultivated fields, secondary forest, savannah, montane forest; 0–2000 m.

Selection of representative specimens:—D.R. CONGO. **Kasaï:** Muetshi 70 Km WNW Lusambo, 1982, *Casier 267* (BR!); Panzi, 16 June 1955, *Devred 2021* (BR!); Bord du Sankuru, 3 July 1903, *van den Bossche 34* (BR!). **Bas-Katanga:** Kipaka-Lutshi, June 1952, *Germain 7721* (BR!); Territ. Mweneditu, Bakwanda (au N. De Katabaie), 12 May 1957, *Liben 2937* (BR!); E of Gandajika, 30 July 1945, *Luxen 508* (BR!); Kamina, Grelco, July 1936, *Quarré 2626* (BR!, WAG). **Forestier Central:** Ponthierville [Ubundu], February 1921, *Claessens 171* (BR!); Befale, 10 January 1958, *Evrard 3186* (BR!); Urega, July 1932, *Lebrun 5769* (BR!); Eala, 22 November 1946, *J. Léonard 1047* (BR!); 20 km W of Yangambi, 15 August 1938, *Louis 10809* (BR!); Lula, 5 February 1926, *Robyns 1470* (BR!). **Ubangui-Uele:** Gangala na Bodio, s.d., *Cornet d'Elzius et al. 710* (BR!); Niangara, 25 March 1952, *Gérard 159* (BR!). **Lac Albert:** Djegu, Plaine Iswa, 1 October 1953, *Taton 1306* (BR!). **Lacs Edouard et Kivu:** Route Kavumu-Walikale, km 110, 18 March 1957, *Troupin 3148* (BR!). **Haut-Katanga:** 33 km WSW Kolwezi, 14 March 1983, *Schajjes 1892* (BR!); Environs de Kolwezi, 17 August 2008, *Malaisse & Kisimba 30* (BR!).—BURUNDI. **Lacs Edouard et Kivu:** Territ. Matana, route Matan-Rutovu, km 15, 26 February 1966, *Lewalle 478* (BR!, MO); Bujumbura, Buhonga, 13 October 1967, *Lewalle 2057* (BR!, MO); Mutumba, 28 August 1971, *Reekmans 919* (BR!). **Rwanda-Burundi:** Cankuzo, 3 October 1974, *Auquier 4384* (WAG); Bururi, Kitaba (= Kwitaba?), September 1932, *Becquet 95* (BR!); Kwitaba, 19 October 1977, *Reekmans 6537* (BR!, WAG); Kigwena, 5 October 1978, *Reekmans 7135* (BR!).

Notes:—1. The type specimen of *C. umbellatum* Poir. actually represents *C. splendens* G. Don. (Meerts & Sosef 2022). Therefore, following the rules of the ICN, *Clerodendrum splendens* would have to be regarded as a synonym of *Clerodendrum umbellatum*, while the species commonly known under that name would have to be called *Clerodendrum scandens*. This would be a highly undesirable situation. According to Art. 57.1, the only way to preserve a name that has been widely and persistently used for a taxon not including its type is by a proposal to conserve the name. Therefore, the name *Clerodendrum umbellatum* Poir. has been proposed as a *nomen conservandum*, with a conserved type with the aim of preserving nomenclatural stability (Art. 14.2 of the ICN) (Meerts & Sosef 2022).

2. *C. umbellatum* is variable in leaf texture and pubescence; specimens from D.R. Congo often have leaves more pubescent than in other regions and the most pubescent forms have been described as “*C. scandens* var. *asperifolium* B. Thomas», *nom. inval.*, but variation in pubescence is continuous. Density of golden yellow glands on lower leaf surface is variable; the most glandular forms have been named *Clerodendrum umbellatum* var. *congense* (Engl.) Moldenke, but variation is more or less continuous. Plants from Burundi tend to have lamina more coriaceous and shining than plants from other regions; more work is needed to decide if they deserve taxonomic recognition.

3. The isotype of *Clerodendrum subreniforme* Gürke in BR lacks complete leaves, but flower traits are diagnostic; the particular shape of the lamina mentioned in the protologue is probably an individual variation, not worthy of recognition.

4. In the savannahs of NE Congo (notably in the Garamba), *C. umbellatum* is represented by a suffrutescent, dwarf morphotype (e.g. *De Saeger 1035*), sometimes not exceeding 30 cm in height, but all intermediates with lianescent forms exist. *C. fuscum* var. *lanceolatum* Moldenke belongs here.

Second-step lectotypification of *Clerodendrum cordifolium* (Hochst.) A.Rich. The protologue of *Volkamaria cordifolia* Hochst. (Hochstetter 1842) is based on materials collected by Schimper, but no collection number is mentioned. Cufodontis (1962) identified *Schimper 1132* as the type (first-step lectotypification). This collection exists in several herbaria. Verdcourt (1992) mentioned *Schimper 1132* (TUB) as the holotype, in error, which can be considered as inadvertent second-step lectotypification.

27. *Clerodendrum volubile* Palisot de Beauvois (1805: 52, pl. 32); Baker (1900: 297); Durand & Durand (1909: 41); De Wildeman (1905: 310; 1912b: 38; 1920b: 176; 1922: 271); Thomas (1936: 72); Huber (1963: 444); Lebrun (1969: 155); Verdcourt (1992: 115); Lebrun & Stork (1997: 514); Akoegninou *et al.* (2006: 986); Hawthorne & Jongkind (2006: 424); Lisowski (2009: 365); Lejoly *et al.* (2010: 295); Pollard (2022: 38).

Type:—NIGERIA. Oware, *Palisot de Beauvois* (holotype: G00366383, iso-: P-JU, FI FI011120).

Sarmentose shrub to small liana, occasionally trailing, up to 8 m long. Stem terete, glabrous, reddish, with pale lenticels, persistent petiole bases ca. 4 mm. Leaf: petiole 0.5–3.0(–4.5) cm, glabrous, canaliculate; lamina narrowly obovate to elliptic, more rarely ovate, 7.5–15(–16.5) × 2–6(–8.5) cm, attenuate or cuneate at base, apex acuminate, 5–7 veins on either side, wholly glabrous, upper surface glossy, margin entire or, rarely, with a few teeth in upper third. Inflorescence terminal: corymbose to hemispheric thyse, 2.5–7(–15) × 4–10(–15) cm, made of dichasia on the 5–10 upper nodes of stem, occasionally with 1–2 remote branches, forming a pyramidal thyse up to 15 × 12 cm, rachis 1.5–6(–12) cm, glabrous or puberulent only in upper part, each dichasium 7–30-flowered, branches slender, glabrous to puberulent, peduncles 1–5 cm, the lowermost ones in the axils of foliaceous bracts, the other in the axils of linear bracts 2–3 mm long. Flower: pedicel 4–20 mm, shortly beige to fulvous appressed pubescent; calyx: tube funnel shaped, ca. 1.5 mm long; green, glabrous to sparsely puberulent, widening into a cup-shaped limb, ca. 3 mm long, 4–7 mm diam., whitish, lobes obtuse-rounded to broadly triangular, 1–2 mm long, glabrous, gland-dotted; corolla: tube 6–8 mm, with sessile or stipitate glands, lobes 2.5–3 mm long, with stipitate glands on outer surface, cream, yellowish, to greenish white, occasionally fulvous puberulent on outer surface; stamens exserted 6–8(–12) mm, greenish, anther ca. 1 mm long. Fruit 6–7 × 5–8 mm, 1- to 4-lobed, subtended by cupuliform calyx.

Distribution in Central Africa:—D.R. Congo.

Distribution elsewhere:—Angola, Benin, Cabinda, Cameroon, Central African Republic, Congo, Equatorial Guinea, Gabon, Ghana, Guinea, Gulf of Guinea Islands, Ivory Coast, Liberia, Mali, Nigeria, Senegal, Sierra Leone, Tanzania, Togo.

Habitat:—Heliophyte. *C. volubile* has a surprisingly broad ecological range. It is particularly frequent in the coastal region, as a characteristic component of coastal bush, thickets and scrub often on maritime sand, and in forest clearings and fringes (Lebrun 1969). However it also occurs in a broad range of inland forest and savannah, often on moist soil, in more or less disturbed situations; 0–600 m.

Selection of representative specimens:—D.R. CONGO. **Côte d'Ivoire:** Zambézi, 2 August 1913, *Bequaert 545* (BR!); s.l., 1923, *Schouteden 33* (BR!); Vista [Nsiam Fumu], 1 July 1974, *Pauwels 5210* (BR!, WAG). **Mayombe:** Luki, 30 July 1959, *Compère 46* (BR!). **Bas-Congo:** Vanga, route de Kimvusa à Inga, 24 September 1959, *Compère 479* (BR!); En aval de la Pointe Kalina, 30 September 1964, *Pauwels 4727* (BR!, WAG); Mvuazi, 4 October 1951, *Devred 863* (BR!, WAG). **Kasaï:** Région de Luebo, s.d., *Achten 14* (BR!); Kamwandu, June 1957, *Liben 3194* (P); Sankuru, June 1903, *Luja 12* (BR!); Kikwit, 21 November 1990, *Masens 584* (BR!, WAG); Kapanga, June 1933, *Overlaet 926* (BR!). **Bas-Katanga:** Parc National de l'Upemba, rivière Lupiala, 30 June 1945, *de Witte 2381* (BR!); Merode, s.d., *Vanderyst 23490* (BR!). **Forestier Central:** Bekondji-Boenga, 1 March 1958, *C. Evrard 3590* (BR!); Wangata-Watsiko (env. D' Eala), 25 August 1946, *J. Léonard 391* (BR!); Yaselia (E Yangambi), 23 January 1936, *Louis 1097* (BR!). **Ubangui-Uele:** District de l' Ubangi, Libenge, 30 July 1913, *Mestdagh 20* (BR!). **Haut-Katanga:** Parc national de l'Upemba, 1 September 1948, *Van Meel in de Witte 4234* (BR!).

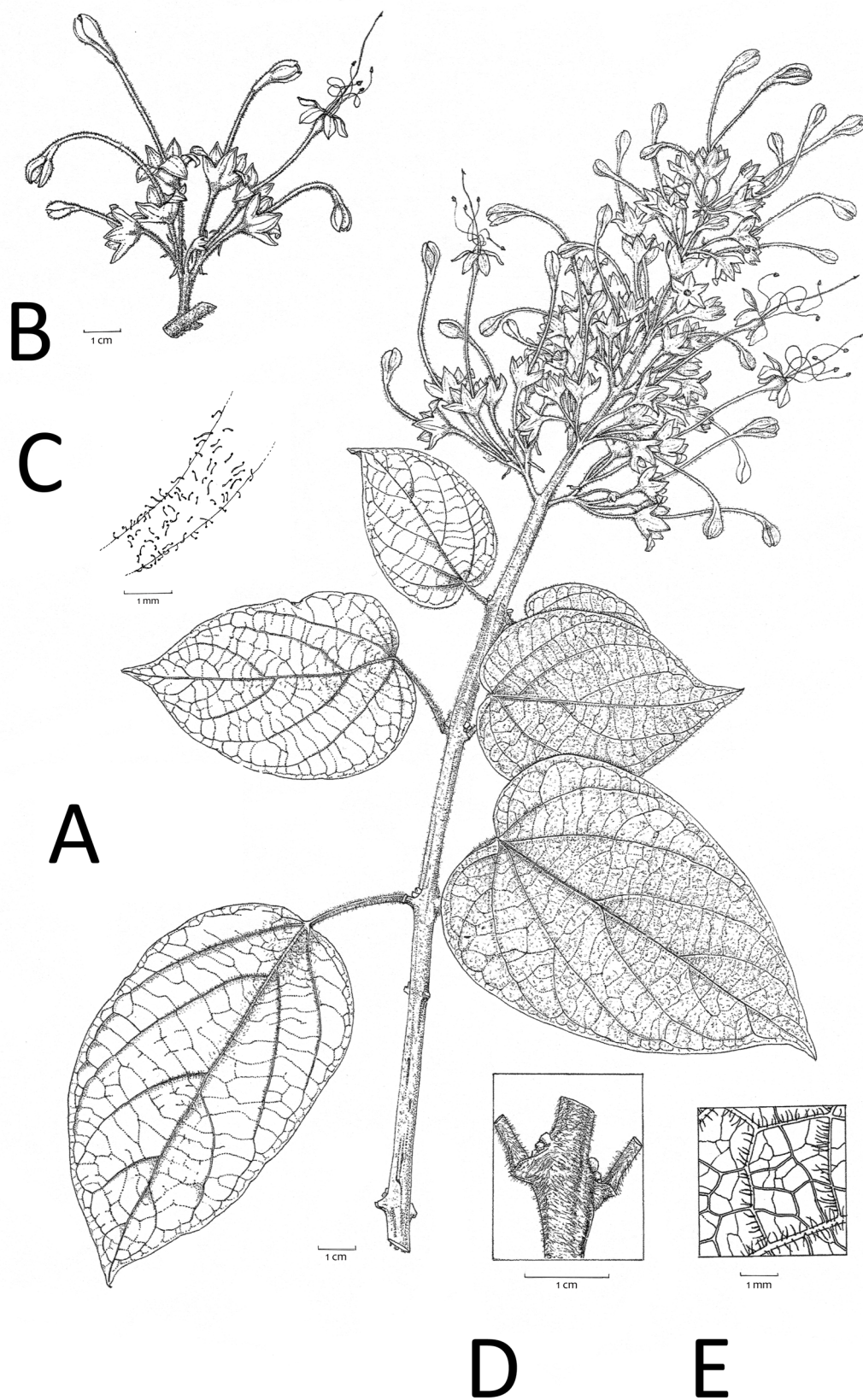


FIGURE 6. *Clerodendrum welwitschii* (Le Testu 9480 (BR)) (A) Habit. (B) Cyme. (C) Portion of corolla tube. (D) Node and petiole base. (E) Leaf undersurface. Drawing by Hilde Orye, Botanical Garden Meise (©).

28. *Clerodendrum welwitschii* Gürke (1893: 174); Baker (1900: 308); De Wildeman (1909: 138; 1912b: 91); Thomas (1936: 60); Huber (1963: 443); Lebrun & Stork (1997: 514); Lejoly *et al.* (2010: 295); Vande weghe *et al.* (2016: 744); Pollard (2022: 40) \equiv *Siphonanthus welwitschii* (Gürke) Hiern (Hiern 1900: 839).—Fig. 6.

Type:—ANGOLA. Golungo Alto, Bumba Quibixe, Sept. 1855, *Welwitsch 5648* (lectotype designated here: K000192939!, isolecto-: BM000798621; COI00005739; G00366307; LISU223664; P00442392, PRE0590601-0).

Shrub or liana, up to 6 m high, 10 cm diam. at base. Stem terete, reddish, fulvous to rusty pubescent, solid, pith regularly interrupted, with thick persistent petiole bases 5–16(–22) mm. Leaf: petiole 1–8(–12) cm, unequal in length at a node; lamina: broadly ovate to ovate-elliptic, 6–21 \times 3.5–14 cm, cordate to rounded at base, apex acuminate, 4–5 veins on either side, slightly impressed on upper surface, reticulum dense, prominent or not on upper surface, upper surface hispid (hairs ca. 1 mm), lower surface hispid on veins, pleasantly smelling when crushed, both surfaces often roughish, margin entire or occasionally somewhat undulate or subcrenate. Inflorescence terminal, a dense thyrse, ovoid to pyramidal, 3–15(–20) \times 2–7.5(–10) cm, rachis densely pubescent, sometimes glandular, branches 5–25(–40) mm, at a narrow angle with rachis, peduncle 2–10 cm. Flower: pedicel 5–20 mm, densely pubescent, occasionally glandular, bracts linear to narrowly elliptic, 3–5 mm long; calyx funnel-shaped or bell-shaped, yellow-green, 9–15(–20) mm, base broadly obconical, more rarely rounded, lobed over more than half its length, lobes triangular to ovate-triangular, 5–10 \times 2–5.5(–7) mm, 3–5-veined, pubescent on both surfaces, occasionally golden gland-dotted; corolla scented, tube 35–45 mm, greenish, sparsely glandular, more densely so near tip, lobes 7–9(–11) mm long, whitish, rose-spotted near throat, with glandular hairs on outer surface; stamens exerted 15–25 mm, anther 1.5–2 mm long. Fruit 9–11 \times 8 mm, concealed in persistent calyx.

Distribution in Central Africa:—D.R. Congo.

Distribution elsewhere:—Angola, Central African Republic, Congo, Gabon, Mozambique, Nigeria, Somalia.

Habitat:—Forest fringe, young regrowth, secondary forest, rainforest, generally heliophilous; 300–1000 m.

Selection of representative specimens:—D.R. CONGO. **Mayombe:** Tshela, September 1952, *Flamigni 10424* (BR!); Luki, 4 September 1957, *Matton 23* (BR!); Gimbi, 23 August 1948, *Toussaint 462* (BR!). **Bas-Congo:** Ngombe Ndiwu, 12 July 1953, *Callens 4151* (BR!); Kisantu, 11 August 1935, *Louis 26* (BR!); Kimuenza, 7 June 1967, *Pauwels 5026* (WAG). **Kasai:** Entre Kwanga-Wamba, rivière Twana, 30 July 1944, *Germain 2498* (BR!); Sangaie (territ. Lusambo), November 1938, *Gillardin 469* (BR!); Popokabaka, June 1925, *Vanderyst 14816* (BR!). **Forestier Central:** Eala, 21 October 1937, *Couteaux 377* (BR!); Yangambi, May 1938, *Gilbert 1126* (BR!, P); Entre Gemena et Karawa, December 1930, *Lebrun 1890* (BR!, P, US); Mobwasa, June 1913, *Lemaire 341* (P); Lilanda (W Yangambi), 22 February 1936, *Louis 1338* (BR!); Kotili (près de Buta), 11 December 1925, *Robyns 1456* (WAG). **Ubangui-Uele:** Bodangabo, 19 February 1955, *C. Evrard 288* (BR!).

Lectotypification of *Clerodendrum welwitschii* Gürke. Gürke (1893) indicated *Welwitsch 5648* as the type. This collection is represented by specimens in BM, COI, G, K, LISU, P and PR. All of them match the protologue. I select the specimen in K as the lectotype (K000192939).

Species excluded

The following names are excluded because they belong in other genera.

- Clerodendrum bequaertii* De Wild., Bull. Jard. Bot. État Bruxelles 7: 185 (1920), *nom. illeg.* [*Rothea*]
Clerodendrum carnosulum Baker, in D.Oliver & auct. Suc. (eds.), Fl. Trop. Afr. 5: 311 (1900). [*Rothea*]
Clerodendrum corbisieri De Wild., Repert. Spec. Nov. Regni Veg. 13: 144 (1914). [*Rothea*]
Clerodendrum discolor (Klotzsch) Vatke, Linnaea 43: 536 (1882). [*Rothea*]
Clerodendrum erectum De Wild., Repert. Spec. Nov. Regni Veg. 13: 145 (1914). [*Rothea*]
Clerodendrum glabrum E.Mey., in Comm. Pl. Afr. Austr.: 273 (1838). [*Volkameria*]
Clerodendrum kanichi De Wild., Ann. Mus. Congo Belge, Bot., sér. 4, 1: 119 (1903). [*Rothea*]
Clerodendrum katangensis De Wild., Ann. Mus. Congo Belge, Bot., sér. 4, 1: 120 (1903). [*Rothea*]
Clerodendrum pusillum Gürke, Bot. Jahrb. Syst. 30: 390 (1901). [*Rothea*]
Clerodendrum ringoetii De Wild., Repert. Spec. Nov. Regni Veg. 13: 144 (1914). [*Rothea*]
Clerodendrum scheffleri Gürke, Bot. Jahrb. Syst. 28: 301 (1900). [*Rothea*]
Clerodendrum schlechteri Gürke, Bot. Jahrb. Syst. 28: 302 (1900). [*Rothea*]

Clerodendrum sessilifolium Moldenke, *Phytologia* 4: 289 (1953). [*Ocimum*]
Clerodendrum triphyllum (Hochst.) H.Pearson, in W.H.Harvey & auct. Suc. (eds.), *Fl. Cap.* 5: 220 (1901). [*Rothea*]
Clerodendrum ugandense Prain, *Bot. Mag.* 135: t. 8235 (1909). [*Rothea*]

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