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## A Revision of *Ficus* Subsection *Urostigma* (Moraceae)

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**Abstract**—The present taxonomic revision of *Ficus* subsection *Urostigma* recognizes 27 species, of which three are new: *F. chiangraiensis*, *F. middletonii*, *F. pseudoconcinna*. Two new varieties are distinguished within *F. virens*, var. *dispersa* and var. *matthewii*. *Ficus lecardii* and *L. salicifolia*, formerly subspecies of *F. cordata*, are again reinstated to the species level. Typical characters for the subsection are monoecy, monostaminate flowers, red(–brown) colored ovaries and cystoliths on only the abaxial leaf surface. *Ficus amplissima* and *F. rumphii* (section *Leucogyne*) were formerly part of subsection *Urostigma*, and they have been added here to the key and descriptions because of their morphological resemblance with the species in *F. subsection Urostigma*. Molecular based phylogenetic analyses showed that at least *F. rumphii* is unrelated to subsection *Urostigma*. The two species only differ from subsect. *Urostigma* in their whitish ovaries and cystoliths at both sides of the leaf blade and they are pollinated by a different group of wasps, species of *Eupristina* subg. *Parapristina*.

**Keywords**—Monoecy, morphology, section *Leucogyne*.

Presently, *Ficus* L. subsect. *Urostigma* (Gasp.) Berg contains 27 species, of which seven species are from continental Africa, Madagascar, and the Arabian Peninsula; and 20 species from Asia, Australia, and the Pacific. Typical are the tree habit, intermittent growth, often deciduous, leaves spirally arranged, often articulate or subarticulate, cystoliths only abaxially, figs axillary, more commonly just below the leaves, and/or ramiflorous on up to ca. 1 cm long spurs, staminate flowers near the ostiole or scattered among the pistillate ones, tepals red(dish), ovary red–brown (or white).

This taxon started in a less elaborate circumscription as *Ficus* subgenus *Urostigma*, which was first described by Miquel in 1867. Miquel abandoned the idea of breaking up the genus *Ficus* into genera and he divided *Ficus* into six subgenera. *Urostigma* is one of the subgenera, then comprising ca. 270 species. *Urostigma* contains monoecious species with unistaminate or bistaminate flowers. However, Miquel subdivided subgen. *Urostigma* according to distribution, recognizing six series for Asia and Australia, three series for Africa, and five series for America. The species presently included in subsect. *Urostigma* were mainly placed in the series *Infectoriae* Miq. and *Religiosae* Miq. of Asia and Australia. The African representatives of the subsection were classified in the series *Grandiores* Miq., *Oblongifoliae* Miq., and *Ellipticifoliae* Miq.

In 1887 King divided *Ficus* into seven sections of which sect. *Urostigma* was equivalent to Miquel's subgenus. King divided his section *Urostigma* into series and subseries based on leaf characters. The species of the present treatment occur in different subseries of King.

In 1960, Corner reused the rank “subgenus.” He recognized three subgenera, one of them subg. *Urostigma* with seven sections, among which sect. *Urostigma* (with 15 species in Asia and six species in Africa) and sect. *Leucogyne* with two species in Asia (*F. amplissima* J. E. Sm. and *F. rumphii* Blume). These two groups contain the species treated here. The main difference between the two sections are the color of the ovary, the position of the staminate flowers and the position of the cystoliths: whitish ovaries, staminate flowers dispersed and cystoliths at both sides of the leaf blade in *Leucogyne*, and red(–brown) ovaries, staminate flowers around the ostiole (not 100%) and cystoliths only abaxially in *Urostigma*.

Berg (1989) recognized two main groups in *Ficus* according to morphological and functional traits, in particular in connection to the unique pollination system by fig wasps. The first group comprises the subgenera *Pharmacosycea* and *Urostigma*, and the other contains the subgenera *Ficus*, *Sycidium*, and *Sycomorus*. Fourteen years later, Berg (2003) divided *Ficus* into six subgenera (*Pharmacosycea*, *Urostigma*, *Ficus*, *Synoecia*, *Sycidium*, and *Sycomorus*) based on major differentiating characters like monoecy–dioecy, adventitious roots, stipules, position of figs, bracts, stigmas, and waxy glands. This new classification did not completely correlate any longer with the pollination system; exceptions occurred. One exception was Berg's (2004) newly established subsection *Urostigma*. Berg (2004) united Corner's sections *Leucogyne*, *Urostigma*, and *Conosycea*, into sect. *Urostigma*, which he subdivided into subsect. *Urostigma* (containing Corner's sect. *Leucogyne* and *Urostigma*) and subsect. *Conosycea* (containing Corner's sect. *Conosycea*). Typical for subsect. *Urostigma* is the presence of intermittent growth. Berg did not recognize the series used by Corner. Berg also included African species in the otherwise Asian/Pacific subsection. The two species in former section *Leucogyne* are pollinated by different wasps than the rest of subsect. *Urostigma* (see paragraph on pollination below).

Berg and Corner (2005) remarked that the differences between Corner's sect. *Leucogyne* and *Urostigma* are not good enough to justify recognition on a sectional or subsectional taxonomic level, and thus subsection *Urostigma* containing both taxa was maintained.

Recently, results of molecular phylogenetic studies by Rønsted et al. (2005, 2008) show that *F. rumphii* is not part of subsect. *Urostigma*, but that it is embedded in the not closely related subsection *Conosycea*. Unfortunately, Rønsted et al. (2005, 2008) did not sample *F. amplissima*, the other species in former sect. *Leucogyne*, which is thus phylogenetically still incompletely known.

Transferring both species to subsection *Conosycea* complicates the morphological distinctiveness of the subsections as the two species share major characters with subsect. *Urostigma*: (1) Both species show an intermittent growth like in subsect. *Urostigma*. (2) Staminate flowers of *F. amplissima* and *F. rumphii* are completely dispersed throughout the fig, which is also present in *F. orthoneura* H. Lév. & Vaniot,

*F. hookeriana* Corner, and *F. prolixa* G. Forst. of subsect. *Urostigma*, while *F. arnottiana* (Miq.) Miq. and *F. virens* Aiton var. *dispersa* Chantaras. show a transition with abundant staminate flowers around the ostiole and a few dispersed ones. (3) Leaf articulation is absent in subsect. *Conosycea*, section *Leucogyne* and in the African and Malagasy species of subsect. *Urostigma*, but mostly present in the Asian species of subsect. *Urostigma* (*F. orthoneura* and *F. hookeriana* excepted). (4) Color of the ovary is normally a good character to separate the two subsections, as ovaries in subsect. *Conosycea* are white (including the two *Leucogyne* species) and red(brown) in subsect. *Urostigma*. However, the ovary of *F. arnottiana* is white (or yellowish) and some samples of *F. religiosa* L. and *F. densifolia* Miq. also show partly white ovaries. In the first two characters, section *Leucogyne* corresponds with subsect. *Urostigma*, in the last one it resembles subsect. *Conosycea*. We will treat the taxa conforming to the phylogenetic analyses by Rønsted et al. (2005, 2008), with subsection *Urostigma* as a monophyletic group by treating *F. amplissima* and *F. rumphii* separately.

The aim of this paper is to revise the complete *Ficus* subsect. *Urostigma*. The two species in Corner's section *Leucogyne* are added to the key, so that all species with intermittent growth can be keyed out, which will prevent confusion in the future. We will not formally reclassify section *Leucogyne* yet, because the phylogenetic status of *F. amplissima* is unknown. In comparison with Berg and Corner (2005), this paper treats all species together, not only the Malesian ones. Descriptions and nomenclature are more complete and based on more specimens, and the latest species delimitations are presented.

## RESULTS

**Habit**—All species are essentially hemi-epiphytic, but without abundant aerial roots. Some species are often terrestrial. Most of the species remain medium-sized trees, rarely taller than 25 m, but some Asian species, like *F. caulocarpa* (Miq.) Miq., *F. superba* (Miq.) Miq., and *F. virens* Aiton often become 30–35 m tall (Berg and Corner 2005). The African species *F. verruculosa* Warb. is a shrub or a treelet, and the Malagasy species *F. madagascariensis* C. C. Berg is sometimes a shrub (Berg and Wiebes 1992). The trees show intermittent growth, for which morphological indications are different colors of parts of twigs of current or recent growth and of the previous season's growth. The transition is marked by a section with short internodes, which in some species bear persistent coriaceous stipules, forming terminal buds.

**Indumentum**—The indumentum consists of unicellular hairs of whitish, yellowish or brown colors which usually occur on leafy twigs, petioles, stipules, peduncles, and sometimes on the upper ostiolar bracts. Many species have translucent hairs on the inner surface of the fig (receptacle) among the flowers; these are called "internal hairs."

**Leaves**—The leaves are always spirally arranged. The lamina varies from broadest below the middle to broadest above the middle. The lamina is always symmetrical and ranges from small (up to 10 cm long) to medium-sized (10–20 cm long), but those of *F. hookeriana* Corner can be up to 25 cm long. The lamina is subcoriaceous to coriaceous and lacks a hypodermis except for *F. hookeriana* Corner and *F. orthoneura* H. Lév. & Vaniot, which have a well-developed hypodermis on both sides. The lamina is mostly

glabrous on both sides, but the young leaves of *F. cupulata* Haines are sometimes puberulous. The margin is always entire. The venation is basically pinnate and brochidodromous. The basal lateral veins are distinct by the narrower angle of departure from the midrib. Some species, e.g. *F. rumphii*, *F. ingens* (Miq.) Miq., and *F. cupulata*, have branched basal veins. The tertiary venation varies from clearly scalariform to reticulate and/or partly parallel to the lateral veins. The leaves are articulate in most species, therefore the lamina is often detached from the petiole in dry material; the African and Malagasy species are not articulate.

**Stipules**—Stipules are often conspicuous as part of the terminal bud cover. They show differences in length on the same plant, usually quite long (more than 2 cm long), thin and caducous on the open shoots and shorter, usually not longer than 2 cm long, thicker and more persistent on the closed shoots. In many species the stipules form ovoid terminal buds at the shoot apex.

**Figs**—They are often borne below the leaves, sometimes only in the leaf axils, and in some species on spurs on the older wood. They occur solitary or in pairs, to up to eight together on the spurs. They are sessile or pedunculate. The number of basal bracts is usually three, in *F. rumphii* sometimes two. These bracts are persistent or caducous. The receptacle is subglobose to subpyriform and varies in size from 0.3–0.4 cm in diam. when dry in *F. concinna* (Miq.) Miq. to 1.9–2.2 cm in diam. when dry in *F. hookeriana*. They are mostly glabrous and in some species wrinkled when dry; in *F. rumphii*, *F. virens* var. *matthewii* Chantaras. they are maculate. The ostiole is circular and the upper two or three visible bracts are imbricate, usually glabrous but in some species hairy, e.g. in *F. cupulata*, *F. virens* var. *virens* and var. *matthewii*. The change of color during maturation of the syconium is from whitish to pinkish to purplish to blackish.

**Flowers**—The number of tepals varies from one to five. They are free or connate, mostly glabrous, and red to brown.

**Staminate Flowers**—They occur near the ostiole (Fig. 1A, D, E) or are dispersed regularly among the pistillate flowers (Fig. 1C, G), but in *F. arnottiana* and *F. virens* var. *dispersa* they are abundant around the ostiole and a few dispersed (Fig. 1B, F). The staminate flowers are mostly sessile, rarely shortly pedicellate, but in *F. rumphii* and *F. amplissima* (section *Leucogyne*) they are distinctly pedicellate. There is only one stamen with a 2-thecate anther.

**Pistillate Flowers**—They are sessile or pedicellate. The ovary is white or red brown. The styles differ in length; usually short and long-styled flowers can be distinguished. Long-styled flowers are mostly sessile; short-styled ones are generally pedicellate and their ovaries tend to be longer than those of the long-styled flowers. However, the short-styled flowers of *F. religiosa* and *F. hookeriana* are mostly sessile and their ovaries are stipitate (Fig. 2A, B). There is only one stigma, which entangles with those of adjacent flowers, thus forming a syn-stigmatic layer (Berg 2004; Berg and Corner 2005). According to Kjellberg et al. (2001), usually 6–10% of the total number of flowers is staminate, and the anther/ovule ratio usually is 0.04–0.10, which is more or less related to the size of the receptacle. Exceptions are *F. densifolia*, *F. virens* var. *dispersa*, and *F. prolixa* for which the anther/ovule ratios are 0.27, 0.57, and 0.51, respectively, with a diameter of the receptacle when dry of (0.5–)0.7–1 cm, 0.6–0.8 cm, and 0.5–0.9 cm, respectively. In these three cases, the presence of at least some dispersed staminate

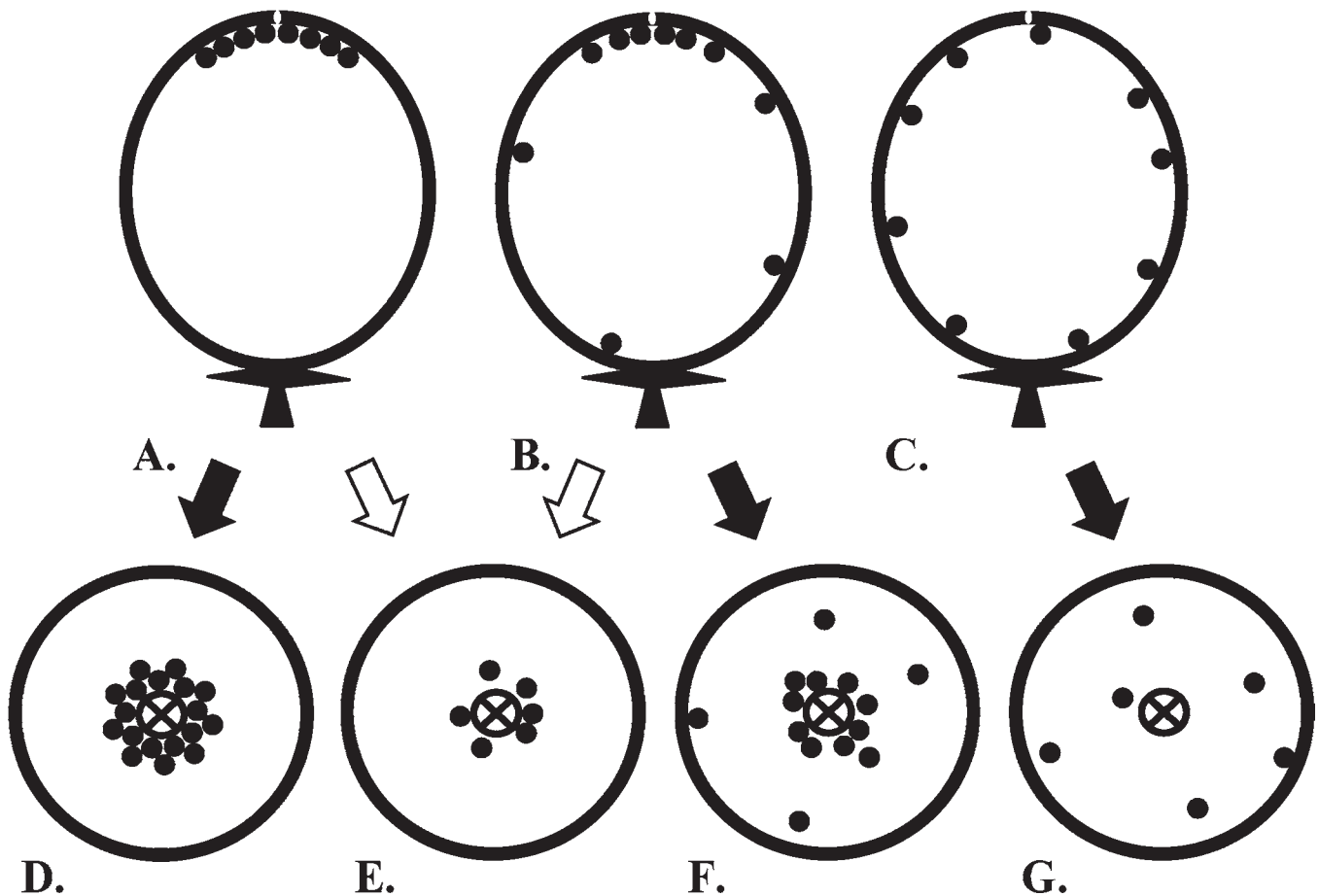


FIG. 1. Diagram showing the various positions of the staminate flowers. A–C. longitudinal section. D–G. apical view of ostiole; patterns between both views indicated by arrows. A, D, E. only around the ostiole; B, F. concentrated around the ostiole but a few irregularly dispersed among the pistillate flowers; C, G. regularly dispersed among the pistillate flowers, few around the ostiole. E can be derived from A and B.

flowers and a larger than usual anther/ovule ratio seems to be associated with passive pollen transport.

**Pollination**—The obligate pollination of figs by fig wasps is unique and a nice introduction is given by Weiblen (2004). The pollinators of subsection *Urostigma* belong to the Agaonidae (Hymenoptera: Chalcidoidea). The majority of species is pollinated by species of *Platyscapa*. However, *F. amplissima* and *F. rumphii* (section *Leucogyne*) are pollinated by species of *Eupristina* subg. *Parapristina* (Berg and Wiebes 1992; Berg and Corner 2005; Cruaud et al. 2009).

#### TAXONOMIC TREATMENT

FICUS L. subg. *UROSTIGMA* (Gasp.) Miq. sect. *UROSTIGMA* (Gasp.) Endl. subsect. *UROSTIGMA* (Gasp.) C. C. Berg, *Blumea* 49: 464. 2004. *Urostigma* Gasp. sect. *Religiosa* Miq., *Fl. Ind. Bat.* 1, 2: 332. 1859. *Ficus* L. subg. *Urostigma* (Gasp.) Miq. sect. *Urostigma* (Gasp.) Endl. ser. *Religiosae* (Miq.) Miq., *Ann. Mus. Bot. Lugduno–Batavi* 3: 287. 1867.—TYPE: *Ficus religiosa* L.

*Urostigma* Gasp. sect. *Caulobotrya* Miq., *Fl. Ind. Bat.* 1, 2: 334. 1859. *Ficus* L. subg. *Urostigma* (Gasp.) Miq. sect. *Urostigma* (Gasp.) Endl. ser. *Caulobotryae* (Miq.) Corner, *Gard. Bull. Singapore* 17: 371. 1960.—LECTOTYPE (designated by Corner 1960): *Ficus caulocarpa* (Miq.) Miq.

*Ficus* L. subg. *Urostigma* (Gasp.) Miq. ser. *Infectoriae* Miq., *Ann. Mus. Bot. Lugduno–Batavi* 3: 286. 1867.—LECTOTYPE (designated here): *Ficus infectorea* Roxb. (= *Ficus virens* Aiton).

*Ficus* L. sect. *Gasparriniella* Sata, *J. Soc. Trop. Agr. Taiwan* 6: 18. 1934; *Contr. Hort. Inst. Taihoku Imp. Univ.* 32: 213, 377. 1944.—LECTOTYPE (designated here): *Ficus wightiana* (Wall. ex Miq.) Benth (= *Ficus virens* Aiton).

*Ficus* L. subg. *Urostigma* (Gasp.) Miq. sect. *Urostigma* (Gasp.) Endl. ser. *Orthonerae* Corner, *Gard. Bull. Singapore* 17: 371. 1960.—TYPE: *Ficus orthonera* H. Lév. & Vant.

*Ficus* L. subg. *Urostigma* (Gasp.) Miq. sect. *Urostigma* (Gasp.) Endl. ser. *Superbae* Corner, *Gard. Bull. Singapore* 17: 371. 1960.—TYPE: *Ficus superba* (Miq.) Miq.

Trees, often deciduous, with intermittent growth, parts of twigs of recent growth different in color from those of the previous season, the transition being marked by a zone with short internodes. Leaves spirally arranged, often articulate or subarticulate; lamina often ovate to subovate to elliptic; cystoliths mostly only abaxially; venation reticulate to subscalariform or partly parallel to the lateral veins; petiole relatively long. Figs axillary, but more commonly just below the leaves, and/or on up to ca. 1 cm long spurs on the older

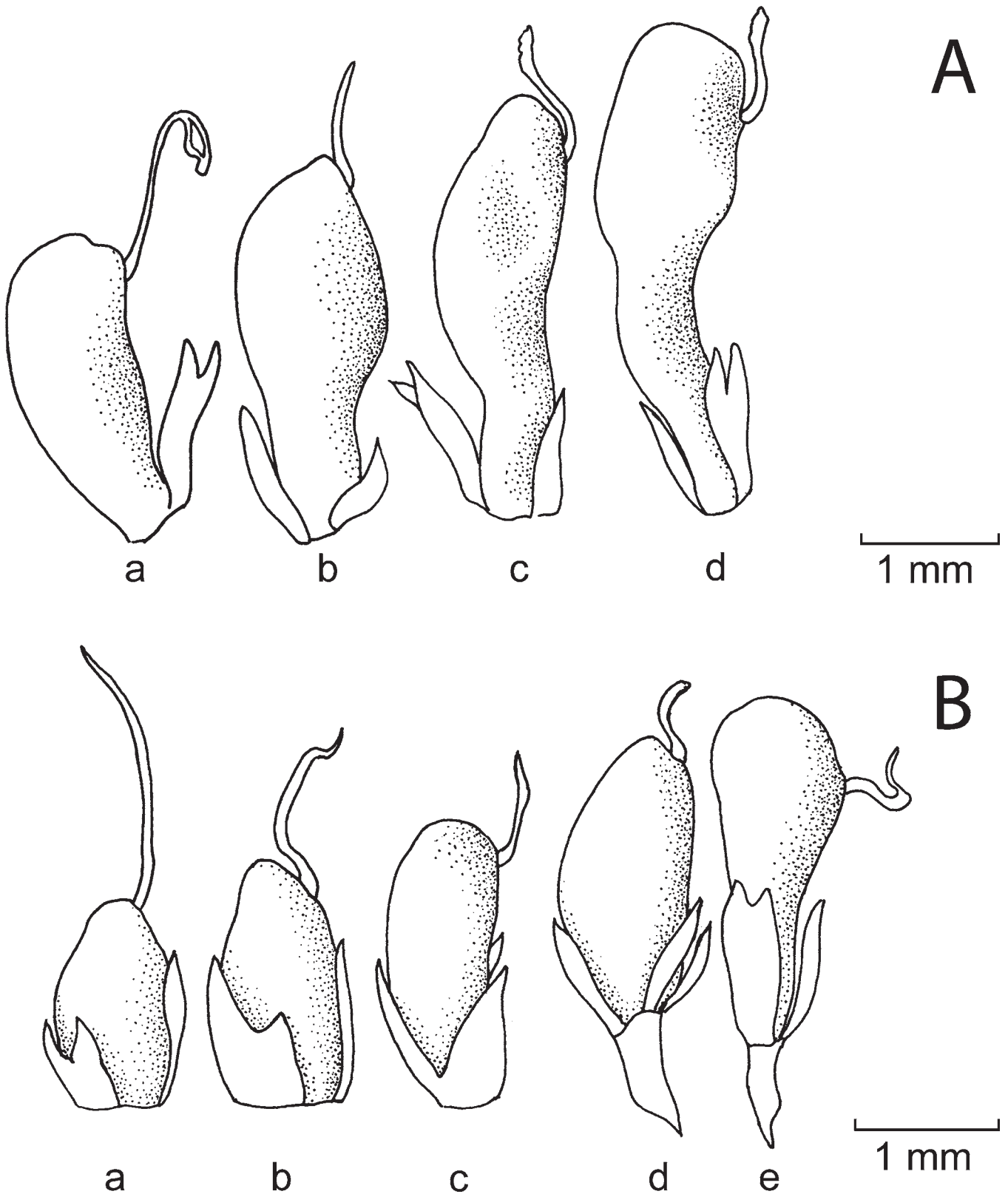


FIG. 2. The pistillate flowers. A. Short-styled flowers on a stipe. B. Long-styled flowers sessile, short-styled ones partly pedicellate with longer ovaries than the long-styled flowers.

wood; basal bracts small or sometimes large, persistent or caducous; internal hairs present and often  $\pm$  chaffy or absent. Staminate flowers near the ostiole or scattered among the pistillate flowers, sessile or sometimes pedicel-

late, tepals (1-)2-4(-5), free or connate, red(dish) brown, stamen 1, the filament variable in length. Pistillate flowers sessile or pedicellate, tepals (1-)2-4(-5), free or connate, red(dish) brown, ovary sometimes stipitate, red brown or

white, style variable in length, long-styled flowers mostly sessile and short-styled ones pedicellate or stipitate, stigmas cohering and forming a synstigma.

**Distribution**—The subsection is distributed from West Africa and Madagascar through the Asian mainland to Japan and through (southern) Malesia to Australia and the Pacific. The distribution of some species is limited: *F. henneana* Miq. is confined to Australia, *F. cupulata* occurs only in India, and *F. madagascariensis* is endemic to Madagascar. The most widespread species is *F. virens*, ranging from Sri Lanka to N Australia and the Pacific.

**Ecology**—The subsection occurs mainly in tropical areas, but *F. subpisocarpa* extends to the subtropics. Most spe-

cies are associated with relatively dry types of vegetation and/or seasonal conditions, often monsoon forest, savannah, or littoral vegetation, often on or near rocks, at low altitudes. In Africa, the species are mainly found in regions with savannah woodland, but *F. verruculosa* is often present in swamps. Species can be deciduous in the monsoon climate and may be evergreen in the rainforest climate. *Ficus rumphii* is common in villages, orchards, and town-gardens (Berg and Corner 2005). *Ficus religiosa* has been planted for a long time in Buddhist temple gardens. It often successfully establishes itself and migrates to natural vegetation, sometimes being invasive just like *F. rumphii*.

#### KEY TO THE SPECIES, SUBSPECIES AND VARIETIES OF *FICUS* SUBSECT. *UROSTIGMA*

(incl. *F. rumphii* and *F. amplissima* because of morphological similarity)

1. Leaves articulate (Asia, Australia, Pacific) ..... 2
2. Ovary white, white with a red mark at the base or yellowish. Figs subsessile or up to 8 mm pedunculate ..... 2. *F. arnottiana*
2. Ovary red-brown, dark red, or brown. Figs sessile or pedunculate ..... 3
3. Staminate flowers near ostiole ..... 4
4. Fig lacking internal hairs or a few minute ones present ..... 5
5. Basal bracts caducous ..... 6
6. Figs (3–)4–6 mm diam. when dry ..... 5. *F. concinna*
6. Figs (7–)8–25 mm diam. when dry ..... 7
7. Figs solitary or in pairs in leaf axils; Australia ..... 10. *F. henneana*
7. Figs 1–5 together on up to 1 cm long curved spurs (exceptionally solitary or in pairs axillary or just below the leaves); Asia ..... 8
8. Stipules 0.5–1.6(–2.7) cm long, densely white woolly–tomentose; basal bracts 2–5 mm long, puberulous ..... 24. *F. superba*
8. Stipules 0.3–1.1 cm long, puberulous; basal bracts 1–2.5 mm long, glabrous ..... 9
9. Leafy twigs whitish puberulous, lateral veins 9–11 pairs, the basal pair up to 1/5–1/3 the length of the lamina; internal hairs minute ..... 23.2. *F. subpisocarpa* subsp. *pubipoda*
9. Leafy twigs (sub)glabrous, lateral veins (5–)7–10 pairs, the basal pair up to 1/10–1/4 the length of the lamina; internal hairs absent ..... 23.1. *F. subpisocarpa* subsp. *subpisocarpa*
5. Basal bracts persistent ..... 10
10. Apex of the lamina caudate ..... 20. *F. religiosa*
10. Apex of the lamina acute to acuminate to caudate, sometimes obtuse ..... 11
11. Figs sessile; basal bracts 2–4.5 mm long ..... 12
12. Lateral veins 8–14 pairs, unbranched, basal pairs (1/7–)1/4–1/3 the length of the lamina; figs solitary or in pairs or up to 8 together on spurs ..... 25. *F. tsjakela*
12. Lateral veins 4–9 pairs, usually branched, basal pair 1/5–1/3 the length of the lamina; figs solitary or in pairs ..... 13
13. Receptacle 0.5–0.6 cm diam. Basal bracts 1.5–2 mm long ..... 22.2. *F. saxophila* var. *cardiophylla*
13. Receptacle 0.6–0.9 cm diam. Basal bracts (2.5–)3–4.5 mm long ..... 22.1. *F. saxophila* var. *saxophila*
11. Figs on up to 2 mm long peduncles, sometimes subsessile; basal bracts 1–2 mm long ..... 14
14. Basal lateral veins 1/10–1/6 the length of the lamina, unbranched ..... 19. *F. pseudoconcinna*
14. Basal lateral veins 1/5–1/3(–1/2) the length of the lamina, branched.
  15. Figs axillary, just below the leaves or on the spurs on the older wood, solitary, in pairs or up to 4 together ..... 17. *F. prasimicarpa*
  15. Figs axillary or just below the leaves, solitary or in pairs ..... 1. *F. alongensis*
4. Fig with internal hairs present ..... 16
16. Basal bracts 4–6 mm long, covering up to the middle of the receptacle ..... 17
17. Lamina broadly ovate or elliptic to oblong, 16.3–22.5 by 9–15 cm; receptacle glabrous ..... 4. *F. Chiangraiensis*
17. Lamina (broadly) ovate, 8.2–12 by 7–9 cm; receptacle usually white tomentose ..... 7. *F. cupulata*
16. Basal bracts 1–4 mm long, covering only the base of the receptacle ..... 18
18. Epidermis of petiole flaking off ..... 19
19. Figs 1–4 together on the spurs, basal bracts 2–2.5 mm long, glabrous ..... 9.1. *F. geniculata* var. *geniculata*
19. Figs 1–8 together on spurs, basal bracts 1.5–2 mm long, glabrous or puberulous ..... 20
20. Receptacle 0.3–0.6(–0.7) cm when dry, glabrous ..... 3.1. *F. caulocarpa* var. *caulocarpa*
20. Receptacle 0.4–0.5 cm when dry, white villous ..... 3.2. *F. caulocarpa* var. *dasycarpa*
18. Epidermis of petiole persistent ..... 21
21. Basal lateral veins usually branched, the other lateral veins branched and often furcate away from the margin ..... 22
22. Stipules white puberulous to tomentose; basal bracts 1–1.5 mm long, puberulous to tomentose or villose; upper ostiolar bracts glabrous (sometimes minutely puberulous), margin ciliate ..... 15. *F. middletonii*
22. Stipules glabrous or puberulous; basal bracts 1.5–3 mm long, minutely puberulous; upper ostiolar bracts puberulous, margin not ciliate ..... 27.1. *F. virens* var. *virens*
21. Basal lateral veins usually unbranched, or if branched then the other lateral veins unbranched ..... 23
23. Stipules glabrous or puberulous; receptacle glabrous or puberulous ..... 24

24. Receptacle 1.2–1.5 cm in diam. when dry, ostiole 3.5–4 mm in diam., upper ostiolar bracts puberulous ..... 27.4 *F. virens* var. *matthewii*
24. Receptacle 0.4–0.9(–1.2) cm in diam. when dry, ostiole (1–)2–3 mm in diam., upper ostiolar bracts glabrous ..... 25
25. Lamina mostly obovate or elliptic; basal lateral veins up to 1/6–1/4 the length of the lamina ..... 27.3. *F. virens* var. *glabella*
25. Lamina mostly (broadly) ovate to lanceolate; basal lateral veins up to (1/10–)1/9–1/3 the length of the lamina ..... 26
26. Epidermis of bud scales persistent ..... 9.1 *F. geniculata* var. *geniculata*
26. Epidermis of bud scales flaking off ..... 27.2 *F. virens* var. *dispersa*
23. Stipules white tomentose or villose, receptacle white tomentose or villose ..... 27
27. Receptacle 0.4–1.2 cm diam. when dry, ostiole 1–2 mm in diam., basal bracts 2–2.5 mm long ..... 9.2. *F. geniculata* var. *insignis*
27. Receptacle (1.1–)1.2–1.5 cm diam. when dry, ostiole 3.5–4 mm in diam., basal bracts 3–4 mm long ..... 27.4. *F. virens* var. *matthewii*
3. Staminate flowers dispersed but also near ostiole ..... 28
28. Terminal bud ovoid, epidermis of bud scales flaking off ..... 27.2. *F. virens* var. *dispersa*
28. Terminal bud (narrowly) ovate to lanceolate, epidermis of bud scales persistent ..... 18. *F. proluxa*
1. Leaves not articulate (Africa, Madagascar, Mauritius, Réunion, Asia) ..... 29
29. Ovary red–brown (or white with a red dot) ..... 30
30. Staminate flowers dispersed; Madagascar, Mauritius, Réunion and Asia ..... 31
31. Figs subsessile or pedunculate up to 4 mm; basal bracts 1.5–2 mm long; Asia ..... 16. *F. orthoneura*
31. Figs sessile; basal bracts 3–11 mm long ..... 32
32. Receptacle 1.2–2.2 cm diam. when dry, ostiole 4–5 mm diam., basal bracts united into a cup; Asia ..... 11. *F. hookeriana*
32. Receptacle (0.5–)0.7–1 cm diam. when dry, ostiole 2.5–3 mm diam., basal bracts free; Madagascar, Mauritius and Réunion ..... 8. *F. densifolia*
30. Staminate flowers near ostiole; Africa mainland, Arabia and Madagascar ..... 33
33. Internal hairs present ..... 34
33. Internal hairs absent ..... 36
34. Lamina mostly (2.5–)3–5 times longer than wide ..... 21. *F. salicifolia*
34. Lamina mostly 1.25–2.5 times longer than wide ..... 35
35. Lateral veins usually branched, tertiary venation reticulate ..... 12. *F. ingens*
35. Lateral veins usually unbranched, tertiary venation reticulate and partly parallel to primary lateral veins ..... 13. *F. lecardii*
36. Figs pedunculate, (peduncle 2–5 mm long), axillary, just below the leaves or on the spurs on the older branches, solitary or in pairs or up to 4 together on the spurs ..... 26. *F. verruculosa*
36. Figs sessile, sometimes subsessile, axillary or just below the leaves, solitary or in pairs ..... 37
37. Lamina ovate to oblong to lanceolate, mostly 2.5–3 times longer than wide, lateral veins 7–12 pairs ..... 14. *F. madagascariensis*
37. Lamina mostly cordiform, some ovate or elliptic, mostly 1.5–2(–2.25) times longer than wide, lateral veins 5–7 pairs ..... 6. *F. cordata*
29. Ovary white (or pale yellow) (sect. *Leucogyne*) ..... 38
38. Lamina elliptic to ovate, base attenuate to cuneate to obtuse to rounded, apex acute to acuminate; lateral veins 8–10 pairs. Basal bracts 3 ..... 28. *F. amplissima*
38. Lamina ovate, base subcordate, subattenuate, broad cuneate or truncate, apex acute, acuminate or cuspidate, lateral veins 5–8 pairs. Basal bracts (2 or) 3 ..... 29. *F. rumphii*

1. *FICUS ALONGENSIS* Gagnep., Notul. Syst. (Paris) 4: 84. 1927; C. C. Berg, Blumea 52: 599. 2007. *Ficus superba* (Miq.) Miq. var. *alongensis* (Gagnep.) Corner, Gard. Bull. Singapore 17: 376. 1960.—TYPE: INDOCHINA. Baie d'along île aux Biches, 8 Sep 1911, Lecomte & Finet 847 (holotype: P; isotype: P).

*Ficus concinna* (Miq.) Miq. var. *subsessilis* Corner, Gard. Bull. Singapore 17: 376. 1960.—TYPE: CHINA. Chekiang, South of Ping Yang, 21 Jun 1924, R. C. Ching 1917 (holotype: K; isotype: P).

Shrub or tree up to 12(–30) m tall. Branches brown or dark brown. Leafy twig 2–3.5 mm thick, puberulous, periderm persistent. Leaves articulate; lamina ovate to oblong to elliptic, 3.8–12 by 2.8–5.3 cm, coriaceous, apex shortly acuminate, the acumen blunt, base subattenuate or obtuse, both surfaces glabrous; lateral veins 6–9 pairs, usually furcate away from the margin, the basal pair up to 1/5–1/3 the length of the lamina, usually branched, tertiary venation largely parallel to the lateral veins, partly reticulate; petiole 1–3.1 cm long, glabrous, epidermis persistent; stipules 0.5–0.8 cm long, glabrous, caducous or sometimes persistent at the shoot apex and forming a terminal bud. Figs axillary or just below the leaves, solitary or in pairs, subsessile or

peduncle up to 1.5 mm long; basal bracts ca. 1.5 mm long, glabrous, mostly persistent; receptacle subglobose or depressed–globose, 0.4–0.5 cm diam. when dry, glabrous or minutely puberulous, colors at maturity unknown, apex convex; ostiole ca. 2 mm in diam., upper ostiolar bracts glabrous; internal hairs absent or minute and sparse. Staminate flowers near the ostiole, sessile or with a short pedicel; tepals 2–3, ovate or oval, free or connate at base to 3/4 the length of tepals, reddish brown. Pistillate flowers sessile or pedicellate; tepals 3, ovate to lanceolate to oblong, free, sometimes connate at the base, reddish brown; ovary red brown.

**Distribution and Habitat**—This species is distributed in China (Prov. Shaanxi, Guangxi, Guangdong, Macau), Thailand, Cambodia, and Vietnam. It is found in wet primary forest at low altitudes but in China also at altitudes between 1,100 and 1,600 m.

**Representative Specimens Examined**—CAMBODIA. Stung Treng: Thala Bavevat, Kalay Isl., 27 Jul 2000, Meng 215 (K). CHINA. Guangdong (Kwangtung): Chekiang, 1920, Hee 232 (K); Yang Shan, S of Linchow, Jul–Sep 1932, Tsui 524 (K, L). Shaanxi: Chang'an (Chang An), Yung Hsien, 23 Oct 1933, Steward & Cheo 1187 (A, P, SING). Guangxi (Kwangsi): N of Guangxi, Kwei–lin, San–min, P'an–ku–shan & Ch'ao–t'ien–shan, 5–23 Aug 1937, Tsang 28020 (A). Macao: Bishop Hill, 19 Apr 1969, Hu 7018 (K). THAILAND. Kanchanaburi: Sai Yok, 30 Dec 1961, Larsen 9052 (SING). VIETNAM. Kon Tum: Dak Gley, ca. 7 km S of Dak Gley, near Dak Pet, Dak Poko R., 12 Nov 1995,



*Averyanov et al. VH 1572* (AAU, P). Tonkin occidental: *Bon 2114* (P). Tonkin méridional, 1883–1891, *Bon s. n.* (P).

**Note**—Berg (2007a) and Berg et al. (2011) described the figs as devoid of internal hairs. However, many figs show sparse, minute internal hairs.

2. *FICUS ARNOTTIANA* (Miq.) Miq., *Ann. Mus. Bot. Lugduno-Batavi* 3: 287. 1867; King, *Ann. Roy. Bot. Gard. (Calcutta)* 1: 56, t. 68A. 1887; Cooke, *Fl. Bombay* 2: 649. 1908; Corner, *Gard. Bull. Singapore* 21: 11. 1965; C. C. Berg, *Thai Forest Bull.*, *Bot.* 35: 8. 2007. *Urostigma arnottianum* Miq., *London J. Bot.* 6: 564. 1847.—TYPE: INDIA. Probably Tamil Nadu, *Wight KD 4575* (holotype: K).

*Urostigma courtallense* Miq., *London J. Bot.* 6: 564. 1847. *Ficus arnottiana* (Miq.) Miq. var. *courtallensis* (Miq.) Miq., *Ann. Mus. Bot. Lugduno-Batavi* 3: 287. 1867; King, *Ann. Roy. Bot. Gard. (Calcutta)* 1: 56, t. 68B. 1887.—TYPE: INDIA. Probably Tamil Nadu, *Courtallum*, 1836, *Wight KD 942*(= 2628) (holotype: K ?; isotype: E).

*Ficus arnottiana* (Miq.) Miq. var. *subcostata* Corner, *Gard. Bull. Singapore* 17: 379. 1960; C. C. Berg, *Thai Forest Bull. Bot.* 35: 18. 2007.—TYPE: NEPAL. Melcham, 21 May 1952, O. Polunin, W. R. Sykes & L. H. J. Williams 4145 (holotype: BM; isotype: E).

*Ficus glaberrima* Blume subsp. *siamensis* auct. non (Corner) C. C. Berg; C. C. Berg, *Thai Forest Bull.*, *Bot.* 35: 18. 2007, pro *F. arnottiana*. var. *subcostata*.

Tree up to 15 m tall. Branches drying pale to dark brown, periderm persistent or flaking off. Leafy twigs (1–)3–6 mm thick, slightly angular to subterete, glabrous or minutely puberulous. Leaves articulate; lamina cordiform to (broadly) ovate, (1.5–)3.3–13.5(–21) by (1–)2.9–10.5(–16) cm, (sub)coriaceous, apex obtuse to acute to acuminate to caudate, the acumen sharp or blunt, base cordate to subattenuate to rounded to cuneate, both surfaces glabrous or sometimes the upper surface minutely puberulous on the midrib; lateral veins 5–8(–10) pairs, sometimes furcate away from the margin, the basal pair up to 2/5–3/5 the length of the lamina, branched or unbranched, tertiary venation reticulate to subscalariform; petiole (1.5–)3–13(–16.5) cm long, glabrous or minutely puberulous, epidermis persistent; stipules 0.3–1 cm long, glabrous or puberulous, usually caducous. Figs axillary and just below the leaves or on minute spurs on the older wood, in pairs or solitary or up to 4 together, subsessile or with a peduncle up to 8 mm long, glabrous; basal bracts 1–1.5 mm long, glabrous, persistent; receptacle subglobose, 0.4–1 cm diam. when dry, glabrous, apex convex; ostiole ca. 2 mm diam., the upper ostiolar bracts glabrous; internal hairs absent. Staminate flowers abundant around the ostiole and a few dispersed or if few then only near the ostiole, sessile or pedicellate; tepals 3, connate, dark red. Pistillate flowers sessile or pedicellate; tepals 3, connate, dark red; ovary white or yellowish white with red mark at base.

**Distribution and Habitat**—This species is distributed in India, Nepal, and Sri Lanka; in deciduous forest, at altitudes up to 1,400 m.

**Representative Specimens Examined**—INDIA. Kanataka: North Kanara, Apr 1885, *Talbot 1207* (K). Andhra Pradesh: Cuddappa (Kadapa), Jul 1884, *Gamble 15032* (K). Tamil Nadu (Madras): Pulney Mt., 1837, *Wight KD 2628* (= *KD 3009*) (E, U). Odisha (Orissa): Ganjam, Feb 1884, *Gamble 13822* (K). West Bengal: hill N of Bagodhar,

29 May 1905, *Haines 789* (K). NEPAL. Far–Western: Seti zone, Bajura, between 81° 44' 26"E, 29° 19' 16"N– 81° 43' 02"E, 29° 24' 11"N, 9 Aug 1991, *Suzuki et al. 9194138* (E). Mid–Western: Kanali zone, Humla, Melcham, 21 May 1952, *Polunin et al. 4145* (E). Eastern: Koshi zone, between Dhankuta–Sankhuwa Sabha, between 87° 15' E, 27° 05' N– 87° 15' E, 27° 10' N, 25 Jul 1990, *Minaki et al. 9070029* (E). SRI LANKA. North Central: Anuradhapura, Ritigala Strict Natural Reserve, 9 Aug 1973, *Jayasuriya 1293* (K, L). Sabaragamuwa: Balangorda, Uggalkalota Rd., 10 miles SW of Balangorda, *Worthington 3754* (K). Uva: Monaragala, Savannah Park Country, 5 miles N of Bibile, 26 Oct 1973, *Jayasuriya 1361* (K).

**Notes**—King (1887) described the staminate flowers as few and near the mouth of the receptacle. Corner (1981) reported staminate flowers around the ostiole and sparsely scattered in the interior of the fig. However, we found both characters, thus the staminate flowers of *F. arnottiana* are present around the ostiole with a few dispersed (Fig. 1B, F) or only near the ostiole if there are few staminate flowers (Fig. 1E.).

Berg (2007b) and Berg et al. (2011) reported the species to be present in Thailand also, but the Thai specimens have distinctly different flowers and they are here described as the new species *F. middletonii* (see there).

3. *FICUS CAULOCARPA* (Miq.) Miq., *Ann. Mus. Bot. Lugduno-Batavi* 3: 268, 287. 1867; Corner, *Gard. Bull. Singapore* 10: 283. 1939; 21: 10. 1965; Sasidh. & Augustine, *Rheedea* 9: 77. 1999; C. C. Berg and Corner, *Fl. Males. Ser. 1*, 17 (2): 604. 2005. *Urostigma caulocarpum* Miq., *London J. Bot.* 6: 568. 1847; *Fl. Ind. Bat.* 1, 2: 334. 1859. *Ficus infectoria* Roxb. var. *caulocarpa* (Miq.) King, *Ann. Roy. Bot. Gard. (Calcutta)* 1: 63, t. 79. 1887.—TYPE: PHILIPPINES. *Cuming 1930* (holotype: U; isotypes: BM, L, K).

*Urostigma stipulosum* Miq., *London J. Bot.* 6: 568. 1847; *Fl. Ind. Bat.* 1, 2: 334. 1859. *Ficus stipulosa* (Miq.) Miq., *Ann. Mus. Bot. Lugduno-Batavi* 3: 287. 1867.—TYPE: PHILIPPINES. *Cuming 1978* (holotype: K; isotypes: BM, K).

*Ficus weinlandii* K. Schum., *Fl. Schutzeb. Südsee Nachtr.*: 248, 1905.—LECTOTYPE (designated by Berg and Corner, 2005): PAPUA NEW GUINEA. *Weinland 180* (lectotype: B; isolectotype: K).

Tree up to 30(–35) m tall. Branches drying brown or gray brown. Leafy twig 3–6(–8) mm thick, glabrous or puberulous. Leaves articulate; lamina ovate, oblong, elliptic, or obovate, 5.5–19(–26.5) by 2–7.5(–9.8) cm, (sub)coriaceous, apex acute or (sub)acuminate, the acumen sharp or blunt, base cuneate, obtuse, rounded, or truncate (or cordate), both surfaces glabrous; lateral veins 9–16 pairs, the basal pair up to 1/10–1/5(–1/3) the length of the lamina, unbranched, tertiary venation reticulate; petiole 1.3–6.5(–8) cm long, glabrous or minutely puberulous at base, epidermis flaking off; stipules 0.3–1.1 cm long, glabrous or puberulous, persistent at the shoot apex or sometimes caducous, usually forming an ovoid terminal bud. Figs axillary, just below the leaves or on up to 0.5 cm long spurs on the older wood, solitary, in pairs, or up to 8 together on spurs, peduncle 0.1–0.5 cm long, glabrous or puberulous (or white villous), basal bracts 1.5–2 mm long, covering only the base of the receptacle, glabrous or puberulous, apex usually lobed, persistent; receptacle subglobose, 0.3–0.6(–0.7) cm diam. when dry, glabrous (or white villous), white to pink to purple to blackish at maturity, apex convex or flat, sometimes concave; ostiole 1–2 mm in diam., the upper ostiolar bracts

glabrous; internal hairs present. Staminate flowers near ostiole, sessile; tepals 2–3, broadly elliptic–ovate or lanceolate, free or connate, reddish brown. Pistillate flowers sessile or pedicellate; tepals (2–)3–4, lanceolate, spatulate, or ovate, free or sometimes connate, reddish brown; ovary dark red.

3.1 *FICUS CAULOCARPA* (Miq.) Miq. var. *CAULOCARPA*: Corner, Gard. Bull. Singapore 21: 10. 1965.

Peduncle 0.1–0.5 cm long, glabrous to puberulous, receptacle subglobose, 0.3–0.6(–0.7) cm diam. when dry, glabrous.

**Distribution and Habitat**—This variety is distributed in India, Sri Lanka, Myanmar, Thailand, Malaysia (Peninsula and Borneo), Indonesia (Borneo, Sulawesi, Lesser Sunda Islands, Moluccas), Timor Este, Taiwan, Japan (Ryukyu Isl.), Philippines, and Papua New Guinea; in evergreen forest, in coastal vegetation, on limestone outcrops or in lowland forest, in swamps and river plains, at low altitudes, but in rain forest up to 1,500 m.

**Representative Specimens Examined**—INDIA. Kerala: Shornur, 24 Feb 1990, *Dept. of Zoology 1* (L). INDONESIA. Kalimantan Barat: Ketapang, Gunung Palung National Park, Cabang Panti Research Site, 110° 06' E, 1° 13' S, 16 Mar 1997, *Weiblen et al. GW 905* (E, K, L). Kalimantan Timur: East Kutai Reserve, near Sengata and Mentoko R., 1977–1979, *Leighton 414* (L). Maluku: Morotai, 3 Jun 1949, *Politon 15* (L, SING), 17 (L). Nusa Tenggara Barat: Lombok, Rindjani–Vulkangebige, Sembaluntal, N slope of Pussuk Mt., 2 Jun 1909, *Elbert 1685* (L). Nusa Tenggara Timur: Flores, W Ende, 4 Feb 1910, *Elbert 4228* (L). Papua: Manokwari, Warnapi, 30 Sep 1948, *Kostermans 484* (bb. 33.635) (L, SING); Jayawijaya, Angguruk, 6 Jun 1975, *Sinke 63* (L). Sulawesi Selatan: S shore of Laka Matano, W of Soroako, 21 Nov 1979, *de Vogel 5907* (L). JAPAN. Okinawa: Yaeyama, Yonaguni. 28 Aug 1951, *Walker & Tawada 6847* (L); Ishigaki, foot of Mt. Omoto, 16 Oct 1972, *Furuse 1498* (K). MYANMAR. Shan: Shan hill, 1892, *Huk 104* (K, U). MALAYSIA. Johore: Telvau, 4 Nov 1934, *Corner s. n.* (SING). Pahang: Bentang, 6 Dec 1922, *Burkill 9998* (K, SING). Sabah: 13 Feb 1985, *Devul & Mansus SAN 68010* (L). Sarawak: Serian, Bukit Selabor, Lobang Mawang, Tebakang Rd., 30 Sep 1968, *Paie S 28113* (K, L, SING). Trengganu: Dungun–Masong Rd. 37 ½ –38 miles, 16 Jul 1953, *Sinclair SFN 39982* (SING). PAPUA NEW GUINEA. Madang: Morox, near Yoro, Bogia, 31 Mar 2005, *Weiblen GW 2384* (L). Morobe: NGF 2972 (K, L). Oro: Tufi, between Naukwate and Korea, 21 Jun 1954, *Hoogland 4160* (L). PHILIPPINES. Cagayan: E Cagayan, Bagio cave, 31 Mar 1981, *Allen PNH 150015* (L). Palawan: May 1906, *Foxworthy BS 908* (K). Quezon: Quezon National Park, Atimonan, Lat 14° 00.4' N, Long 121° 55.2' E, 18 Mar 1996, *Castro et al. PPI 22299* (L). Romblon: Magdiwang, Tampayan, along Pawala R., 25 May 1992, *Stone et al. PPI 6682* (L). Zambales: Masinloc, Coto Mines, 2 Feb 1992, *Reynoso et al. PPI 4154* (L). Zamboanga del Norte: 25 Dec 1957, *Frake PNH 37976* (L). SINGAPORE. Alexandra Rd., 12 Apr 1932, *Corner s. n.* (SING). Pulau Ubin, 1997, *Lai LJ 168* (SING). SRI LANKA. Central: Kandy, 1854, *Thwaites C.P. 2931* (P, K); Matale, Matale East, 17 Aug 1953, *Wortington 6367* (K). TAIWAN. Tomita–cho, Taihoku–shi, 7 Jul 1932, *Tanaka & Shimada 11159* (L, SING); Heng Chun Branch, 1 Apr 1966, *Liao 10436* (L). THAILAND. Nakhon Si Thammarat: Thung Song, Yong falls, 6 Oct 1972, *Smithinand 11734* (BKF). Narathiwat: Waeng, Ban Kreuzor, 14 Feb 2003, *Chantarasuwan 140203–7* (BKF, THNHM). Ranong: Kuw Chang, 6 Jan 1929, *Kerr 16568* (BK, K). Yala: Khaw Pee Saad, 28 Apr 1998, *Niyomtham & Puudjaa 5443* (BKF). TIMOR ESTE. Dili: Port Timor, 29 Dec 1953, *van Steenis 18343* (L).

**Note**—Based on the width of the leaf laminae two forms can be distinguished. Broad leaves (5–9.8 cm wide) are found in India, Sri Lanka, Myanmar, the northern part of Thailand, Philippines, Taiwan, and Japan; this form may be confused with *F. subpisocarpa*, but the basal bracts of the figs are persistent and the epidermis of the petiole is flaking off (caducous bracts and non flaking epidermis in *F. subpisocarpa*). The narrow leaves (2–5.5 cm wide) are present in Philippines, southern part of Thailand, Malaysia, Singapore, Indonesia, Timor Leste, and Papua New Guinea.

3.2 *FICUS CAULOCARPA* (Miq.) Miq. var. *DASYCARPA* Corner, Gard. Bull. Singapore 17: 378. 1960.—TYPE: PHILIPPINES. Luzon, Zambales Province, Mountain Pinatubo, *PNH 4788* (holotype: PNH, lost; isotype: US?).

Peduncle 0.3–0.5 cm long, white villous, receptacle subglobose, 0.4–0.5 cm diam. when dry, white villous.

**Distribution and Habitat**—This variety is endemic in the Philippines.

**Representative Specimens Examined**—PHILIPPINES: Mindoro, Paluan, Apr 1921, *Ramos BS 39732* (K).

4. *Ficus chiangraiensis* Chantaras., sp. nov.—TYPE: THAILAND. Chiang Rai, Mae Fa Luang, Teut Tai subdistrict, Doi Bahng Ngoon, south slope, below the summit, above Bahng Mah Hahn (Akha hilltribe) village, *J. F. Maxwell 06–517* (holotype: L; isotype: CMU).

Petiolus glaber epidermis non desquamans vel basi minute albe epidermis desquamans; stipulae gemmas terminales ovoideas dense lanate tomentosae formantes. Fici axillares admodum infra folia vel 1–7 (vel 8) in calcaribus curvatis ad 3mm longis in ligno vetiore (sub)sessiles, bractea basales 4–6 mm longae albe strigosae persistentes receptaculo ad medio tegentes.

Tree, up to 18 m tall. Branches drying brown or gray brown. Leafy twig 0.9–1 cm thick, glabrous, periderm flaking off. Leaves articulate; lamina broadly ovate to elliptic to oblong, 16.3–22.5 by 9–15 cm, coriaceous, apex (sub)acute or obtuse, base rounded or subattenuate, both surfaces glabrous; lateral veins 8–10 pairs, usually furcate away from the margin, the basal pairs up to 1/4–1/3 the length of the lamina, mostly branched and departing from the midrib at different distances from the base, tertiary venation reticulate; petiole 6.5–8.8 cm long, glabrous and epidermis persistent or minutely white hairy at the base and epidermis flaking off; stipules 0.9–1 cm long, densely woolly–tomentose, persistent and forming an ovoid terminal bud. Figs axillary, just below the leaves or on up to 3 mm long curved spurs on the older wood, solitary, in pairs, or up to 7(–8) together on the spurs, (sub)sessile; basal bracts 4–6 mm long, covering up to the middle of receptacle, white strigose, apex usually lobed, persistent; receptacle subglobose, 0.6–0.8 cm diam. when dry, outside surface wrinkled, glabrous, color at maturity unknown, apex convex; ostiole 2–3 mm in diam., upper ostiolar bracts white hairy; internal hairs present. Staminate flowers near ostiole, sessile or sometimes with a short pedicel; tepals 3, connate, reddish brown. Pistillate flowers sessile or pedicellate; tepals 3, ovate to lanceolate, free or sometimes connate at base, reddish brown; ovary red–brown. Figure 3.

**Distribution and Habitat**—This species is distributed in Thailand; in primary evergreen forest and degraded hardwood forest with bamboo, at ca. 1,450 m. Figure 4.

**Representative Specimen Examined**—THAILAND. Chiang Rai, Mae Fa Luang, Teut Tai, Doi Bahng Ngoon, above Bahng Mah Hahn (Akha hilltribe) village, 23 Jul 2006, *Maxwell 06–517* (CMU, L).

**Note**—This new species has a typical combination of characters (articulate leaf, red–brown ovaries, staminate flowers around ostiole, hairs inside the fig and relatively large bracts). Morphologically, it is closest to *F. cupulata*, a rare and local endemic species of India, from which it differs in the completely glabrous receptacle (usually white

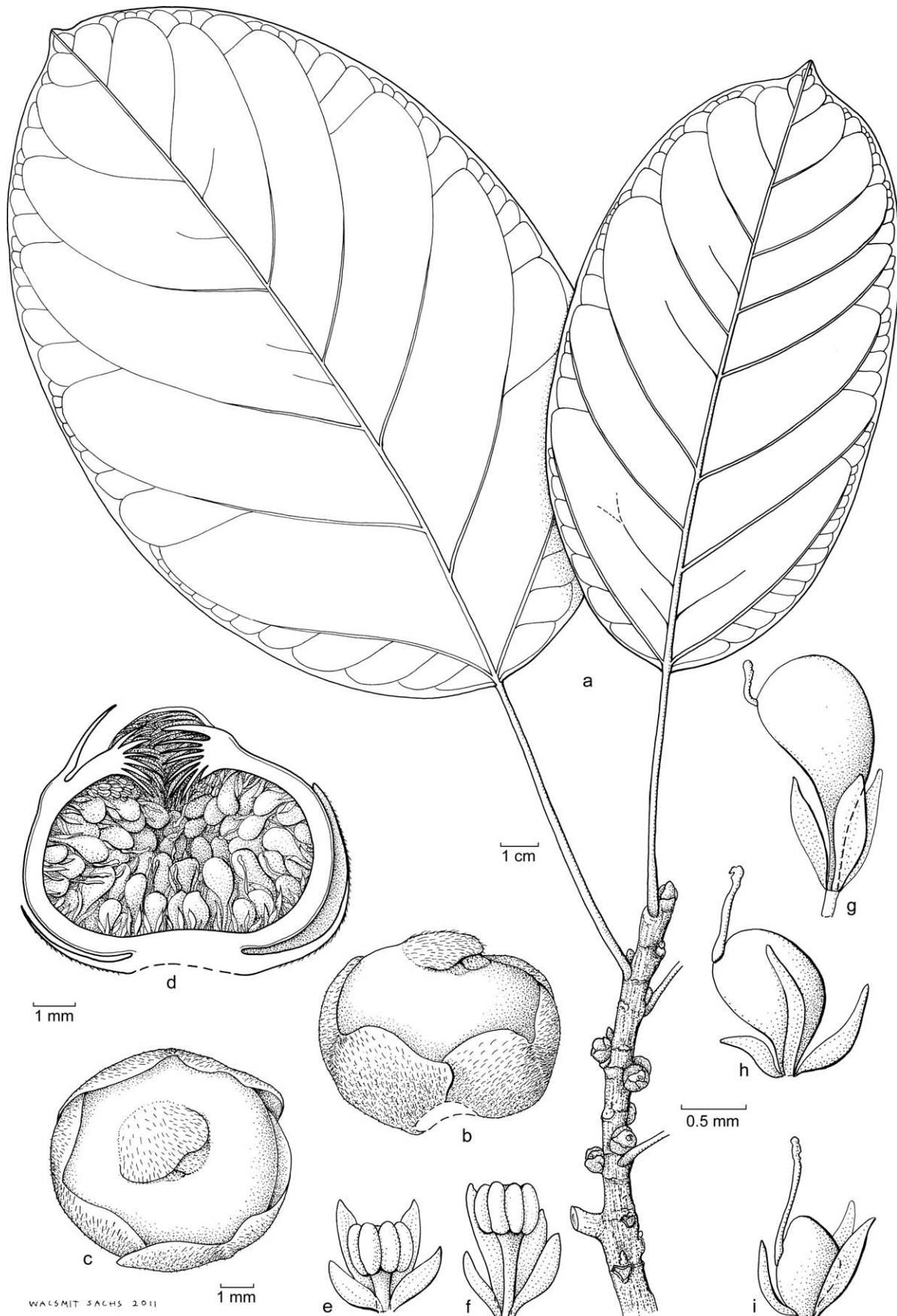


FIG. 3. *Ficus chiangraiensis* Chantaras. (Moraceae). A. Twigs with leaves and figs. B. Fig with basal bracts. C. Ostiole. D. Fig in longitudinal section. E, F. Staminate flowers with free tepals. G. Pistillate flower with pedicel. H, I. Sessile pistillate flowers with free tepals. [J. F. Maxwell 06-517 (L)]. Drawing: Anita Walsmit Sachs, 2011.

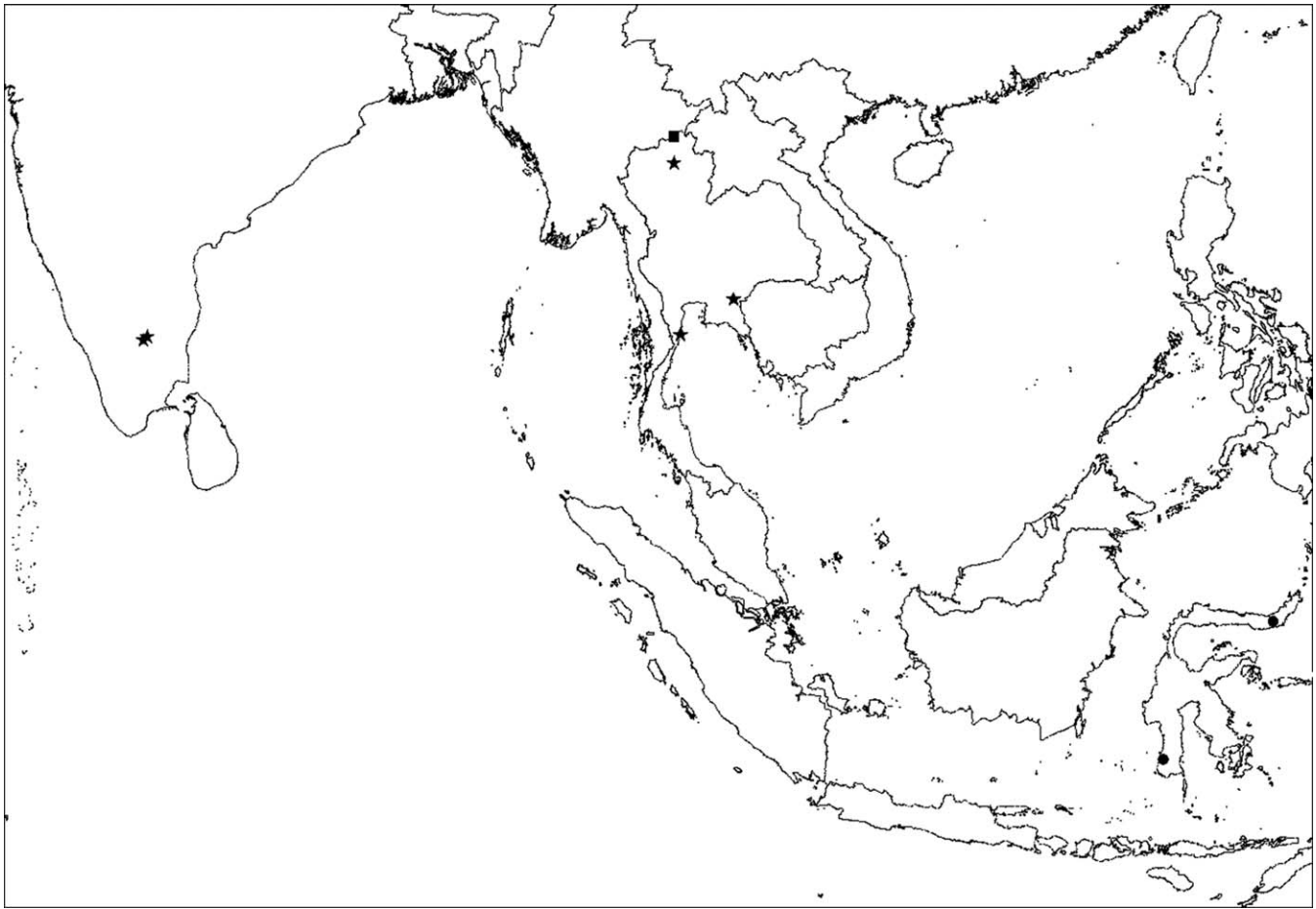


FIG. 4. Distribution map of *Ficus chiangraiensis* Chantaras. (square), *F. pseudoconcinna* Chantaras. (dot), and *F. middletonii* Chantaras (stars).

tomentose in *F. cupulata*) and the distinctly larger leaves (16.3–22.5 by 9–15 cm versus 8.2–12 by 7–9 cm).

5. *FICUS CONCINNA* (Miq.) Miq., Ann. Mus. Bot. Lugduno-Batavi 3: 286. 1867; Merr., Fl. Manila: 176. 1912; Enum. Philipp. Flow. Pl. 2: 49. 1923; Corner, Gard. Bull. Singapore 21: 8. 1965; Kochummen, Tree Fl. Malaya 3: 144. 1978; Tree Fl. Sabah Sarawak 3: 234. 2000; C. C. Berg and Corner, Fl. Males. ser. 1, 17 (2): 605. 2005. *Urostigma concinnum* Miq., London J. Bot. 6: 570. 1847; Fl. Ind. Bat. 1, 2: 343. 1859. *Ficus glabella* Blume var. *concinna* (Miq.) King, Ann. Roy. Bot. Gard. (Culcutta) 1: 50. 1887.—TYPE: PHILIPPINES. *Cuming* 1940 (holotype: U; isotypes: BM, E, L, K).

*Urostigma parvifolium* Miq., London J. Bot. 6: 568. 1847; Fl. Ind. Bat. 1, 2: 343. 1859. *Ficus parvifolia* (Miq.) Miq., Ann. Mus. Bot. Lugduno-Batavi 3: 286. 1867., non Oken 1841.—TYPE: PHILIPPINES. *Cuming* 1935 (holotype: U; isotypes: BM, E, L, K).

*Ficus subpedunculata* Miq., Ann. Mus. Bot. Lugduno-Batavi 3: 217, 286. 1867.—TYPE: BHUTAN. 1802–03, W. Griffith KD 4590 (holotype: K; isotype: U).

*Ficus affinis* Wall. ex Kurz, J. Asiat. Soc. Bengal 42, 2: 105. 1873; Forest Fl. Burma 2: 444. 1877. *Ficus glabella* Blume var. *affinis* (Wall. ex Kurz) King, Ann. Roy. Bot. Gard. (Culcutta) 1: 50. 1887.—TYPE: INDIA. Sillet, *Wallich Cat.* 4524 (holotype: K–WALL; isotype: L?).

*Ficus arayatensis* Warb. in Perkins, Fragm. Fl. Philipp. 3: 196. 1905.—SYNTYPES: PHILIPPINES. Luzon, Prov. Pampanga, Mt. Arayat, *Warburg* 14035 (syntypes: B, K?); idem, *Warburg* 14036 (syntypes: B, K?); idem, *Warburg* 14037 (syntypes: B, K?).

*Ficus fecundissima* H. Lév. & Vaniot, Feddes Repert. Spec. Nog. Regni Veg. 9: 19. 1911.—TYPE: CHINA. Kouy-Tchéou, Lo-Fou, *Cavalerie* 3588 (holotype: E; isotypes: P, K).

*Ficus pseudoreligiosa* H. Lév., Fl. Kouy-Tchéou: 432. 1915.—TYPE: CHINA. Kouy-Tchéou, Lo Hou, roches derrière le fort, *J. Esquirol* 3518 (holotype: E; isotype: P).

Tree up to 10(–30) m tall. Branches drying pale to dark brown. Leafy twig 1–2.5 mm thick, glabrous, periderm persistent or flaking off. Leaves articulate; lamina ovate, elliptic, oblong, lanceolate, obovate, or oblanceolate, 4–13.5 by 1–5.2 cm, (sub)coriaceous, apex acute to acuminate, the acumen sharp or blunt, base cuneate, obtuse, or rounded, both surfaces glabrous; lateral veins 8–14 pairs, the basal pair up to (1/10–)1/9–1/6 the length of the lamina, unbranched, tertiary venation reticulate to partly parallel to lateral veins; petiole 0.8–3.5(–5) cm long, glabrous, epidermis persistent, sulcate above; stipules 0.3–0.6 cm long, puberulous, usually ciliate, caducous. Figs axillary, just below the leaves, or on minute spurs on the older wood, solitary, in pairs, or up to 4 on spurs; peduncle 1–5(–6) mm

long, glabrous or puberulous; basal bracts ca. 0.5–1.5 mm long, glabrous or puberulous in the middle, caducous; receptacle subglobose, (0.3–)0.4–0.6 cm diam. when dry, glabrous, pink to purple or black at maturity, apex convex; ostiole 1–1.5 mm in diam., upper ostiolar bracts glabrous; internal hairs absent or sometimes present, minute and sparse. Staminate flowers near ostiole, sessile or with a short pedicel; tepals 2–3, ovate, usually connate, red brown. Pistillate flowers sessile or pedicellate; tepals 2–3(–4), ovate or lanceolate, free, red brown; ovary dark red. Figure 5 F.

**Distribution and Habitat**—This species is distributed in India, Bhutan, China (Prov. Yunnan, Guizhou, Guangxi, Guangdong), Myanmar, Thailand, Vietnam, Malaysia (Borneo), Indonesia (Sumatra), and the Philippines; in primary evergreen forest, mixed evergreen–deciduous scrub, on rocky seashores, on limestone hills, from low altitudes up to 1,900 m.

**Representative Specimens Examined**—BHUTAN. Wangdue Phodrang: Samtengang, 11 Apr 1967, Hara et al. 3600 (E, L). CHINA. Guizhou (Kweichow): 1936, Teng 90789 (L). Guangxi (Kwangsi): Guilin (Kweilin), 1979, Wan & Ghow 79050 (K). Guangdong, Qingyuan, Yang Shan, S of Linchow, July–Sept 1932, Tsui 524 (L). Yunnan: 1933–4, Tsiang 12286 (K). INDIA. Tamil Nadu (Madras): Khasia, Hook fil. & T. Thomson 113 (K). Bihar: Singbhum, 2 May 1902, Haines 373 (K). Odisha (Orissa): Kalahandi, Kalapat, 5 Apr 1941, Mooney 1705 (K). Assam: Kamrup, Rangiya, 24 Feb 1952, Chand 5271 (K, L). Manipur: Karong, 20 Oct 1950, Chand 3872 (L). Andaman Islands: South Andaman, Kala Pahar, 20 Oct 1894, King s. n. (P). MALAYSIA. Sabah: Bod Goya isl, 15 Mar 1934, Orolfo 3800 (K). INDONESIA. Sumatra: Danau Ranau, 19 Feb 1983, Afriastini 837A (L). MYANMAR. Bago (Pegu): Bago Yomah, 15 Jan 1871, Kurz 3133 (K). PHILIPPINES. Batangas: Apr–May 1915, Ramos & Deroy BS 22638 (K). Benguet: Dec 1908, Bacani 15921 (K). Marinduque: Matalim, Dampulan, 121°00.5' E, 13°47.5' N, 30 Oct 1965, Romero & Chavez PPI 29148 (K, L). Nueva Ecija: Dec 1910, Alvarez FB 22116 (K). Palawan: Busuanga, Coron, 1 May 1950, Sulit PNH 12275 (L, SING). Rizal: Montalban, Mar 1906, Merrill 5041 (L, K). THAILAND. Chiang Rai: Doi Tung Cha (Prachao Luang), 18 Nov 1920, Kerr 4597 (BK, K, L). Chon Buri: Siracha, Si Chang Isl., Laem Tahm Pang, 8 Nov 1992, Maxwell 92–704 (L). Kanchanaburi: Sai Yoke, 99° 60' E, 19° 09' N, 26 Nov 1971, van Beusekom et al. 3990 (BKF, L, P). Nakhon Si Thammarat: Lansagah, Gahrome falls, Khao Luang National Park, 17 May 1985, Ramsri 50 (BKF, L). Prachuap Khiri Khan: Sam Roy Yot, 99°55' E, 12°15' N, 5 May 1974, K. Larsen & S. S. Larsen 33630 (BKF, K). Narathiwat: Waeng, 13 Jun 1970, Smitinand 47574 (BKF). VIETNAM. Hanoi: Yen–Lang, Oct 1887, Balansa 2947 (K, P). Can Tho: 26 Jan 1914, Chevalier 30322 (P). Ho Chi Minh (Saigon): Botanical Garden, 27 Mar 1914, Chevalier 31376 (K, L).

**Note**—Corner (1965) published a new variety, *Ficus concinna* (Miq.) Miq. var. *dasycarpa* Corner, from India with as typical character a white villose peduncle. Chaudhary et al. (2012) report this variety to be endemic. Probably the variety is rare, because we could not find any matching Indian material. Therefore, we cannot decide anything about the status of this variety.

6. *FICUS CORDATA* Thunb., Diss. Acad., Fic.: 8, with plate. 1786; Rees, Cycl. 14: n. 6. 1810; Hutch., Fl. Trop. Afr. 6, 2: 119. 1916; C. C. Berg et al., Fl. Cameroun 28: 125, t. 50. 1985; C. C. Berg, Kew Bull. 43: 81. 1988; Fl. Trop. E. Africa, Morac.: 60. 1989; Fl. Zambes. 9 (6): 55. 1991; C. C. Berg and Wiebes, African fig trees and fig wasps: 90. 1992. *Urostigma cordatum* (Thunb.) Gasp., Ricerche Caprifico: 82. 1845. *Urostigma thunbergii* Miq., London J. Bot. 6: 556. 1847, nom. superfl. *Ficus cordata* Thunb. subsp. *cordata*: C. C. Berg, Kew Bull. 43: 81. 1988; Fl. Zambes. 9, 6: 55. 1991; C. C. Berg and Wiebes, Africa fig trees and fig wasps: 92. 1992.—TYPE: SOUTH AFRICA. Thunberg 24343 (holotype: UPS, microfiche seen).

*Ficus tristis* Kunth & C. D. Bouché, Ind. Sem. Hort. Berol.: 19. 1846. *Ficus cordata* var. *tristis* (Kunth & C. D. Bouché) Warb., Vierteljahrsschr. Naturf. Ges. Zürich 51: 137. 1906.—TYPE: Cultivated specimen from Berlin Botanical Garden (holotype: B).

*Ficus welwitschii* Warb., Bot. Jahrb. 20: 160. 1894; Hutch., Fl. Trop. Afr. 6, 2: 118. 1916.—LECTOTYPE (designated by Berg et al. 1985): ANGOLA. Zenza do Galungo, Welwitsch 6356 (lectotype: K; isolectotypes: B, P).

*Ficus welwitschii* Warb. var. *beroensis* Hiern, Cat. Afr. Pl. 1, 4: 999. 1900.—LECTOTYPE (designated by Berg et al. 1985): ANGOLA. Mossamedes, Bero R., Welwitsch 6379 (lectotype: BM; isolectotypes: B, K).

*Ficus cordata* Thunb. var. *marlothii* Warb., Vierteljahrsschr. Naturf. Ges. Zürich 51: 137. 1906.—LECTOTYPE (designated by Berg et al. 1985): NAMIBIA. Fleck 395, (lectotype: Z).

*Ficus cordata* Thunb. var. *fleckii* Warb., Vierteljahrsschr. Naturf. Ges. Zürich 51: 138. 1906.—LECTOTYPE (designated by Berg et al. 1985): NAMIBIA. Fleck 387a, (lectotype: Z).

Shrub or tree up to 15 m tall. Branches drying grey to brown. Leafy twig 2–4 mm thick, grey brown, glabrous or white puberulous or white pubescent, periderm persistent. Leaves not articulate; lamina cordiform, ovate or elliptic, 2–12 by 1.1–6.5 cm, apex acuminate to caudate, base (sub)cordate, truncate or rounded, both surfaces glabrous; lateral veins 5–7 pairs, usually furcate away from the margin, the basal pair up to (1/6–)1/4–1/2 the length of the lamina, usually branched, tertiary venation reticulate; petiole 0.8–2.5(–5.5) cm long, glabrous or minutely puberulous at base, epidermis persistent; stipules 0.25–0.8(–1) cm long, glabrous or puberulous, usually caducous. Figs axillary or below the leaves or on short spurs on the older wood, (sub)sessile, solitary or in pairs; basal bracts 2–3 mm long, sometimes the apex lobed, glabrous or white puberulous, persistent; receptacle subglobose, 0.5–0.9 cm diam. when dry, glabrous or puberulous, turning from green to whitish to orange to dark purple or dark red at maturity, apex convex; ostiole 1.5–2.5 mm in diam., upper ostiolar bracts glabrous or minutely puberulous; internal hairs absent. Staminate flowers near ostiole, sessile; tepals 3–4(–5), spatulate, ovate, or lanceolate, free, reddish brown. Pistillate flowers sessile or pedicellate; tepals 3–4(–5), ovate, lanceolate, or oblong, free, reddish brown; ovary red brown.

**Distribution and Habitat**—This species is distributed in Congo, Angola, Namibia, Botswana, and South Africa; in semi-desert, in rocky places, at altitudes up to 1,500 m.

**Representative Specimens Examined**—ANGOLA. Luanda: Malanga, May–Aug 1903, Gossweiler 1004 (K, P). BOTSWANA. Ngamiland: Aha hill, 21° 04.15' W, 19° 41.6' S, 27 Apr 1980, P.A. Smith 3462 (K, U). CONGO. Without locality, 24 Sep 1921, Dawe 75 (K). NAMIBIA. Erongo: Karibib, Namibrand, Okongawa, 9 May 1958, Seydel 1555 (WAG). Otjozondjupa: Grootfontein, Rd. Tsumeb–Namutoni, 15 km from Tsumeb, by Otjikotosee, 29 Mar 1968, H. and H. E. Wanntorp 488 (K). SOUTH AFRICA. Northern Cape: Drege 9566 (P, WAG); Orange R., NW of Cape, 12 Jan 1909, Pearson 3103 (WAG).

**Notes**—Berg and Wiebes (1992) only mentioned the distribution to be W. Angola, NW. Botswana, Namibia, and SW South Africa. Here we add Congo.

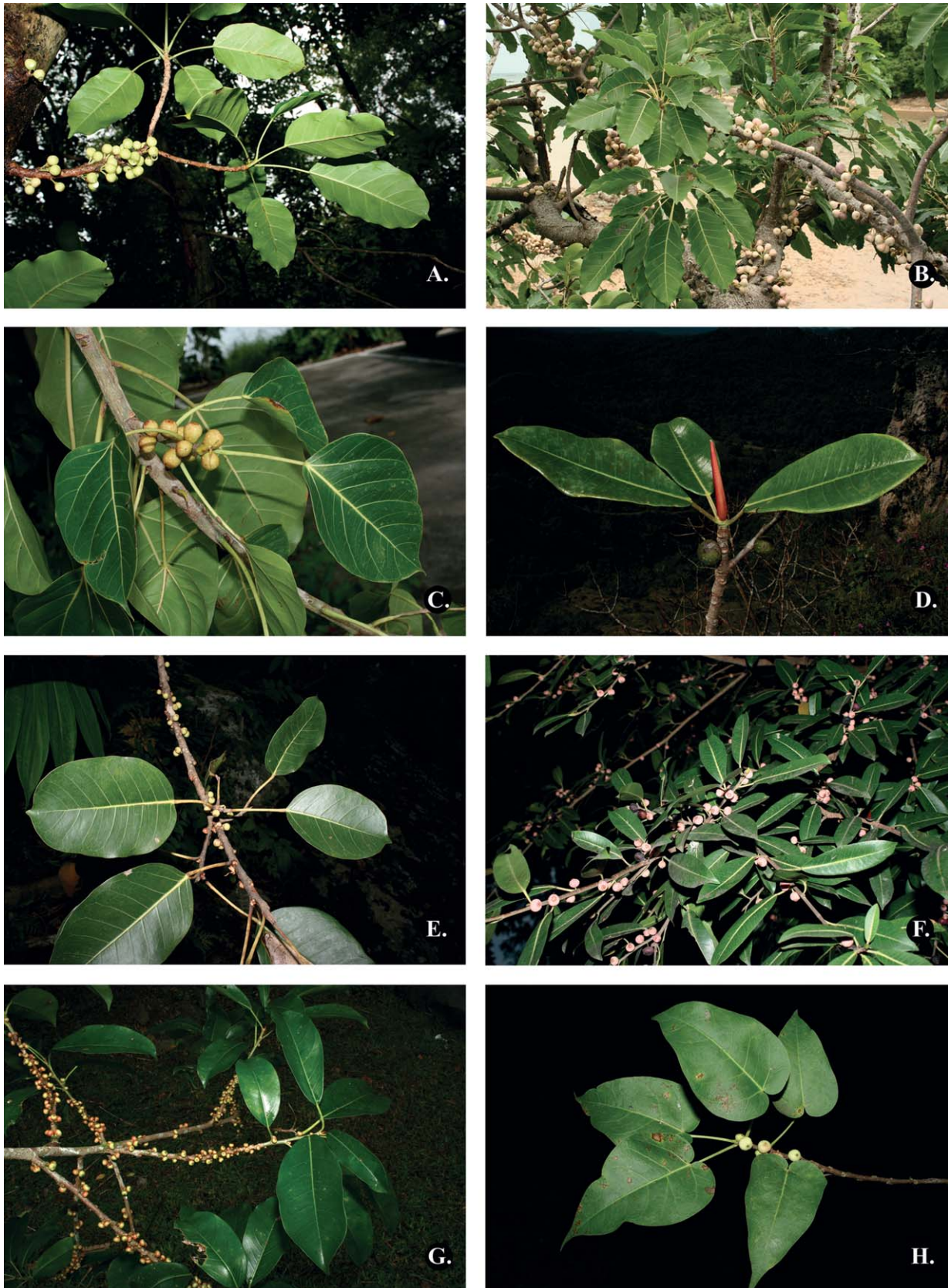


FIG. 5. A. *Ficus subpiscarpa* Gagnep. subsp. *pubipoda* C. C. Berg. B. *Ficus superba* (Miq.) Miq. C. *Ficus rumphii* Blume. D. *Ficus orthoneura* H. Lév. & Vaniot. E. *Ficus gemiculata* Kurz var. *gemiculata*. F. *Ficus concinna* (Miq.) Miq. G. *Ficus virens* Aiton var. *glabella* (Blume) Corner. H. *Ficus saxophila* Blume subsp. *cardiophylla* (Merr.) C. C. Berg.

Formerly, three subspecies were distinguished (Berg and Wiebes 1992). All are recognized here as species (*F. cordata*, *F. lecardii*, and *F. salicifolia*), because the differences between the species are constant. The two easiest characters to separate the three species are the absence of internal hairs in the figs of *F. cordata* (present in the other two species) and the narrow (2.5–5 times longer than wide) leaves of *F. salicifolia* (1.25–2.5 longer than wide in the other two species).

7. *FICUS CUPULATA* Haines, Bull. Misc. Inform. Kew: 154. 1914; Khanna and Kumar, Bull. Bot. Surv. India 44: 145. 2002.—TYPE: INDIA. Central province, Pachmarhi, Haines 3556 (holotype: K).

Shrub or small tree, 2–6 m tall. Branches drying gray brown to dark brown. Leafy twig 6–8 mm thick, puberulous to tomentose, gray brown to dark brown, periderm persistent. Leaves articulate; lamina (broadly) ovate, 8.2–12 by 7–9 cm, apex subacuminate to obtuse, the acumen blunt, base cordate, both surfaces glabrous or sometimes puberulous; lateral veins 6–7 pairs, usually furcate away from the margin, basal pair up to 1/4–1/3 the length of the lamina, branched, tertiary venation reticulate; petiole 2.2–4 cm long, velutinous, epidermis persistent; stipules 0.4–0.8 cm long, white tomentose or villose, persistent at the shoot apex and forming an ovoid terminal bud. Figs axillary, just below the leaves or on up to 2–4 mm long spurs on the older wood, solitary or in pairs, sessile; basal bracts 5–6 mm long, covering up to the middle of the receptacle, tomentose or villose, apex usually lobed, persistent; receptacle subglobose, 0.8–1.1 cm diam. when dry, white puberulous or tomentose, apex convex; ostiole 3.5–4 mm in diam., upper ostiolar bracts tomentose or villose; internal hairs present. Staminate flowers near the ostiole, sessile; tepals 3–4, usually connate, reddish brown. Pistillate flowers sessile or pedicellate; tepals 3–4, ovate or lanceolate, free, reddish brown; ovary red brown.

**Distribution and Habitat**—This species is distributed in Central India; in xerophytic vegetation, resembling tropical dry deciduous forest.

**Representative Specimens Examined**—INDIA. Madhya Pradesh: Pachmarhi, Jun 1910, Haines 4 (K), Oct 1911, Haines 3556 (K).

**Notes**—This is an endemic and rare species only known from three specimens; two were collected by Haines in 1910–1911, and the last one was recently collected by Khanna and Kumar in 2000 (Khanna and Kumar, 2002). Thus seemingly, the species is not extinct.

See also note under *F. chiangraiensis*.

8. *FICUS DENSIFOLIA* Miq., Ann. Mus Bot. Lugduno–Batavi 3: 218. 1867; C. C. Berg et al. Fl. Mascareignes, Moracées: 9. 1985.—TYPE: LA RÉUNION. *Herb. Mus. Paris* 703 (holotype: P; isotype: L.).

*Ficus lucens* Cordem., Fl. Réunion: 273. 1895.—TYPE: LA RÉUNION, *Cordemoy s. n.* (holotype: MARS).

Tree up to 6 m tall. Branches drying (dark) brown, periderm persistent. Leafy twig (1.5–)2–5 mm thick, glabrous or minutely puberulous, periderm persistent. Leaves not articulate; lamina (broadly) ovate to elliptic, (3.5–)6–12.5 by (1.5–)3.8–8.8 cm, coriaceous, apex acute to (sub)acuminate, the acumen sharp or blunt, base rounded to truncate to cuneate to (sub)attenuate to subcordate, both surfaces glabrous; lateral veins 8–13 pairs, usually furcate away from

the margin, the basal pair up to 1/6–1/3 the length of the lamina, usually branched, tertiary venation reticulate or partly parallel to lateral veins; petiole 1–4.7 cm long, glabrous, epidermis persistent; stipules (0.5–)0.9–1.9 cm long, glabrous, persistent. Figs axillary or below the leaves, solitary or in pairs, sessile; basal bract broadly ovate, 3–6 mm long, usually lobed at apex, glabrous, persistent; receptacle ovate or subglobose, (0.5–)0.7–1 cm diam. when dry, glabrous, apex convex; ostiole 2.5–3 mm in diam.; upper ostiolar bracts glabrous; internal hairs absent. Staminate flowers dispersed, sessile or pedicellate, tepals 2–3, broadly ovate to spatulate, sometimes connate at base or up to 2/3 the length of the tepals, red(dish) brown. Pistillate flowers sessile or pedicellate; tepals 2–3, ovate or lanceolate, sometimes connate at base or up to 3/4 the length of the tepals, reddish brown to dark red, ovary red–brown or sometimes white with a red dot.

**Distribution and Habitat**—This species is distributed in Madagascar, Réunion, and Mauritius; at altitudes up to 1,200 m.

**Representative Specimens Examined**—MADAGASCAR. Ambanja: Ambodimanga, 12 Jun 1905, *d'Alleizette s. n.* (L). MAURITIUS. Near Petria Jafraïl, Mar 1934, *Rav(?)* 906 (K). RÉUNION. Bourbon, Oct 1875, *Balfour s.n.* (K); Mt. St. Denis, La Grande Chaloupe, 23 Oct 1973, *Bernardi* 14565 (K); Without locality, 11 Nov 1970, *Cadet* 2837 (P); Petite Plaine, Palmistes, 4 Mar 1971, *Friedmann* 1092 (K, P, U).

**Note**—We have only seen one specimen from Madagascar (seemingly collected in 1905). If the label information is correct, then this species is rare on Madagascar and perhaps already extinct.

9. *FICUS GENICULATA* Kurz, J. Asiatic Soc. Bengal, Pt. 2, Nat. Hist. 42: 105. 1873; Forest Fl. Burma 2: 447. 1877; King, Ann. Roy. Bot. Gard. (Culcutta) 1: 64, t. 80, t. 84X2. 1887; C. C. Berg, Thai Forest Bull. Bot. 35: 16. 2007.—TYPE: MYANMAR. Bago (Pegu), *Kurz* 1537 (holotype: K).

Tree up to 30(–40) m tall. Branches drying brown. Leafy twig (1.5–)2–6 mm thick, glabrous, puberulous or densely whitish tomentose, periderm persistent or sometimes flaking off. Leaves articulate, lamina (broadly) ovate to elliptic to oblong, (5–)10–15.7(–20) by (2.8 –)6–11 cm, coriaceous, apex acute to subacuminate, the acumen blunt or sharp, base cuneate to obtuse to rounded to subattenuate to (sub) cordate, both surfaces glabrous; lateral veins 8–14 pairs, the basal pair up to (1/10–)1/8–1/4(–1/3) the length of the lamina, sometimes branched, tertiary venation reticulate to partly parallel to the lateral veins; petiole (2.5–)3.5–8.5(–15) cm long, glabrous or whitish puberulous, epidermis persistent, sometimes flaking off at the apex or the base; stipules 0.5–0.9 cm long, glabrous or densely whitish puberulous to tomentose, persistent at the shoot apex and forming a terminal bud, epidermis of bud scales persistent. Figs axillary or below the leaves or on up to 0.5–1 cm long spurs on the older wood, solitary or in pairs or up to 4 on spurs, sessile or peduncle up to 2(–10) mm long, puberulous or tomentose; basal bracts 2–2.5 mm long, covering only the base of the receptacle, minutely puberulous, persistent; receptacle subglobose, 0.4–0.7(–1.2) cm diam. when dry, glabrous or puberulous or densely white tomentose to villose, white to pink to purple to black at maturity, apex convex or flat; ostiole 1–2 mm in diam., upper ostiolar bracts glabrous; internal hairs present. Staminate flowers near the ostiole, sessile; tepals 3, usually connate, red–brown. Pistillate flowers sessile or with a short pedicel; tepals 2–3(–4),

lanceolate or ovate, sometimes connate, red brown; ovary red brown.

- 9.1 *FICUS GENICULATA* Kurz var. *GENICULATA*: Kurz, Forest Fl. Burma 2: 447. 1877; C. C. Berg, Thai Forest Bull., Bot. 35: 17. 2007.

*Ficus geniculata* Kurz var. *abnormalis* Kurz, Forest Fl. Burma 2: 447. 1877.—LECTOTYPE (designated here): MYANMAR. Bago (Pegu), Kurz 3134b (lectotype: L).

Leafy twig glabrous or puberulous. Lamina mostly (broadly) ovate, the basal lateral veins up to (1/10–)1/9–1/3 the length of the lamina; petiole glabrous, epidermis usually flaking off at the apex or the base; stipules glabrous or puberulous; basal bracts glabrous; receptacle glabrous. Figure 5 E.

**Distribution and Habitat**—This variety is distributed in India, Bangladesh, China (Prov. Sichuan), Myanmar, Thailand, Laos, and Vietnam; in primary evergreen forest or partly open areas in mixed deciduous forest, on granite, sandstone or limestone bedrock, at altitudes up to 1,450 m.

**Representative Specimens Examined**—BANGLADESH. Chittagong: Kodala hill, 30 miles from Chittagong, Sep 1885, King 136 (K). CHINA. Sichuan: Kientschang, Tetschang, between Cungmuying–Loyao, 2 Apr 1914, Handel–Mazzetti 1094 (E). INDIA. Assam: Goalpara, Khasia hill, Jan 1886, Man 9 (K). Jharkhand: Ranchi, Sep 1917, Haines 4199 (K). Sikkim: Hooker f. & Thomson s. n. (K). LAOS. Xiangkhouang: 3 Nov 1920, Poilane 2253 (P). MYANMAR. Bago (Pegu): Sep 1878, Kurz 1537 (K). Mandalay: Maymyo Plateau, 5 Oct 1912, Lace 5977 (K). THAILAND. Chiang Mai: Chiengdao, Mar 1957, Bunchuai 337 (BKF, L). Chon Buri: Sathahip, Koh Khram, 4 Aug 1999, Phengklai 11910 (BKF). Kanchanaburi: Thong Phaphum, Kroeng Kauvia, 4 Feb 1962, Larsen & Smitinand 9543 (BKF). Prachuap Khiri Khan: Hua Hin, Dec 1960, Champion s. n. (BKF). Surat Thani: Kaw Tao, 14 Apr 1927, Kerr 12741 (BK). Utai Thani: Ban Rai, Huai Ka Kaeng Game Reserve, ca. 99° 14' E 15° 00' N, 27 Feb 1970, van Beusekom & Santisuk 2954 (BKF). VIETNAM. Ho Chi Minh (Saigon): Botanical Garden, 27 Mar 1914, Chevalier 31375 (K).

- 9.2 *FICUS GENICULATA* Kurz var. *INSIGNIS* (Kurz) C. C. Berg, Thai Forest Bull., Bot. 35: 17. 2007. *Ficus insignis* Kurz, J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 42(2): 105. 1873; For. Fl. Burma 2: 447. 1877.—TYPE: MYANMAR. Bago (Pegu), 15 Aug 1872, Kurz 3151 (holotype: K).

*Ficus avium* Gagnep., Notul. Syst. (Paris) 4: 85. 1927.—TYPE: VIETNAM. Near Nhatrang, Poilane 4559 (holotype: P).

*Ficus virens* Aiton var. *dasycarpa* Corner, Blumea 22: 299. 1975; Chew, Fl. Australia 3: 35. 1989.—TYPE: AUSTRALIA. Western Australia, Dale Gorge, Hamersley Range, Sep–Oct 1964, J. Thomson s.n. (holo: PERTH).

Leafy twig densely whitish puberulous or tomentose. Lamina ovate or elliptic to oblong; the basal lateral veins up to 1/6–1/3 the length of the lamina; petiole glabrous or whitish puberulous, epidermis persistent; stipules usually densely whitish puberulous to tomentose; basal bracts glabrous or minutely puberulous; receptacle densely white tomentose to villose.

**Distribution and Habitat**—This variety is distributed in India, Myanmar, Thailand, Cambodia, Vietnam, and Australia; in primary evergreen forest or partly open area in mixed deciduous forest, on granite, sandstone or limestone bedrock.

**Representative Specimens Examined**—AUSTRALIA. Northern Territory: between Bing Bong Station and Coast Mill, 45 km N of Borroloola, 15° 38' S, 136° 22' E, 14 Sep 1978, Farrell TF 888 (BRI); Katherine, 16 miles Caves Reserve, 28 Oct 1977, Parker 1144 (K, L). Western Australia: West Kimberley, Eastern Walcott Inlet, 16° 16' S, 124° 59' E, 22 May 1983, Milewski 145 (PERTH); Dale Gorge, Hamersley Range, 25 Aug 1960, George 1053 (PERTH). CAMBODIA. Phnom Penh:

10 Jul 1933, Bèjaud 197 (K, P). INDIA. Tamil Nadu (Madras): Nilgiris, Oct 1883, Gamble 13072 (K). Uttar Pradesh: Saharanpur, 6 Feb 1901, Kanjilal 1045 (K). MYANMAR. Bago (Pegu): 15 Aug 1872, Kurz 3151 (K). Magwe: 3 miles E of Natmauk, 12 Mar 1915, Rogers 959 (E). VIETNAM. Khánh Hòa: Mt. Cồ–Inh, near Nhatrang, 16 Sep 1922, Poilane 4559 (P).

**Notes**—Corner (1975) identified some of the Australian figs as *Ficus virens* Aiton var. *dasycarpa*. These specimens show as dominant characters white tomentose to villose stipules and receptacles. However, all other characters are more in line with *Ficus geniculata* Kurz var. *insignis* (Kurz) C. C. Berg., thus we identified the specimens as *Ficus geniculata* var. *insignis*.

The subspecies has once been photographed in Thailand; no herbarium collections have been made so far.

10. *FICUS HENNEANA* Miq., Ann. Mus. Bot. Lugduno–Batavi 3: 216. 1867; Benth., Fl. Austral. 6: 165. 1967; F. M. Bailey, Queensl. Fl. 5: 1468. 1902. *Ficus superba* Miq. var. *henneana* (Miq.) Corner, Gard. Bull. Singapore 17: 376. 1960; Chew, Fl. Australia 3: 32. 1989.—TYPE: AUSTRALIA. Queensland, Booby Is., *Henne s. n.* (holotype: L; isotypes: K, NSW).

*Ficus gracilipes* F. M. Bailey, Queensland Bot. Bull. 3: 16. 1891.—TYPE: AUSTRALIA. Queensland, Brook field, A. Exley (holotype: BRI).

*Ficus parkinsonii* Hiern, J. Bot. 39: 1–2, Table 417. 1901.—TYPE: AUSTRALIA. Queensland, Booby Is., J. Banks (holotype: BM).

*Ficus pritzelii* Warb., Repert. Spec. Nov. Regni Veg. 1: 74. 1905.—TYPE: AUSTRALIA. Queensland, Barron, Diels 8371 (not seen).

Tree up to 20(–45) m tall. Branches drying (dark) brown. Leafy twig 2–5 mm thick, glabrous or puberulous, periderm persistent or sometimes slightly flaking off. Leaves articulate; lamina ovate to elliptic to oblong, 3.2–13.5 by (1.2–)2–7.5 cm, (sub)coriaceous, apex acute to subacuminate, the acumen blunt, base cuneate to obtuse to rounded to (sub)cordate, both surfaces glabrous; lateral veins 8–12 pairs, often furcate away from the margin, the basal pair up to 1/10–1/5 the length of the lamina, unbranched, tertiary venation reticulate to partly parallel to the lateral veins; petiole 1.2–5.5 cm long, glabrous or puberulous, epidermis persistent; stipules 0.3–0.8 cm long, glabrous or puberulous, caducous or sometimes persistent at the shoot apex and forming a terminal bud. Figs axillary, solitary or in pairs; peduncle 0.4–0.8 cm long, glabrous or minutely puberulous; basal bracts ca. 1.5 mm long, caducous; receptacle subglobose, 1–2.1 cm in diam. when dry, sometimes with a stipe up to 2 mm long, glabrous, surface usually wrinkled when dry, yellow to reddish purple or red at maturity, apex convex; ostiole 4–5 mm in diam., upper ostiolar bracts glabrous; internal hairs absent. Staminate flowers near the ostiole, sessile or on a short pedicel; tepals 3(–4), oblong or ovate, free, reddish brown. Pistillate flowers sessile or pedicellate; tepals (2–)3(–4), ovate, oblong, or lanceolate, free, reddish brown; ovary dark red.

**Distribution and Habitat**—This species is distributed in northeast and east Australia; in rain forest, monsoon forest, limestone outcrops, deciduous vine thickets, or coastal dunes, at altitudes up to 1,000 m.

**Representative Specimens Examined**—AUSTRALIA. New South Wales: New South Wales National Park, Jan 1902, Boorman s. n. (K); Whispering



Gallery, 5 km SE of Albion Park, 8 Nov 1977, *Coveny 9750* (K, L). Northern Territory: Arnhem Land, Little Lagoon, Groote Eylandt, Arnhem Land Aboriginal Reserve, 30 May 1948, *Specht 446* (K, L); Arnhem Land, Elcho Isl., 135° 33' E, 12° 00' S, 14 Jul 1975, *Maconochie 2208* (K, L). Queensland: Atherton, State Forest Res 652, Cauley, 148° 30'E, 20° 50' S, 31 Jul 1974, *Hyland 4050 (R.F.K.)* (K); Brisbane, Moreton, Mt. Tamborine, Mar 1947, *Clemens s. n.* (K); Cape York, Tolga Scrub, 13 May 1974, *Irvine 8484* (L).

11. *FICUS HOOKERIANA* Corner, Gard. Bull. Singapore 17: 378. 1960, substitute name; 21: 10. 1965; Grierson & Long, Fl. Bhutan 1(1): 97. 1983; Zhekun and Gilbert, Fl. China 5: 41. 2003. *Ficus hookeri* Miq., Ann. Mus. Bot. Lugduno-Batavi 3: 215. 1867, non Sweet 1826.—TYPE: INDIA. Sikkim, *Hooker f.* (*Ficus no 120*) (holotype: K; isotypes: BM, E, L, P).

Tree, up to 28 m tall. Branches drying brown, glabrous, periderm persistent. Leafy twig 4–9 mm thick, glabrous or sometimes brownish villose, periderm persistent or sometimes flaking off. Leaves not articulate; lamina obovate or elliptic-oblong, 10–25.5 by 5–17 cm, coriaceous, apex acute to subacuminate, the acumen blunt or sometimes lobed, base (sub)cuneate, subattenuate, or rounded, both surfaces glabrous; lateral veins 8–11 pairs, usually furcate away from the margin, the basal pair up to 1/5–1/3 the length of the lamina, sometimes branched, tertiary venation reticulate; petiole 2.1–8.1 cm long, glabrous, epidermis persistent; stipules 0.4–0.8 cm long, glabrous, persistent at the shoot apex and usually forming an ovoid terminal bud. Figs axillary or below the leaves, solitary or in pairs, sessile; basal bracts 4.5–11 mm long, united into a cup, glabrous, persistent; receptacle subglobose, 1.2–2.2 cm diam. when dry, wrinkled, glabrous, maculate, apex flat; ostiole 4–5 mm in diam., upper ostiolar bracts glabrous; internal hairs absent. Staminate flowers dispersed, sessile; tepals 4, elliptic, free, (dark) red brown. Pistillate flowers sessile; tepals 3–5, lanceolate, (dark) red brown; ovary sessile or stipitate, dark red to brown.

**Distribution and Habitat**—This species is distributed in North India, Nepal, China (Prov. Guizhou), and Vietnam; usually in forest on limestone, altitude between 500 and 2,000 m.

**Representative Specimens Examined**—CHINA. Guizhou: Lipo country, Jan 1988, *Xianghou 684* (K). INDIA. Meghalaya: Mt. Khasia, 1859, *Hooker f. & T. Thomson* (*Ficus no 120*) (P, L). Manipur: 1886, *Vatt 5877* (P). Sikkim: without locality, *Hooker f.* (*Ficus no 120*) (E, L). NEPAL. Eastern: Koshi zone, Sankhuwasabha, 87° 22' 00" E, 27° 46' 00" N–87° 20' 30" E, 27° 44' 00" N, 25 Aug 1998, *Noshiro et al. 9840182* (E). VIETNAM. Hoa Binh: Mai Choue, Pâw, Apr 1996, *Hiep NTH 2107* (P).

**Note**—This is one of the Asian species without an articulated petiole and the only species in this subsection with large basal bracts (4.5–11 mm long) that are united into a cup. The large, united bracts make it distinct from *F. orthoneura*.

12. *FICUS INGENS* (Miq.) Miq., Ann. Mus. Bot. Lugduno-Batavi 3: 288. 1867; Hutch., Fl. Trop. Afr. 6, 2: 121. 1916; C. C. Berg et al. Fl. Cameroun 28: 146, t. 48. 1985; C. C. Berg, Fl. Trop. E. Afr. Moraceae: 60, t. 20. 1989; Kirkia 13: 259. 1990; Fl. Zambes. 9, 6: 54. 1991; C. C. Berg and Wiebes, African fig trees and fig wasps: 90. 1992; Friis, Fl. Somalia 2: 100. 1999. *Urostigma ingens* Miq., London J. Bot. 6: 554. 1847. *Ficus schimperiana* A. Rich., Tent. Fl. Abyss. 2: 266. 1851, nom. superfl.—TYPE: ETHIOPIA. Djeladjeranne, *Schimper 1771* (holotype: K; isotypes: B, BR, L, K, P).

*Urostigma caffrum* Miq., Nieuwe Verh. Eerste Kl. Kon. –Ned. Inst. Wetensch. Amsterdam, ser. 3, 1: 141. 1849. *Ficus*

*caffra* (Miq.) Miq., Ann. Mus. Bot. Lugduno-Batavi 3: 288. 1867; Hutch., Fl. Trop. Afr. 6, 2: 121. 1916.—TYPE: SOUTH AFRICA. Macalesberg, *Burke s. n.* (holotype: B; isotypes: K, U).

*Urostigma xanthophyllum* Miq., London J. Bot. 6: 554. 1847; Hutch., Fl. Trop. Afr. 6, 2: 121. 1916.—TYPE: ETHIOPIA. *Schimper 943* (holotype: B; isotypes: K, L, P).

*Urostigma xanthophyllum* Miq. var. *ovatocordatum* Sonder, Linnaea 23: 136. 1850; Mildbread and Burret, Bot. Jahrb. 46: 209. 1911.—TYPE: SOUTH AFRICA. *Zeyher 1548* (holotype: B, not found yet).

*Ficus stuhlmannii* Warb. var. *glabrifolia* Warb., Bot. Jahrb. 20: 162. 1895; Mildbr. and Burret, Bot. Jahrb. 46: 209. 1911.—LECTOTYPE (designated by Berg et al. 1984): TANZANIA. Victoria Nyanza, Busisi, *Stuhlmann 750* (lectotype: B).

*Ficus pondoensis* Warb., Vierteljahrsschr. Naturf. Ges. Zürich 51: 140. 1906; Hutch., Fl. Trop. Afr. 6, 2: 121. 1916.—TYPE: SOUTH AFRICA. Pondoland, 1887–88, *F. Bachman 425* (holotype: B).

*Ficus caffra* (Miq.) Miq. var. *sambesiaca* Warb., Vierteljahrsschr. Naturf. Ges. Zürich 51: 140. 1906; Mildbr. and Burret, Bot. Jahrb. 46: 209. 1911.—TYPE: ZIMBABWE. Boruma, *Menyhart 770* (holotype: Z).

*Ficus caffra* (Miq.) Miq. var. *longipes* Warb., Vierteljahrsschr. Naturf. Ges. Zürich 51: 140. 1906; Mildbr. and Burret, Bot. Jahrb. 46: 209. 1911.—TYPE: SOUTH AFRICA. Transvaal, Pretoria, Wonderboompoort, *Rehmann 4435* (holotype: Z; isotype: BM).

*Ficus caffra* (Miq.) Miq. var. *natalensis* Warb., Vierteljahrsschr. Naturf. Ges. Zürich 51: 140. 1906; Mildbr. and Burret, Bot. Jahrb. 46: 209. 1911.—TYPE: SOUTH AFRICA. KwaZulu-Natal, Camperdown, *Rehmann 7798* (holotype: Z).

*Ficus caffra* (Miq.) Miq. var. *pubicarpa* Warb., Vierteljahrsschr. Naturf. Ges. Zürich 51: 140. 1906; Mildbr. and Burret, Bot. Jahrb. 46: 209. 1911.—TYPE: SOUTH AFRICA. Cape province, *Drege s. n.* (holotype: B).

*Ficus magenjensis* Sim, Forest Fl. Port. E. Afr.: 99, t. 93B 1909; Hutch., Fl. Trop. Afr. 6, 2: 121. 1916. – TYPE: MOZAMBIQUE. Maganja da Costa, *Sim 5653* (holotype: K).

*Ficus katagumica* Hutch., Kew Bull. 7: 317. 1915.—TYPE: NIGERIA. Katagum, *Dalziel 305* (holotype: K).

*Ficus kawuri* Hutch., Kew Bull. 7: 319. 1915.—LECTOTYPE (designated by Berg et al. 1984): NIGERIA. *Dalziel 910* (lectotype: K).

*Ficus ingentoides* Hutch., Kew Bull. 7: 319. 1915; Fl. Trop. Afr. 6, 2: 123. 1916; Lebrun and Boutique, Fl. Congo Belge 1: 124. 1948.—LECTOTYPE (designated by Berg et al. 1984): ERITREA. near Acrur, *Schweinfurth & Riva 1687* (lectotype: K).

*Ficus ovato-cordata* De Wild, Ann. Soc. Sci. Brux. 40: 281. 1921; Lebrun and Boutique, Fl. Congo Belge 1: 121. 1948.—TYPE: DEMOCRATIC REPUBLIC OF CONGO (Zaire). 21 Sep 1914, *J. Bequaert 5821* (holotype: BR).

*Ficus ingens* (Miq.) Miq. var. *tomentosa* Hutch., Fl. Cap. 5, 2: 530. 1925; Troupin, Fl. Rwanda 1: 146. 1978; Fl. Plant Ligneuses Rwanda: 445. 1982.—TYPE: SOUTH AFRICA. Cape Prov., Queenstown Distr., Zwart Valley, *Galpin* 8173 (holotype: K).

Tree up to 15(–20) m tall. Branches drying yellow brown to brown. Leafy twig 2.5–6 mm thick, white or brown pubescent to tomentose to velutinous, periderm persistent or sometimes flaking off. Leaves not articulate; lamina ovate to lanceolate or elliptic to oblong, (2.5–)5.5–13(–20) by (2–)3.3–8(–11) cm, coriaceous, apex acute to acuminate, the acumen sharp or blunt, base obtuse, rounded, (sub)cordate, or truncate, both surfaces glabrous; lateral veins 7–11 pairs, usually furcate away from the margin, basal pair up to 1/6–1/3 the length of the lamina, branched, tertiary venation reticulate; petiole (0.5–)1–4.2 cm long, glabrous, puberulous, or velutinous, epidermis persistent or sometimes flaking off; stipules 0.4–1.2 cm long, glabrous, puberulous or tomentose to velutinous, usually caducous. Figs axillary or just below the leaves, solitary or in pairs, subsessile or with a peduncle up to 5 mm long, puberulous; basal bracts 1.5–2 mm long, puberulous, persistent, sometimes the apex lobed; receptacle subglobose, 0.5–1.2 cm diam. when dry, glabrous, minutely puberulous, tomentose, or white to brown velutinous, whitish to pink to yellow or pale red to purple at maturity, apex flat or convex; ostiole 2–3 mm in diam., upper ostiolar bracts glabrous or minutely puberulous; internal hairs present. Staminate flowers near the ostiole, sessile or shortly pedicellate; tepals 2–3(–4), free or connate, reddish brown. Pistillate flowers usually sessile; tepals 3–4, ovate or broad lanceolate, free, reddish brown; ovary red brown.

**Distribution and Habitat**—This species is distributed in Senegal, Mali, Ivory Coast, Ghana, Benin, Niger, Nigeria, Cameroon, Gabon, Chad, Central African Republic, Congo, Sudan, Uganda, Rwanda, Burundi, Zambia, South Africa, Zimbabwe, Swaziland, Eritrea, Ethiopia, Kenya, Tanzania, Malawi, Mozambique, Djibouti, Somalia, Saudi Arabia, and Yemen; in grassland with scattered small trees or woodland remnants of evergreen forest, often in rocky places or in lowland (riverine) forest, at altitudes up to 1,700 m.

**Representative Specimens Examined**—BENIN. Atakora: Tangueta, Tanougou waterfalls, 1° 26.63' E, 10° 48.17' N, 15 Apr 2001, *van der Maesen et al.* 7601 (WAG). Borgou: Ndali, 30 Apr 1999, *Houngnon et al.* 6616 (WAG). Zou: Djidja, Setto, 2° 04' E, 7° 30' N, 25 Aug 2001, *Akoegninou* 5294 (WAG). BURUNDI. Bubanza: 29°23' E, 3°06' S, 2 Oct 1976, *Reekmans* 5400 (K, WAG). CAMEROON. Adamava: Nganha Mt. near Ndigou, about 60 km E of Ngaoundéré, 3 Dec 1964, *de Wilde & de Wilde-Duyffes* 4486A (WAG). North: 2 km E of Garoua, 13°25' E, 9°22' N, 23 May 1974, *Geerling & Néné* 4881 (WAG). CENTRAL AFRICAN REPUBLIC. Matakil falls, 8°26' N, 21°11' E, 9 Dec 1982, *Fay* 4068 (K). CHAD. Upper Outbangui: Nana, 21 Nov 1902, *Chevalier* 6320 (K). DEMOCRATIC REPUBLIC OF CONGO (Zaire). Katanga: Dilolo, Jan 1950, *Schmitz* 2673 (K). Kivu: Uvira, Kamanyola escarpment, 29 May 1959, *Léonard* 4456 (K, L). DJIBOUTI. Randa: May 1959, *Chedeville* 1290 (K). ERITREA. Anseba: Keren, Mt. Zeban, S of Keren, 30°27' E, 16°17' N, 17 Aug 1973, *Aweke & Gilbert* 693 (WAG). Central: Asmara, 18 km SW of Asmara, on Adwa Rd., 39°13' E, 15°22' N, 20 Aug 1973, *Aweke & Gilbert* 701 (WAG). ETHIOPIA. Oromia: about 50 km W of Lekemti, near bridge crossing Didessa R., 12 Apr 1966, *de Wilde & de Wilde-Duyffes* 10730 (WAG). Tigray: 23 km W of Makalle, 39°33' E, 13°31' N, 13 Aug 1973, *Aweke & Gilbert* 637 A (WAG). GABON. Without locality, 1984, *Williamson* 38 (K). GHANA. Brong-Ahafo: near Jema-Nkwanta, 1°47.0' W, 7°53.1' N, *Jongkind & Nieuwenhuis* 2558 (WAG). Northern: Gambaga, 5 Apr 1953, *Morton* 159 (WAG). IVORY COAST. Marahoue: Bouaffé, Marahoue National Park, 7°04' N, 5°55' W, 9 Feb 1998, *Jongkind & Musah* 4317 (WAG). Vallée du Bandama: Katiola,

Tiengala Rd., ca. 25 km N of Katiola, ca. 5°08' W, 8°19' N, 14 Sep 1978, *Dekker* 144 (WAG). KENYA. Coast: Taita-Taveta, Voi, Nov 1955, *Ossent* 119 (K). Eastern: Makueni, Kibwezi, Dwa rock, Jul 1943, *Bally* 2576 (K). Rift Valley: Naivasha, Oilongonot Estate, Feb 1963, *Okerfoot* 4729 (WAG). MALI. Kayes: Sebekoro, 30 Oct 1978, *Geerling & Coulibaly* 5876 (WAG). Koulikoro: above Koronga, 3 Jun 1982, *Klug & Hamburg* BFT 113 (K). MOZAMBIQUE. Maputo: Namaacha, 26 Jun 1948, *Torre* 7994 (WAG). Niassa: Maniamba, Metangula, 11 Oct 1942, *Mendonca* 764 (WAG). Tete: Angónia, Ulongue, NE of Dómue Mt., 19 Dec 1980, *Macuácuá* 1487 (WAG). NIGER. Bani kou beye, 2 Dec 1968, *Kawara* 5620 (WAG). NIGERIA. Bauchi: Yankari Game Reserve, Kwa Rd., 10°00' E, 10°00' N, 30 Mar 1971, *Geerling* 3522 (WAG). Niger (State): Minna, Gurara falls, Bank of Gurara R., 17 May 1973, *Eimunjeze et al.* 66417 (WAG). RWANDA. Western: Kibuye, Lake Kivu, Iwawu Isl., 26 May 1978, *Troupin* 15967, 15968 (K). SAUDI ARABIA. Dalaghan National Park: 5 Mar 1981, *Hillcoat* 97(BM). SENEGAL. Niokolo-Koba National Park, Mount Assirik, 23 Mar 1976, *Tutin* 8 (K). SOMALIA. Awdal: Borama, 13 Jan 1945, *Glover & Gilliland* 586 (K). Somaliland: Auboba, 21 Nov 1933, *Gillett* 4626 (K). SOUTH AFRICA. Eastern Cape: Pondoland, 1887–88, *Bachmann* 425 (B). Gauteng: Wonderboompoort, *Rehmann* 4435(Z). KwaZulu-Natal: Alfred, Horseshoefarm, 17 Dec 1965, *Strey* 6154 (K). SUDAN. Northern state: West Darfur, about 120 km E of Zalingei, 20 Jan 1965, *de Wilde & de Wilde-Duyffes* 5432 (K, WAG). Southern Sudan: East Equatoria, Lower slopes of Mt. Konoro, towards Gilo, ca. 32°53' E, 4°03' N, 24 Nov 1980, *Friis & Vollesen* 443 (K). SWAZILAND. Manzini: Timbutini, 13 Aug 1958, *Compton* 27936 (K). TANZANIA. Arusha: Engari Nanyuki R., Arusha National Park, 11 Apr 1968, *Greenway & Kanuri* 13454 (K). Kigoma: Mahali Mt., Lumbye R., 21 Sep 1958, *Newbould & Jefford* 2491(K). Morogoro: Ulanga, 10 km N of Itete, 2 Nov 1998, *Gereau et al.* 6175 (L). UGANDA. Central: Lake Victoria, Lolui Isl., 14 May 1964, *Jackson* 82 (K). Eastern: Mbale, Budama, E side of Sukulu hill, close to Busai-Tororo road, 5 miles S of Tororo, 10 Mar 1951, *Wood* 392 (K). Northern: Kitgum, Chua, Paimol, *Eggeling* 2350 (K). YEMEN. Jebelain: near Al Udayn, 8 Jun 1975, *Wood* 299 (BM). Jebel Raymah: 7 Oct 1976, *Wood* 1379 (BM). ZAMBIA. Copperbelt: Rd. Mpongwe (St. Anthony's Mission)—Lake Kashiba, NW of Mpongwe, 23 Nov 1982, *Berg & Bingham* 1395 (U). Lusaka: 1 km N of Kafue bridge, 17 Nov 1982, *Berg & Bingham* 1368 (K, U, WAG). Northwestern: Solwesi, Mutanda R. bridge, Solwezi-Mwinilunga miles 23, 15 Sept 1952, *Angus* 455 (K). ZIMBABWE. Mashonaland Central: Mazowe, Mazoe dam, 31 Jan 1982, *Berg & Drummond* 1335 (U, WAG). Mashonaland East: Mutoko, near Mutoko, 9 Feb 1982, *Berg & Campbell* 1350 (U, WAG).

13. *FICUS LECARDII* Warburg, Ann. Mus. Congo, Bot. ser. 6, 1: 24, Table 11. 1904; Hutch., Fl. Trop. Afr. 6, 2: 117. 1916. *Ficus cordata* Thunb. subsp. *lecardii* (Warb.) C. C. Berg, Kew Bull. 43: 81. 1988; C. C. Berg and Wiebes, African fig trees and fig wasps: 92. 1992.—TYPE: SENEGAL. *Lecard* 197 (holotype: BR; isotype: K).

*Ficus salicifolia* Vahl var. *latifolia* Hutch., Fl. Trop. Afr. 6, 2: 116. 1916.—TYPE: CHAD. Dar Banda Ndelli, *Chevalier* 6767 (holotype: K; isotype: B).

Shrub or tree up to 8 m tall. Branches drying grey to brown. Leafy twig 1.5–3 mm thick, brown, glabrous or puberulous, periderm persistent. Leaves not articulate; lamina (broadly) ovate, subovate, or oblong, 2–9(–12) by 1.5–6(–8) cm, apex subacute to acuminate, base cuneate to rounded to obtuse or subcordate, both surfaces glabrous; lateral veins 7–11 pairs, unbranched, the basal pair up to 1/5–1/4 the length of the lamina, tertiary venation reticulate and partly parallel to lateral veins; petiole 1–4.5 cm long, glabrous or minutely puberulous at the base, epidermis persistent; stipules 0.5–1 cm long, glabrous or puberulous, caducous. Figs axillary or just below the leaves, solitary or in pairs, subsessile or with a peduncle up to 3 mm long, glabrous or white puberulous; basal bracts 1.5–2 mm long, puberulous, persistent; receptacle subglobose, 0.6–0.8 cm diam. when dry, glabrous or puberulous, apex convex; ostiole 1.5–2 mm in diam., upper ostiolar bracts

glabrous; internal hairs present, minute and sparse. Staminate flowers near ostiole, sessile; tepals 3(–4), spatulate or ovate, usually free or sometimes connate at base, reddish brown. Pistillate flowers sessile or pedicellate; tepals 3(–4), ovate, lanceolate, or oblong, free, reddish brown; ovary red brown.

**Distribution and Habitat**—This species is distributed in Senegal, Guinea–Bissau, Mali, Ivory Coast, Burkina Faso, Nigeria, and Cameroon; in savannas, often near rocks, at altitudes up to 1,500 m.

**Representative Specimens Examined**—BURKINA FASO (Upper Volta). Cascades, Comoe, 18 km N of Banfora, 5 Jun 1962, *Leeuwenberg* 4360 (P, K, WAG). Hauts–Bassins: Houet, Bobo Dioulasso, 10 Dec 1973, *Ausru* 5523 (P, WAG). CAMEROON. North: Garoua, Tinguelin, 13° 23' E, 9° 23' N, 31 Dec 1975, *Geerling* 5552 (P). Far North: Bourha, 65 km south–eastern of Mokolo, 13 Oct 1964, *Letouzey* 6949 (P, K). GUINEA–BISSAU (GUINÉ PORTUGUESA). Bafata: Contubo El, 18 Nov 1955, *Santo* 3600 (WAG). Gabu: Canjadúdi, 10 Jun 1949, *Santo* 2501 (K). Quinara: Buba Saltinho, 30 May 1948, *Santo* 2485 (WAG). IVORY COAST. Denguélé: Odianné, Tiémé, 22 Oct 1974, *de Koning* 4310 (WAG). Savanes: Korhoko, ca. 16 km N of Korhoko, Guine zone, Lataha, ca. 5°35' W, 9°35' N, 2 Nov 1978, *Dekker* 318 (WAG). MALI. Kayes. Sebekoro, 30 Oct 1978, *Geerling & Coulibaly* 5896 (K, P, WAG). Mopti. Sangha, 29 Oct 1969, *Hepper* 3783 (K). Sikasso. 5° 40' W, 11° 19' N, 8 Nov 1984, *Hiemstra* 776 (WAG). NIGERIA. Kaduna, Zaria, Kufena rock, 4 May 1950, *Keay FHI* 25722 (K). Sokoto: Gaaau, Kura village, 9 Jan 1968, *Daramola FHI* 62543 (K). SENEGAL. Niokolo Koba National Park, 15 Apr 1976, *Tutin* 12 (WAG). CHAD. Dar Banda Ndelli, 20 Dec 1902, *Chevalier* 6767 (K), 31 Jan 1903, *Chevalier* 7417 (K).

**Notes**—Berg and Wiebes (1992) treated *F. lecardii* as a subspecies of *F. cordata*. Here we reinstate its species status, because of constant differences with *F. cordata* and *F. salicifolia*. For differences see the second note under *F. cordata*.

We already know that staminate flowers of some species of subg. *Sycidium* sect. *Palaeomorpha* contain pistillodes as large as the pistillate flowers. Here, we found some staminate flowers (*Letouzey* 6949) that also contained a pistillode, an uncommon feature in subsect. *Urostigma*.

14. *FICUS MADAGASCARIENSIS* C. C. Berg, Bull. Mus. Natl. Hist. Nat., B, Adansonia Sér. 4, 8: 34. 1986; C. C. Berg and Wiebes, African fig trees and fig wasps: 93. 1992.—TYPE: MADAGASCAR. Menamaty, Oct. 1911, *Perrier de la Bathie* 10045 (holotype: P).

Shrub (or large tree). Branches drying brown. Leafy twig 1–3 mm thick, glabrous or minutely puberulous, periderm persistent or sometimes flaking off. Leaves not articulate; lamina ovate to oblong to lanceolate, 6.1–15 by 2.1–5.5 cm, subcoriaceous, apex acuminate to cuspidate, the acumen sharp, base obtuse or rounded, both surfaces glabrous; lateral veins 7–12 pairs, sometimes furcate away from the margin, the basal pair up to 2/7–1/4 the length of the lamina, tertiary venation reticulate; petiole 0.5–3.5(–5) cm long, glabrous, epidermis persistent; stipules 0.3–0.7 cm long, glabrous or white puberulous, persistent at the shoot apex and forming a terminal bud. Figs axillary or just below the leaves, solitary or in pairs, sessile; basal bracts 1–2 mm long, glabrous, persistent, apex usually lobed; receptacle subglobose or depressed–globose, 0.4–0.6 cm diam. when dry, glabrous or minutely puberulous, apex convex; ostiole ca. 1.5 mm in diam., upper ostiolar bracts glabrous; internal hairs absent. Staminate flowers near the ostiole, sessile; tepals 3, ovate, lanceolate, or oblong, free, reddish brown. Pistillate flowers sessile or pedicellate; tepals 2–3, ovate, lanceolate, or oblong, free, reddish brown; ovary red–brown.

**Distribution and Habitat**—This species is distributed in Madagascar; in dry forest or xerophytic bush but may perhaps also occur in rainforest (unidentified photo seen).

**Representative Specimens Examined**—MADAGASCAR. Without locality, 1932–1933, *Perrier de la Bathie* 19239 (P); without locality, *Montagnac* 72 (WAG). Valley of Fiherenana: 2–3 Aug 1928, *Humbert & Swingle* 5122 (K); 12 Aug 1928, *Humbert & Swingle* 5229 (K). Mahajanga (Majunga): Tsingy de Bemaraha S of the Manambolo R., 44° 49' E, 19° 09' S, 11 Dec 1996, *Jongkind* 3506 (WAG).

15. *Ficus middletonii* Chantar., sp. nov. —TYPE: THAILAND.

Prachuap Khiri Khan, Pran Buri, Khao Sam Roi Yot National Park, Trail from Tham Sai to Tham Phra Yanakhon, 18 Aug 2002, *Middleton, Suddee, Davies & Hemrat* 1178 (holotype: L; isotypes: BKF, E, L).

Folii basis (sub)cordata ad rotundata, stipulae gemmam anguste ovatum terminalem formantes albe puberulae ad tomentosae. Fici subsessiles vel pedunculo ad 1.5 mm longo, cum pilis interioribus. Flores staminati prope ostiolium, tepala 3–4 libera.

Tree 10–20 m tall. Branches drying brown, periderm persistent. Leafy twigs 1.5–3(–5) mm thick, glabrous to puberulous. Leaves articulate; lamina ovate, 5–10(–4) by 2.5–6.5(–11) cm, (sub)coriaceous, apex acute to acuminate, the acumen blunt, base subcordate or obtuse to rounded, both surfaces glabrous; lateral veins 7–9 pairs, branched and often furcate away from the margin, the basal pair up to 1/5–1/3 the length of the lamina, usually branched, tertiary venation reticulate; petiole 1.5–5(–9.5) cm long, glabrous or puberulous, epidermis persistent; stipules 0.6–1 cm long, white puberulous to tomentose, persistent at the shoot apex and forming a terminal bud. Figs axillary, just below the leaves, or on up to 4 mm long spurs on the older wood, in pairs or solitary, subsessile or with a peduncle up to 1.5 mm long, puberulous to tomentose; basal bracts 1–1.5 mm long, covering only the base of the receptacle, puberulous to tomentose or villose, margin usually ciliate, persistent; receptacle subglobose, 0.5–0.8 cm diam. when dry, glabrous or minutely puberulous, cream to orange at maturity, apex convex; ostiole ca. 2 mm in diam., the upper ostiolar bracts glabrous, sometimes minutely puberulous, margin ciliate, internal hairs present. Staminate flowers near the ostiole, sessile or pedicellate; tepals 3–4, ovate or lanceolate, free or sometimes connate at base, reddish brown. Pistillate flowers sessile or pedicellate; tepals 3–4, ovate or lanceolate, free, reddish brown; ovary red brown. Figure 6.

**Distribution and Habitat**—This species is distributed in South India and Thailand; in scrub forest on limestone rocks, at altitudes up to 1,050 m. Figure 4.

**Representative Specimens Examined**—INDIA. Tamil Nadu (Madras): Dharmapuri, Harur, Chitteri hill, Nochikkottai, 8 Aug 1978, *Matthew RHT* 16107 (K); Salem, Yercad, Servarayans, Yercad Ghat Rd., Hair Pin Bend 10, 2 Jul 1979, *Matthew RHT* 23476 (L). THAILAND. Lampang: Wahng Nua, Doi Luang National Park, Wahng Gayo falls, 11 Jul 1997, *Maxwell* 97–729(A). Prachuap Khiri Khan: Pran Buri, Khao Sam Roi Yot National Park, 18 Aug 2002, *Middleton et al.* 1178 (A, BKF, E, L). Sa Kaeo: Khao Cha Kan temple, 27 Mar 2005, *Tanning* 69 (L).

**Note**—This species was always referred to *F. arnottiana*. However, we found many characters that are distinctively different, such as the position of the staminate flowers (only near ostiole), tepals mostly free, ovary of pistillate flowers red brown, and internal hairs present in the figs.

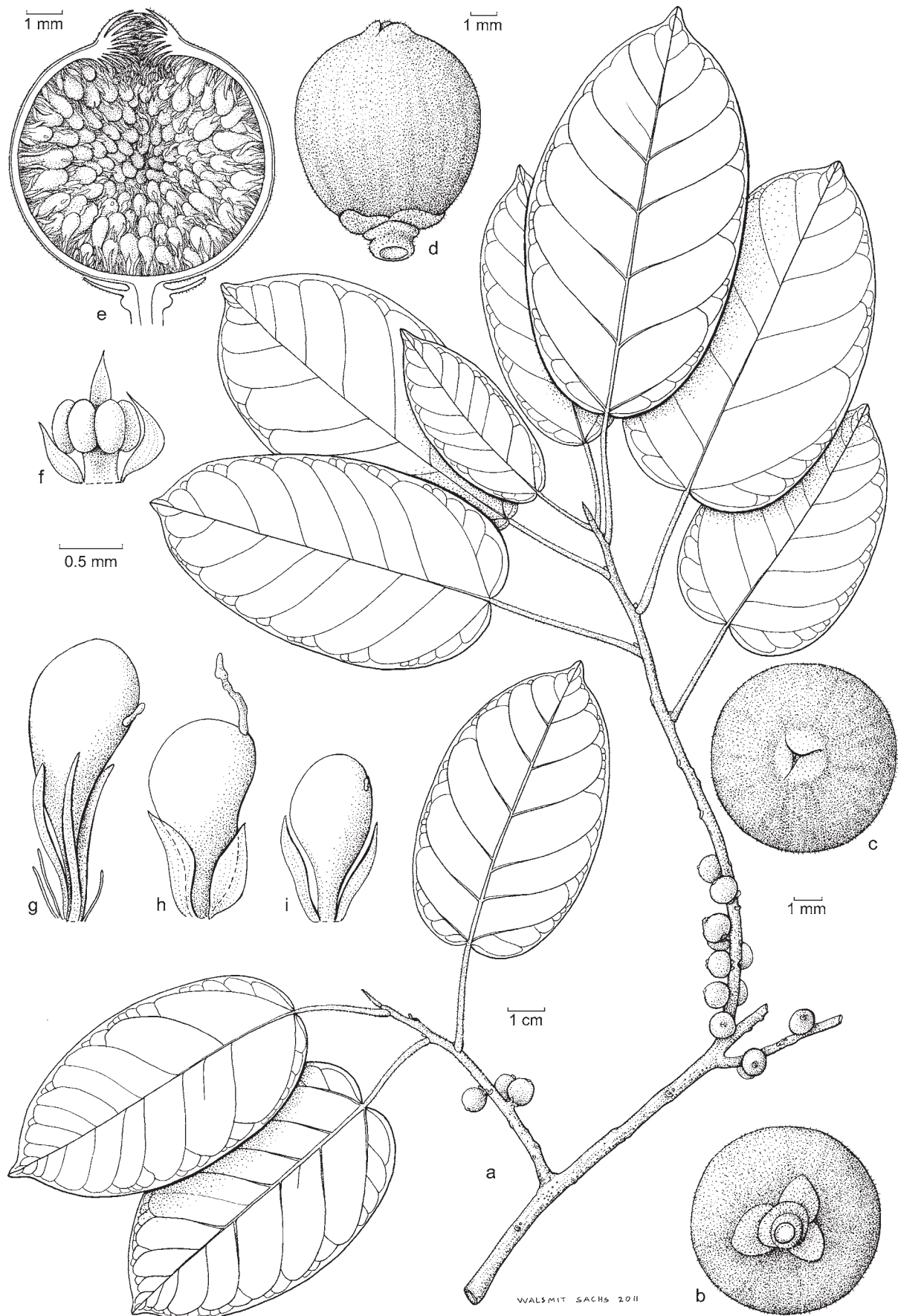


FIG. 6. *Ficus middletonii* Chantaras. (Moraceae). A. Twigs with leaves and figs. B. Basal bracts. C. Ostiole. D. Fig. E. Fig in longitudinal section. F. Staminate flower. G, H, I. Pistillate flowers. [D. J. Middleton et al. 1178 (L)]. Drawing: Anita Walsmit Sachs, 2011.

16. *FICUS ORTHONEURA* H. Lév. & Vaniot, Repert. Spec. Nov. Regni Veg. 4: 66. 1907; Corner, Gard. Bull. Singapore 21: 10. 1965; Zhekun and Gilbert, Fl. China 5: 41. 2003.—TYPE: CHINA. Guizhou: Kouy–Tcheou, Houo Kiang, 6 Jun 1904, *J. Cavalerie 2050* (holotype: E; isotype: P).

*Ficus hypoleucogramma* H. Lév. & Vaniot, Repert. Spec. Nov. Regni Veg. 4: 65. 1907.—TYPE: CHINA. Guizhou: Kouy–Tcheou, *Esquirol 597* (holotype: E).

*Ficus caesia* Hand.–Maz., Anz. Akad. Wiss. Wien, Math.–Naturwiss. Kl: 59: 54. 1922.—TYPE: CHINA. Prov. Cuidschou austro–occid., 20 Jun 1917, *Handel–Mazzetti 10378*. (not found yet).

*Ficus fedorovii* W. T. Wang, Acta Phytotax. Sin. 6: 268. 1957.—TYPE: CHINA. Yunnan, Ho–kou, Lao–fan–chai, W. T. Wang 3226 (not found yet, photograph in Acta Phytotax. Sin. 6: t21. 1957).

Shrub or tree to 10 m tall. Branches drying brown or dark brown, periderm flaking off. Leafy twigs 3–6 mm thick, glabrous or sometimes puberulous, periderm persistent or sometimes flaking off. Leaves not articulate; lamina elliptic to oblong or obovate, 6.6–16 by 3.2–10 cm, coriaceous, apex acute to rounded, base obtuse to cuneate, both surfaces glabrous, the upper surface usually shining; lateral veins 11–14 pairs, the basal pair up to 1/9–1/6 the length of the lamina, unbranched; tertiary venation reticulate; petiole 1.5–4 cm long, glabrous or minutely puberulous, epidermis persistent; stipules (2–)3–9 mm long, glabrous or minutely puberulous, margin ciliate, persistent at the shoot apex, usually forming an ovoid terminal bud. Figs axillary or just below the leaves or on up to 6 mm long spurs on the older wood, in pairs or solitary, subsessile or with a peduncle 2.5–4 mm long, glabrous or minutely puberulous; basal bracts 1.5–2 mm long, free, covering only the base of the receptacle, minutely puberulous and ciliate, persistent; receptacle subglobose, 0.7–1.3 cm diam. when dry, wrinkled, minutely puberulous or glabrous, apex convex; ostiole 2.5–4 mm in diam.; upper ostiolar bracts glabrous; internal hairs absent. Staminate flowers dispersed, sessile or pedicellate; tepals 3–4(–5), lanceolate or oblong (or ovate), free, reddish brown. Pistillate flowers sessile or pedicellate; tepals (2–)3–4, ovate or lanceolate, free, red brown; ovary reddish brown. Figure 5 D.

**Distribution and Habitat**—This species is distributed in China (Prov. Yunnan), Myanmar, Thailand, and Vietnam; on limestone, at altitudes between 200 and 1,700 m.

**Representative Specimens Examined**—CHINA. Yunnan–Sen, 1900–1920, *Cavalerie 7807* (K). MYANMAR. Mandalay: Maymyo Plateau, 14 Sep 1912, *Lace 5959* (K). THAILAND. Kanchanaburi: Sai Yoke, Erawan falls, 26 Jan 1962, *Larsen & Smitinand 9270* (BKF). Khon Kaen: Tham Pha Phuang, 18 Jul 1973, *Smitinand 11812* (BKF). VIETNAM. Ninh Binh: Cuc Phuong National Park, 105°43.08' E, 20°14.22' N, 20 Dec 1999, *Cuong et al. 765* (L); Thua valley, Mo village, Thanh Yen, Thanh Hoa, 105°38.27' E, 20°15.70' N, 6 Mar 2002, *Cuong NMC1577* (L).

**Note**—See also note under *F. hookeriana*.

17. *FICUS PRASINICARPA* Elmer [Leaf. Philipp. Bot. 9: 3451. 1937, nom. inval.; Corner, Gard. Bull. Singapore 21: 8. 1965; C. C. Berg and Corner, Fl. Males. Ser. 1, 17 (2): 606. 2005] ex C. C. Berg, Blumea 56: 164. 2011.—TYPE: PHILIPPINES. Luzon, Sorsogon Prov, Irosin (Mt. Bulusan), *Elmer 16129* (holotype: PNH, lost; isotype: L).

*Ficus glabella* Blume var. *papuana* King, Ann. Roy. Bot. Gard. (Calcutta) 1: 50. 1887; Diels, Bot. Jahrb. Syst. 67: 184. 1935.—TYPE: NEW GUINEA. *Beccari PN 157* (not seen).

Tree up to 15 m tall. Branches drying red brown to dark brown. Leafy twigs 1.5–3.5 mm thick, glabrous, periderm flaking off. Leaves articulate; lamina ovate to elliptic to oblong to obovate, 4.7–16.4(–18) by 2.1–9(–10) cm, subcoriaceous to coriaceous, apex acute to acuminate (or up to caudate), the acumen blunt or sometimes sharp, base cuneate to obtuse to rounded to cordate, both surfaces glabrous; lateral veins 6–11 pairs, the basal pair up to 1/5–1/3(–1/2) the length of the lamina, mostly branched, usually departing from the midrib at different distances from the base, tertiary venation reticulate, partly parallel to the lateral veins; petiole 1–3.9(–4.5) cm long, glabrous, epidermis persistent; stipules 0.3–0.6(–0.8) cm long, glabrous or puberulous, caducous or sometimes persistent at the shoot apex and forming a terminal bud. Figs axillary, just below the leaves or on short spurs on the older wood, solitary, in pairs, or up to 4 together on the spurs, subsessile or with a peduncle up to 2 mm long, glabrous; basal bracts 1–2 mm long, glabrous or minutely puberulous in the middle, persistent; receptacle subglobose or subpyriform, 0.4–0.8 cm diam. when dry, glabrous, turning to purplish at maturity, apex flat or convex; ostiole 1.5–2 mm diam., upper ostiolar bracts glabrous; internal hairs absent. Staminate flowers near the ostiole, sessile, tepals 2, broadly ovate, usually connate, red brown. Pistillate flowers sessile or pedicellate; tepals 2–3, elliptic, ovate or oblong, free, red brown; ovary dark red.

**Distribution and Habitat**—This species is distributed in Indonesia (Sulawesi, Moluccas, Papua), Philippines, Papua New Guinea, and Solomon Islands; in rain forest, secondary forest, littoral vegetation, savannahs, on limestone cliffs, at low altitudes to up to 1,100 m.

**Representative Specimens Examined**—INDONESIA. Maluku: Morotai, Ngele 2, 23 Jun 1949, *Kostermans 1593* (K). Papua: Radjah Ampat, Waigeo Isl., Majalibid bay, Lupiltol, 11 Feb 1955, *P. van Royen 5495* (K). Sulawesi Selatan: Maros, Leangleang prehistoric park, 8 Jun 1986, *Chin 3405* (L). PHILIPPINES. Bulacan: Mt. Biak na Bato, San Miguel, 121°04.7' E, 15°07.5' N, 12 Sep 1994, *Garcia et al. PPI 15069* (K, L). Bukidnon: vicinity of Tanculan, Jul 1916, *Fénix BS 26087* (K). Negros Occidental: Cauayan, 122°22.6' E, 9°52.5' N, 21 Aug 1995, *Madulid & Majaducon PPI 36089* (K, L). Palawan: Quezon, Tawa–tawa, 117°32' 6"E, 8°56' 4"N, 1 Feb 1994, *Gaerlan et al. PPI 13431* (K, L). Quezon: Real Watershed area, Kawatan, 121° 09.2' E, 14°12.1' N, 19 Feb 1995, *Romero et al. PPI 15671* (K, L). Sorsogon: Rosin (Mt. Bulusan), May 1916, *Elmer 16129* (K, L). PAPUA NEW GUINEA. Milne Bay: Menapi, Cape Vogel Peninsula, 18 Apr 1953, *Brass 21972* (K). Morobe: Lae, Lasanga Isl., 147° 15' E, 7° 25' S, 6 Nov 1969, *Streimann NGF 44299* (K, L); Musi Isl., Buso, 147° 10' E, 7° 25' S, 20 Aug 1970, *Streimann NGF 45207* (K, L). West Sepik: Selio Isl., Aitape, 142° 30' E, 3° 10' S, 31 May 1969, *Millar & Vandenberg NGF 40898* (K, L, SING). SOLOMON ISLANDS. Malaita: Lilisiana–Fiu Rd., Auki area, 15 Aug 1968, *Gafui et al. BSIP 10490* (K). New Georgia, Rendova Isl., W coast, near Zaimane R., 15 May 1963, *Whitmore BSIP 1939* (K, SING). Rennell: 24 Aug 1962, *Dissing 2881* (SING). Santa Isabel: Regi–Tanabuli villages, 28 Sep 1967, *Hunt 2760* (K, SING).

**Notes**—Berg and Corner (2005) mentioned that this species closely resembles *F. saxophila* (*F. saxophila* subsp. *saxophila* here), from which it differs in the presence of short peduncles and absence of indumentum on the basal and ostiolar bracts. However, the basal bracts of this species are only 1–2 mm long, while those of *F. saxophila* are much longer (2.5–4.5 mm).

The caudate leaf apex is rare and only known from two samples, *Ridsdale SMHI 434* from Malapakan Isl. (Philippines) and *Schram BW 14995* from Job Isl. (New Guinea).

18. *FICUS PROLIXA* G. Forst, Fl. Ins. Austr.: 77. 1786; Endl., Ann. Wiener Mus. Naturgesch. 1: 165. 1836; Guillaumin, Ann. Sci. Nat. Bot. ser 2, 7: 185. 1837; Drake, Ill. Fl. Ins. Pacif.: 297. 1892; Fl. Polynésie Franç.: 194. 1893; S. Moore, J. Linn. Soc., Bot. 45: 411. 1921; F.Br., Bull. Bernice P. Bishop Mus. 130: 40, Fig. 6A–D. 1935; J. Florence, Fl. Polynésie Franç. 1: 150. 1997. *Urostigma prolixum* (G.Forst.) Miq., London J. Bot. 6: 560. 1847.—*Ficus prolix* G.Forst. var. *prolix*: J. Florence, Fl. Polynésie Franç. 1: 150. 1997.—LECTOTYPE (designated by Florence 1997): SOCIETY ISLANDS. Tahiti, Forster s. n.(= FP 3546) (lectotype: BM); Forster 410 (isolectotype: BM)

*Ficus umbilicata* Bureau ex Drake, Fl. Polynésie Franç.: 195. 1893.—TYPE: GAMBIER ISLANDS. Mangareva, 1841, J. B. Hombron s. n. [= FP2447] (holotype: P).

*Ficus aoa* Warb., Bot. Jahrb. Syst. 25: 615. 1898.—SYNTYPES: SAMOA. Savaii, Centralgebiet, Warburg 504 (syntype: B, probably lost); Upolu, Lanuto'o –Kamm, Warburg 374 (syntype: B, probably lost).

*Ficus inaequibractea* Warb., Repert. Spec. Nov. Regni Veg. 1: 80. 1905.—TYPE: NEW CALEDONIA. 21 Sep 1902, Schlechter 14730 (holotype: B, probably lost; isotypes: BM, E, L).

*Ficus prolixoides* Warb., Repert. Spec. Nov. Regni Veg. 1: 79. 1905.—TYPE: NEW CALEDONIA. Balansa 3021 (ad 3026) (holotype: B, probably lost).

*Ficus mariannensis* Merr., Philipp. J. Sci., C 9: 73. 1914.—TYPE: GUAM. Nunu, R. C. McGregor 384 (holotype: A; isotype: BM).

*Ficus tenuistipula* Merr., Philipp. J. Sci., C 9: 75. 1914.—TYPE: GUAM. Upi road, R. C. McGregor 395 (holotype: A; isotypes: BM, L).

*Ficus marquesensis* F. Br., Bull. Bernice P. Bishop Mus. 130: 39. 1935.—TYPE: MAQUESAS. Nukuhiva, Mauu, 18 Jun 1921, Brown 420 (isotype: P).

*Ficus prolix* G. Forst. var. *subcordata* Corner, Gard. Bull. Singapore 17: 378. 1960.—TYPE: GUAM. Fosberg 35333 (holotype: A; isotype: L).

Tree 15–20(–25) m tall. Branches drying dark brown. Leafy twigs 2–4 mm thick, glabrous or puberulous, drying brown, periderm persistent or sometimes flaking off. Leaves articulate; lamina ovate to elliptic to oblong, 5.5–13.5(–15.1) by 2.5–7.4 cm, (sub)coriaceous, apex acute to subacuminate, the acumen sharp or blunt, base cuneate, obtuse, rounded, truncate, or (sub)cordate, both surfaces glabrous; lateral veins 7–11 pairs, the basal pair up to 1/5–1/3 the length of the lamina, mostly branched, usually departing from the midrib at different distances from the base, tertiary venation reticulate, partly parallel to the lateral veins; petiole 0.9–2.5(–3.7) cm long, glabrous or puberulous, epidermis persistent or sometimes flaking off at base; stipules 0.4–1.2 cm long, glabrous or puberulous, usually persistent at the shoot apex and forming a (narrowly) ovate to lanceolate bud, epidermis of bud scales persistent. Figs axillary or just below the leaves, solitary or in pairs, (sub)sessile or

peduncle up to 3 mm long, glabrous; basal bracts broadly ovate, 2.5–4 mm long, glabrous or puberulous, persistent; receptacle subglobose or subpyriform, 0.6–0.9 cm diam. when dry, reddish or purple to black at maturity, glabrous, apex convex or flat or concave; ostiole 2–3 mm in diam., upper ostiolar bracts glabrous; internal hairs present. Staminate flowers dispersed, sessile or shortly pedicellate; tepals 2–3, elliptic, free or connate, reddish brown. Pistillate flowers sessile or pedicellate; tepals (1–)2–3, elliptic, broadly ovate, free or connate, reddish brown; ovary red brown.

**Distribution and Habitat**—This species is distributed in Guam, Northern Mariana Isl., New Caledonia, Vanuatu, Nauru, Fiji, Niue, Cook Isl., and French Polynesia; in scrub forest, on rough limestone hill or on limestone cliffs, at low altitudes (up to 480 m).

**Representative Specimens Examined**—COOK ISLAND. Mangaia: Oneroa–Tamarua Rd., 27 Jul 1974, Sykes 287260 (L). Rarotonga Isl.: Tupapa valley: 28 Aug 1969, Philipson 10144 (L). FIJI. Rotuma Isl.: Haa, 1 Aug 1938, John 19396 (L, SING). FRENCH POLYNESIA. Marquesas Islands: Eiao, NW side, Vituha Bay and summit ridge, 1 Aug 1977, Gagné 1289 (L); Nukuhiva, Baie Marquisienne, SW side, 5 Aug 1977, Gagné 1281 (L); Hivaoa, between Eiaone and Puamau, NW of Puamau, 16 Nov 1963, Decker 939 (L); Tahuata, Vaitahu, Mt. Amatea, 10 Apr 1975, Schüfer 5497 (K). Society Islands: Raiatea, Uturoa, 10 Sep 1926, Moore 29 (L); Tahiti, Mt. Hiurai, 10 May 1990, Florence 10308 (L). GUAM. Asanite bay: 8 Jul 1965, Fosberg 46274 (L). Rota: between Rota and Tatacho Point, 20 Jun 1946, Fosberg 24972 (L). MARIANA ISLANDS. Pagan: without locality, 8 Aug 1954, Bonham 17 (L). Saipan: Chalankanoa, W coast of Isl., 1 Feb 1950, Fosberg 31278 (L). Tinian: Marpo valley, E of Tinian, 9–11 Jun 1946, Fosberg 24731 (L). NAURU. Without locality, 11 Dec 1990, McKee 45237 (L). Meneng, 29 Nov 1978, Fosberg 58663 (L). NEW CALEDONIA. South: Paita, Tiaré, 11 Dec 1955, McKee 3574 (L); Noumea, Yaouhe, 21 Sep 1902, Schlechter 14730 (E, L). NIUE. Vinivini: Muitauliku Rd., 11 Nov 1965, Sykes 170364 (L). VANUATU. Tanna: Lenakel, 21 Feb 1928, Kajewski 29 (K); Eromanga, Dillon bay, 17 May 1928, Kajewski 273 (K); Aneityum, Anelgauhay bay, 15 March 1929, Kajewski 900 (K).

19. *Ficus pseudoconcinna* Chantaras., sp. nov.—TYPE: INDONESIA. North Sulawesi: Dumoga–Bone proposed National Park, Bank of Tumpa river, 17 Sep 1984, T. C. Whitmore & K. Sidiyasa TCW 3429 (holotype: L; isotype: BO).

Laminae foliorum acuminatae acumen acutum, venae basales laterales ad 0.1–0.67 laminae longitudino eramosae. Fici axillares admodum infra folia sessiles vel pedunculo ad 0.2 cm longo, bractee basales persistentes, receptaculum subglobosum 0.3–0.6 cm diam. i.s., sine pilis interioribus.

Tree, up to 20 m tall. Branches drying pale to dark brown. Leafy twigs 1–2 mm thick, glabrous. Leaves articulate; lamina oblong to elliptic to lanceolate, 5–11 by 1–4 cm, (sub)coriaceous, apex acuminate, the acumen sharp, base cuneate to rounded, both surfaces glabrous; lateral veins 8–10 pairs, the basal pair up to 1/10–1/6 the length of the lamina, unbranched, tertiary venation reticulate to partly parallel to the lateral veins; petiole 2–3 cm long, ca. 1 mm thick, glabrous, the epidermis persistent; stipules 0.2–0.5 cm long, glabrous, persistent at the shoot apex and forming a terminal bud or sometimes caducous. Figs axillary or just below the leaves, in pairs or solitary, subsessile or with a peduncle up to 0.2 cm long; basal bracts 1.5–2 mm long, glabrous, persistent; receptacle subglobose, 0.3–0.6 cm diam. when dry, glabrous, turning from white to pink to purple to black at maturity, apex convex; ostiole 1–1.5 mm in diam., slightly prominent to flat, the upper ostiolar bracts glabrous; internal hairs absent. Staminate flowers

near the ostiole, sessile; tepals 2–3, connate, reddish brown. Pistillate flowers sessile or pedicellate; tepals 2–3, ovate or spatulate, free, reddish brown; ovary red brown. Figure 7.

**Distribution and Habitat**—This species is distributed in Indonesia (endemic on Sulawesi); on limestone cliffs or rocks (and river banks). Figure 4.

**Representative Specimens Examined**—INDONESIA. Sulawesi Selatan: Maros, Ulu Leang, Tompokbalang, 30 Sep 1975, *Soenarko* 355 (L). Sulawesi Utara: Dumoga–Bone proposed National Park, Bank of Tumpa R., 17 Sep 1984, *Whitmore & Sidiyasa* TCW 3429 (L).

**Note**—This species differs from *F. concinna* by the distinctly persistent basal bracts.

20. *FICUS RELIGIOSA* L., Sp. Pl. 2: 1059. 1753; Burm. f., Fl. Ind.: 225. 1768; Miq., Ann. Mus. Bot. Lugduno–Batavi 3: 287. 1867; King, Ann. Roy. Bot. Gard. (Culcutta) 1: 55, t. 67A. 1887; Hook.f., Fl. Brit. India 5: 513. 1888.; Gagnep. in Lecomte, Fl. Indo–Chine 5: 767. 1928; Corner, Wayside Trees 1: 683, t. 204, 206. 1940; Gard. Bull. Singapore 21: 6. 1965; C. C. Berg and Corner, Fl. Males. Ser. 1, 17(2): 608. 2005. *Urostigma religiosum* (L.) Gasp., Giorn. Bot. Ital. 2: 214. 1844; Ann. Sci. Nat. Bot., Sér. 3, 3: 343. 1845; Miq., London J. Bot. 6: 563. 1847; Fl. Ind. Bat. 1, 2: 333, t. 23. 1859.—TYPE: not indicated, *Hb. Linnaeus* 1240.4 and 1240.5 (LINN) are representative specimens.

*Ficus caudata* Stokes, Bot. Mat. Med. 4: 358. 1812.—TYPE: Specimen gathered in Fothergill's garden, *Obs.* 8388 (not found, LIV?, NMW).

*Ficus superstiosa* Link, Enum. Hort. Berol. Alt. 2: 449. 1822.—TYPE: not indicated (synonymy based on Berg and Corner 2005).

*Ficus rhynchophylla* Wall. ex Steud., Nomencl. Bot. ed. 2, 1: 637. 1840, nom. inval., in synonym. *Ficus religiosa* L. var. *rhynchophylla* (Wall. ex Steud.) Miq., Ann. Mus. Bot. Lugduno–Batavi 3: 287. 1867.—TYPE: not indicated (synonymy based on Berg and Corner 2005).

*Urostigma affine* Miq., London J. Bot. 6: 564. 1847.—TYPE: INDIA. Assam, Bengali, *Hb. Hooker s. n.*, s. d. (holotype: K).

*Ficus peepul* Griff., Notul. 4: 393. 1854.—TYPE: INDIA. Assam, Tezpoor (not seen).

[*Ficus religiosa* L. var. *cordata* Miq., Ann. Mus. Bot. Lugduno–Batavi 3: 287. 1867, nom. nud.]

Tree up to 25(–35) m tall. Branches drying (dark) brown or yellow–brown. Leafy twigs 2–7 mm thick, glabrous or white puberulous. Leaves articulate; lamina ovate to cordiform, (5–)10–21(–27) by (2.5–)7–13.5(–17) cm, coriaceous, apex caudate, the acumen sharp, base cordate to cuneate to truncate to subattenuate, both surfaces glabrous; lateral veins 7–11 pairs, the basal pair up to (1/8–)1/7–1/5(–1/4) the length of the lamina, usually branched, tertiary venation reticulate to subscalariform; petiole (2.5–)4–10(–12) cm long, glabrous; stipules 0.5–1 cm long, glabrous or ciliate, caducous or sometimes persistent at the shoot apex and forming a terminal bud. Figs axillary or below the leaves, solitary or in pairs, sessile; basal bracts 3, 3–5 mm long, puberulous or ciliate, apex usually lobed, persistent; receptacle subglobose, 0.5–0.8 cm diam. when dry, glabrous, turning from pink to purple to black at maturity, apex convex to flat; ostiole 2–2.5 mm in diam.; upper ostiolar

bracts glabrous and ciliate; internal hairs absent. Staminate flowers near the ostiole, sessile; tepals 3–4, ovate or oblong, free, reddish brown. Pistillate flowers sessile; tepals (2–)3–4, lanceolate or oblong, free, reddish brown; ovary sessile or stipitate, red brown, dark at apex to pale at base.

**Distribution and Habitat**—This species is distributed in Pakistan, India, Nepal, Sri Lanka, Bhutan, Myanmar, Thailand (Northern), Laos, and Vietnam. Cultivated worldwide in tropical areas.

**Uses**—Ornamental plants that are cultivated worldwide. They are sacred trees in Hinduism and Buddhism. In Sri Lanka people use the bark for dyeing, it contains tannin and fibers; leaves for silkworm (Corner 1981).

**Representative Specimens Examined**—BHUTAN. Samdrup Jongkha, 26°48', 91°28', 27 Jun 1979, *Grierson & Long* 2115 (K). INDIA. Maharashtra: Mumbai (Bombay), Karjat, North Konkan, 29 Jan 1949, *Fernandes* 65 (L). Tamil Nadu (Madras): Salem, Attur, Manmalai hill, Manmalai village, 7 Jul 1979, *Matthew* 23664 (L). Uttar Pradesh: Lakhimpur Kheri, Kheri, Upper Gangetic Plain, 31 Mar 1898, *Duthie* 22768 (K). West Bengal: N of Calcutta, 1863–4, *Griffith* KD 4591 (K). NEPAL. Eastern: Kosi, Tumlingta, Arun valley, 8 Nov 1972, *Wraber* 34784 (K). Central: Kaski, Pokhara, 18 Jun 1967, *Hara et al.* 26070 (L). LAOS. Saravan. Eutu B. Zlang Phu et Zateng, 22 Oct 1928, *Poilane* 16100 (P). PAKISTAN. Punjab: Rawalpindi, 29 Dec 1917, *Sprague* 4 (K). SRI LANKA. Central: Kandy, Jan 1979, *Kostermans* 27310 (K, L). Western: Colombo, 11 Feb 1937, *Coert* 1461 (L). MYANMAR. Mandalay: Maymyo, 25 Aug 1912, *Lace* 5925 (K). Sagaing: Shwebo, Jun 1891, *Huk* 67 (K). THAILAND. Tak, Bhumipon dam, Jedeeluang temple, 12 Dec 2502, *Boonnak* 561 (BKF). VIETNAM. Hanoi: Jun 1908, *d'Alleizette s. n.* (L); Giang, Chaudoc, Mt. Bai, Nov 1867, *Pierre* 269 (SING).

**Note**—Berg and Corner (2005) mention that *F. religiosa* occurs in the northern part of Thailand. However, the specimens from Thailand were mainly collected on temple grounds (thus cultivated plants). Even when found outside the temples, it remains unsure whether they occur naturally, are escaped, or are cultivated.

21. *FICUS SALICIFOLIA* Vahl, Symb. Bot. 1: 28, t. 23. 1790; Willd., Sp. Pl., ed. 4, 4 (2): 1149. 1806; Hutch., Fl. Trop. Afr. 6 (2): 115. 1916. *Ficus cordata* Thunb. subsp. *salicifolia* (Vahl) C. C. Berg, Kew Bull. 43: 82. 1988; Fl. Trop. E. Africa, Morac.: 63. 1989; C. C. Berg and Wiebes, African fig trees and fig wasps: 92. 1992. *Urostigma salicifolium* (Vahl) Miq., London J. Bot. 6: 556. 1847.—TYPE: YEMEN. *Forsskål* 780 (holotype: C; isotype: B).

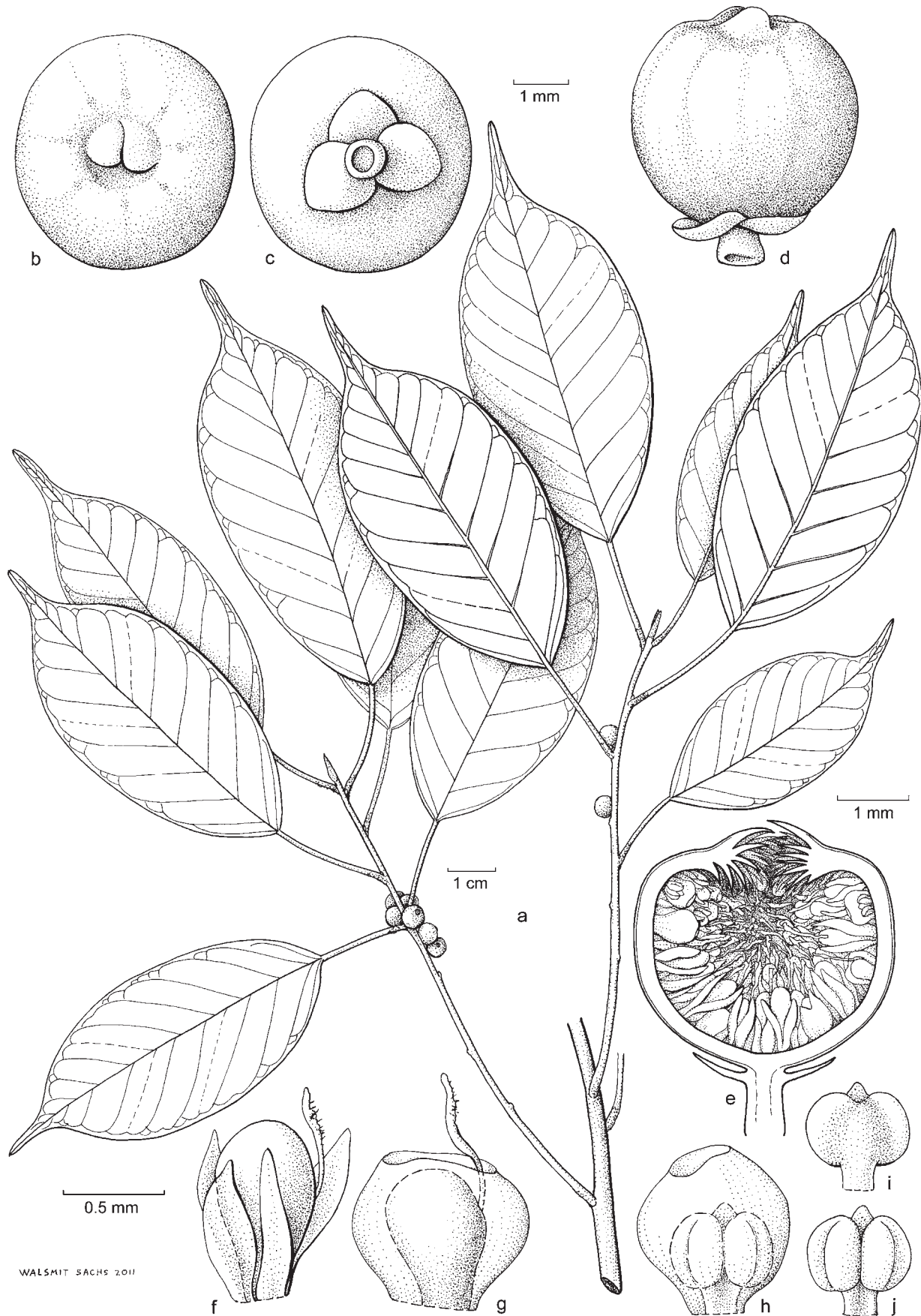
*Ficus indica* Forssk., Fl. Aegypt.–Arab.: 179. 1775, non L., 1753.—TYPE: YEMEN. *Forsskål s. n.* (holotype: C)

*Ficus religiosa* Forssk., Fl. Aegypt.–Arab.: 170. 1775, non L., 1753.—TYPE: YEMEN. *Forsskål s. n.* (holotype: C; isotype: B).

*Ficus salicifolia* Vahl var. *australis* Warb., Vierteljahrsschr. Naturf. Ges. Zürich 51: 139. 1906.—TYPE: SOUTH AFRICA. Transvaal, *Rehmann s. n.* (holotype: Z).

*Ficus pretoriae* Burt–Davy, Trans. Roy. Soc. S. Afr. 2: 365. 1912; Hutch., Fl. Trop. Afr. 6, 2: 116. 1916; F. White, Forest Fl. Northern Rhodesia: 32. 1962.—SYNTYPES: SOUTH AFRICA. Transvaal, Pretoria District, Magaliesberg, *Burt–Davy* 2750 & 2806 (K, PRE).

Shrub or tree up to 15 m tall. Branches drying grey to brown. Leafy twig 1.5–4 mm thick, grey brown, glabrous or white puberulous or white pubescent, periderm persistent. Leaves not articulate; lamina subovate, oblong, lanceolate or elliptic, 3–21(–27) by 0.9–7.5 cm, apex acuminate or obtuse, base (sub)attenuate to cuneate to obtuse to



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FIG. 7. *Ficus pseudoconcinna* Chantaras. (Moraceae). A. Twigs with leaves and figs. B. Ostiole. C. Basal bracts. D. Fig. E. Fig in longitudinal section. F. Pistillate flower with free tepals. G. Pistillate flower with connate tepals. H. Staminate flower with connate tepals. I. stamen (back side). J. stamen (front side). [T. C. Whitmore & K. Sidiyasa TCW3429 (L)]. Drawing: Anita Walsmit Sachs, 2011.



rounded to (sub)cordate, both surfaces glabrous; lateral veins 8–16 pairs, sometimes furcate, the basal pairs up to (1/10)–1/8–1/3 the length of the lamina, tertiary venation reticulate to partly parallel to lateral veins; petiole 0.7–6 cm long, glabrous or minutely puberulous at the base, epidermis persistent; stipules 0.3–1.7 cm long, glabrous or white puberulous, persistent at the shoot apex and forming a terminal bud or sometimes caducous. Figs axillary, just below the leaves or on up to 2–3 mm long spurs on the older wood, solitary, in pairs, or up to 4(–6) on spurs, subsessile or with a peduncle up to 0.6 cm long, glabrous or white puberulous; basal bracts 1.5–3 mm long, glabrous or white puberulous, persistent or sometimes caducous; receptacle subglobose, 0.5–1.2 cm diam. when dry, glabrous or puberulous, apex convex; ostiole 2–2.5 mm in diam., upper ostiolar bracts glabrous or puberulous; internal hairs present, minute and sparse. Staminate flowers near ostiole, sessile; tepals 3–4(–5), spatulate, ovate, or lanceolate, free, reddish brown. Pistillate flowers sessile or pedicellate; tepals 3–4(–5), ovate, lanceolate, or oblong, free, reddish brown; ovary red brown.

**Distribution and Habitat**—This species is distributed in Algeria, Niger, Libya, Congo, South Africa, Botswana, Egypt, Sudan, Zimbabwe, Uganda, Eritrea, Ethiopia, Kenya, Tanzania, Djibouti, Somalia, Saudi Arabia, Yemen, United Arab Emirates, and Oman; in woodland, often in rocky places, at altitudes up to 2,700 m.

**Representative Specimens Examined**—ALGERIA. Massif du Hoggar, 16 km NE of Tamanrasset, 5°38' E, 22°50' N, 19 Mar 1981, *Podlech 34881* (L). BOTSWANA. Central: Serowe, 14 km E. of Serowe to Palapye, 28 Nov 1994, *Cole 1055* (WAG). CONGO. Orientale: Ango, 7 Jul 1955, *Boutique 126* (K). DJIBOUTI. Tadjourah: between Tadjourah and Lake Assal, 5–6 Jan 1971, *Bavazzano & Lavarano s. n.* (K). EGYPT. Aswan: Gebel Elba, site 11, Mar 1997, *Sheded s. n.* (E). ERITREA. Southern (Dehub): Lungo R., between Majo and Addi-Cajé (Adi Keyh), 11 May 1902, *Pappi 5205* (P). ETHIOPIA. Dire Dawa: 27 km NE of Dire Dawa on road to Djibouti, 42°03' E, 9°45' N, 10 Apr 1972, *Gilbert 2322* (K), Mountain between Alemaya and Dire Dawa, 3 Dec 1975, *Jansen 4813* (WAG), About 13 km on road Dire Dawa to Harrar, 41°53'E, 9°32'N, 22 Feb 1969, *De Wilde 4718* (WAG). Harari: near Harar, slopes of Dengego (escarpment S of Dire Dawa), 11 Mar 1975, *Bos & Jansen 9861* (WAG). LIBYA. Djebel Uweinat, 12 Dec 1968, *Léonard 4959* (E, P). KENYA. Central: Kiambu, ca. 18 miles from Kikuya, Ndeiya Grazing Scheme, 36°32' E, 01°11' S, 20 Jan 1963, *Verdcourt 3548* (K). Rift Valley: Nakuru, Kenya K3, Lake Nakuru National Park, 16 Nov 1973, *Kutilek 158* (K). Eastern: Isiolo, Uaso Nyiro, at Buffalo Springs, between Isiolo and Archer's Post, 25 Jan 1961, *Polhill 334* (K). NIGER. Italemen: 9°20' E, 18°42' N, 24 Mar 1979, *Newby ZP140* (K), 24 Mar 1979, *Newby ZP 152* (K). OMAN. Ash Shargiyah: Wadi Dawgah, 058° 12' E, 22° 31' N, 23 Apr 1993, *McLeish 1777* (E); Wadi Bani Habib, 057° 36' E, 23° 04' N, 15 Jun 1993, *McLeish 2152* (E). Dhofar: Leger Waterhole, 055° 05' E, 17° 06' N, 16 Sep 1993, *McLeish 2478* (E). SAUDI ARABIA. Makkah (Mecca): near market Mecca, 23 Aug 1949, *Nur s. n.* (SING). SOMALIA. Awdalland: Borama, 26 Jul 1957, *Hemming 1290* (K). Puntland: Bari, Galgalla, W of Karin, 6 Dec 1985, *Thulin 5628* (K). Somaliland: Upper Sheik, 12 Feb 1954, *Bally 9649* (K). SOUTH AFRICA. Gauteng: Wild part of Pretoria National Botanical Garden, 28°16'52" E, 25°44'13" S, 6 May 2005, *Neohutalu & Nkuna 956* (K). KwaZulu-Natal: Ngotshe, Leuwsburg, Craigadam Forest, Ithala Nature Reserve, 24 Jan 1978, *Mc Donald 503* (K). SUDAN. Northern State: Dafur, Jebel Marra, Kelok Hing, 14 Feb 1964, *Wickens 1296* (K). TANZANIA. Arusha: Masai, 55 km N of Arusha, 10 Dec 1964, *Leippert 5337* (K). UGANDA. Karamoja, Dodoth, Kaabong, 17 Sep 1950, *Dawkins 645* (K). Northern: Kitgum, Chua, *Eggeling 2407* (K). UNITED ARAB EMIRATES. Ras Al Khaimah: 11 km E of Ras Al Khaimah town, Wadi Haqil 4065/28560, 4 Nov 1992, *Martin 105* (E). YEMEN. Socotra: *Balfour 448, 410, 476* (E); Feb–Mar 1880, *Balfour 354, 646, 647* (E). ZIMBABWE. Midlands: Kwe Kwe, Sable Park, 10 Sep 1975, *Stephens 271* (U).

**Notes**—This is the only species of the subsection that shows persistent and caducous basal bracts. Berg and Wiebes

(1992) treated *F. salicifolia* as a subspecies of *F. cordata*. Here we reinstate its species status, because of constant differences with *F. cordata* and *F. lecardii*. For more differences see the second note under *F. cordata*.

The figs are usually solitary or in pairs when axillary or they are in groups of up to 4 on a spur. However, two samples from Ethiopia—*De Wilde 4718* and *Jansen 4813*—show up to 4 axillary figs and up to 6 on a spur.

22. FICUS SAXOPHILA Blume, Bijdr. Fl. Ned. Ind. 9: 437. 1825; Decne., Ann. Mus. Hist. Nat. Paris 3: 493. 1834; Miq., Ann. Mus. Bot. Lugduno-Batavi 3: 260, 287. 1867; King, Ann. Roy. Bot. Gard. (Culcutta) 1: 17, t. 12, t. 81B. 1887; Koord. & Valetton, Bijdr. Boomsort. Java 11: 56. 1906; Merr., Philipp. J. Sci. 1, Suppl.: 47. 1906; Elmer, Leaf. Philipp. Bot. 2: 537. 1908; Koord., Atlas 4: t. 702. 1916; Merr., Enum. Philipp. Flow. Pl. 2: 65. 1923; Elmer, Leaf. Philipp. Bot. 9: 3474. 1937; Backer, Blumea 6: 303. 1948; Corner, Gard. Bull. Singapore 21: 6. 1965; C. C. Berg and Corner, Fl. Males. Ser. 1, 17 (2): 610. 2005; C. C. Berg, Thai Forest Bull., Bot. 35: 22. 2007. *Urostigma saxophilum* (Blume) Miq., Fl. Ind. Bat. 1, 2: 333. 1859. *Ficus petrophila* Hassk., Cat. Hort. Bot. Bogor.: 75. 1844, nom. superfl.—TYPE: INDONESIA. Java, Bantam, *Reinwardt s. n.* (holotype: L).

Tree up to 35 m tall. Branches drying dark brown. Leafy twig (1.5)–2–4.5 mm thick, glabrous or puberulous, periderm persistent. Leaves articulate; lamina ovate to elliptic, 3.5–22.5(–24) by 2–11.3(–15) cm, (sub)coriaceous, apex acuminate, the acumen sharp, base cordate to rounded, both surfaces glabrous; lateral veins 4–9 pairs, usually furcate away from the margin, the basal pair up to 1/5–1/3 the length of the lamina, usually branched, tertiary venation reticulate to subscalariform; petiole 2–7 cm long, glabrous or puberulous; stipules 0.3–1 cm long, glabrous, puberulous or tomentose, persistent at the shoot apex and forming a terminal bud or sometimes caducous. Figs axillary or just below the leaves, solitary or in pairs, sessile; basal bracts broad ovate, (1.5)–2–4.5 mm long, persistent, glabrous, puberulous or ciliate, apex usually lobed; receptacle subglobose or depressed–globose, 0.5–0.9 cm diam. when dry, glabrous or sometimes minutely puberulous, sometimes maculate, red at maturity, apex convex to flat; ostiole ca. 2.5 mm in diam., prominent, upper ostiolar bracts glabrous, margin ciliate; internal hairs absent. Staminate flowers near ostiole, sessile; tepals 2 or 3, oblong or ovate, free, red brown or reddish. Pistillate flowers sessile or pedicellate; tepals (2)–3–4, ovate or lanceolate, free or sometimes connate at base, red brown; ovary dark red.

**Note**—For difference from *F. prasinicarpa* see note under latter.

#### 22.1 FICUS SAXOPHILA Blume subsp. SAXOPHILA

Leafy twig 2–4.5 mm thick. Lamina 7–24 by 4–15 cm; petiole 2–5.6(–7) cm long, glabrous; stipules glabrous or puberulous. Basal bracts (2.5)–3–4.5 mm long, glabrous, puberulous or ciliate; receptacle 0.6–0.9 cm in diam. when dry, glabrous or sometimes minutely puberulous.

**Distribution and Habitat**—This subspecies is distributed in Vietnam, Thailand, Indonesia (Java, Lesser Sunda Islands, Sulawesi, Papua), Philippines, and Australia (Christmas Island, Indian Ocean); in coastal vegetation, often in rocky places, sometimes in forest, at low altitudes.

**Representative Specimens Examined**—AUSTRALIA. Christmas Island: Audruo's Lookout, Oct 1904, *Ridley 113* (SING); Steep point, Oct 1904, *Ridley 110* (SING). INDONESIA. Java: 1859–1860, *Teijsmann 46* (L). Nusa Tenggara Timur: West Timor, Roti, Baa, Oct 1925, *Vearsts s. n.* (L). Papua: Manokwari, Dessa Mami, 27 Aug 1948, *Kostermans 335* (bb. 33520) (K, L, SING). Sulawesi Selatan: Malili, Kawata, 10 Oct 1932, *Neth. Ind. For. Service CEL./V-188* (L, SING). PHILIPPINES. Bataan: Lamao R., Mt. Mariveles, Feb 1905, *Meijer 2588* (K, SING). Cebu: Mar 1912, *Ramos BS 11045* (K, L). Negros oriental: Dumaguete (Cuernos mts.), Mar 1908, *Elmer 9644* (K, L). Sorsogon: Irosin (Mt. Bulusan), Oct 1915, *Elmer 14427* (K, L). THAILAND. Saraburi, Phraputtath, Phraputtath temple, 18 Sep 2010, *Chantarasuwan 180910-1* (L, THNHM). VIETNAM. Ho Chi Minh City (Saigon): 20 May 1921, *Poilane 1990* (L).

22.2 *FICUS SAXOPHILA* Blume subsp. *CARDIOPHYLLA* (Merr.) C. C. Berg, Thai Forest Bull., Bot. 35: 23. 2007. *Ficus cardiophylla* Merr., Univ. Calif. Publ. Bot. 13: 129. 1926.—TYPE: VIETNAM. Cho Ganh, *Petelot 1291* (holotype: A; isotype: P).

*Ficus bonii* Gagnep. Notul. Syst. (Paris) 4: 86. 1927.—TYPE: VIETNAM. Lang-he, Ninh-binh region, *Bon 4045* (holo: P).

Leafy twig 1.5–2 mm thick. Lamina cordiform, 3.5–10.6(–11.3) by 2–4.7(–7.5) cm; petiole 1–2.8 cm long; stipules puberulous. Basal bracts 1.5–2 mm long, puberulous; receptacle 0.5–0.6 cm in diam. when dry, usually minutely puberulous. Figure 5 H.

**Distribution and Habitat**—This subspecies is distributed in China (Prov. Guangxi), Thailand, and Vietnam; on limestone hills, at altitudes up to 350 m.

**Representative Specimens Examined**—CHINA. Guangxi: Lungchow, *Morse 144* (K). THAILAND. Chumphon: Muang, Krating, Wat Tham Khao Khun Krating, 12 Jun 2006, *Williams 1669* (L). Saraburi: Tap Kwang, 3 Oct 1963, *Smitinand & Sleumer 1342* (BKF, L, SING); Phraphutthabath, Khunkhol, Tham Makak, near Bo Phran Lang-ueua, 20 Nov 2005, *Pooma et al. 5716* (L). Satun: Taratao Isl., on cliff along the beach, 17–22 May 2005, *Tunming & Gardner s. n.* (L). VIETNAM. Tankeuin: 25 Dec 1885, *Balansa 745* (L).

23. *FICUS SUBPISOCARPA* Gagnep., Notul. Syst. (Paris) 4: 95. 1927; in Lecomte, Fl. Indo-China 5: 769. 1928; C. C. Berg and Corner, Fl. Males. Ser. 1, 17(2): 611. 2005; C. C. Berg, Thai Forest Bull., Bot. 35: 23. 2007.—TYPE: VIETNAM. Near Haipong, *Balansa 769* (holotype: P).

Shrub or tree up to 10(–15) m tall. Branches drying dark brown or gray brown. Leafy twig (1.5–)2.5–8 mm thick, (sub)glabrous or white puberulous, periderm flaking off. Leaves articulate; lamina ovate to elliptic to oblong, 4–16(–24) by 2–9(–13) cm, (sub)coriaceous, apex acute to subacuminate, the acumen blunt, base rounded to obtuse to cuneate to subattenuate, rarely cordate, both surfaces glabrous; lateral veins (5–)7–11 pairs, the basal pair up to 1/10–1/4(–1/3) the length of the lamina, unbranched, tertiary venation reticulate to partly parallel to the lateral veins; petiole (1.5–)2.3–4.5(–7) cm long, glabrous or sometimes puberulous at the base, epidermis persistent or flaking off at the base of the glabrous petiole; stipules 0.3–1.1 cm long, puberulous, persistent at the shoot apex, usually forming an ovoid terminal bud. Figs usually on up to 0.5 cm long spurs on the older wood, sometimes also axillary or just below the leaves, 1–4 together but solitary or in pairs in the leaf axils; peduncle 0.1–0.8(–1.1) cm long, glabrous or minutely puberulous; basal bracts 1–2.5 mm long, glabrous, caducous; receptacle subglobose or subpyriform, 0.7–1.2(–1.4) cm diam. when dry, glabrous, surface wrinkled when dry, turning from whitish to pink to

purple or black at maturity, apex flat or convex; ostiole (1.5–)2–3 mm in diam., upper ostiolar bracts glabrous; internal hairs usually absent or sometimes minute and sparse. Staminate flowers near the ostiole, sessile; tepals 2–3, connate, red brown. Pistillate flowers sessile or with a short pedicel; tepals 2–3, usually connate, reddish brown; ovary red brown or dark red.

**Note**—See note under *F. caulocarpa* for differences. For differences with *F. superba* see note under latter.

23.1 *FICUS SUBPISOCARPA* Gagnep. subsp. *SUBPISOCARPA* C. C. Berg, Thai Forest Bull., Bot. 35: 24. 2007. *Ficus superba* (Miq.) Miq. var. *japonica* Miq., Prolus. Fl. Jap.: 132. 1866/67; Ann. Mus. Bot. Lugduno-Batavi 2: 200. 1865; Corner, Gard. Bull. Singapore 21: 7. 1965.—TYPE: JAPAN. Distr. Kowara, *Siebold s. n.* (holotype: L).

Shrub or tree up to 7 m tall; leafy twig (sub)glabrous. Lamina: lateral veins (5–)7–10 pairs, the basal pair up to 1/10–1/4 the length of the lamina; petiole glabrous or puberulous, epidermis persistent or sometimes flaking off at base; stipules 0.3–0.7(–1.1) cm long, (minutely) puberulous. Figs on spurs or axillary, up to 4 together; peduncle 0.1–0.7(–0.9) cm long, glabrous or whitish puberulous; basal bracts 1–2 mm long, glabrous; receptacle 0.7–1 cm diam. when dry; ostiole 1.5–2.5 mm in diam.; internal hair absent.

**Distribution and Habitat**—This subspecies is distributed in China (Prov. Guangdong, Hainan, Hong Kong), Taiwan, Cambodia, Vietnam, Indonesia (Moluccas?, see note), and Japan; in evergreen or deciduous forest, on limestone rock, from low altitudes up to 1,300 m.

**Representative Specimens Examined**—CAMBODIA. Kampot: North Kampot, Srê-Krasang, 10 Feb 1928, *Poilane 14775* (L). CHINA. Guangdong (Kwangtung): Sin-fung, Wamei Tong, Sha Lo Shan, 1–31 Dec 1937, *Taam 237* (L). Hainan: Yaichow, Feb 1983, *How & Chun 70185* (K). Hong Kong: High Isl., 23 Feb 1970, *Hu 9525* (K); Dog Stomach village, Shatin, 28 Nov 1968, *Hu 6293* (K); Moyenne, 19 Dec 1894, *Bodinier 1003* (P). INDONESIA. Maluku: Seram, 1859–1861, *de Vriese s. n.* (L). JAPAN. Kyushu: Kagoshima, Mt. Kaimon, 17 Apr 1927, *Kondo 2210* (L). Okinawa: Yaeyama Gunto, Iriomote, between Shira-hama and Sonai, 17 Aug 1951, *Walker & Tawada 6523* (L); Ogami Jima, 25 Aug 1956, *Fosberg 38416* (L). Shikoku: Kochi, Okinoshima, Sukumo-shi, 24 Nov 1966, *Kitamura & Murata 2592* (L). TAIWAN (Formosa). Takuw plain, Apr 1895, *Henry 2030* (K); Savote, Matouan, 8 May 1912, *Price 437* (K). VIETNAM. Ninh Thuan: Phanrang, Cana, 24 Oct 1925, *Poilane 12425* (A, P).

**Cultivated**—AUSTRALIA. New South Wales: Grafton, 11 Nov 1934, *White 11158* (L).

**Note**—Only one specimen collected by *de Vriese* in the Moluccas (Seram). This is a strange gap in the distribution. However, the data on the labels of De Vriese are unreliable, but always collected in Indonesia, which means that there is always a disjunct distribution. On the other hand, the collected material may also be a cultivated specimen.

23.2 *FICUS SUBPISOCARPA* Gagnep. subsp. *PUBIPODA* C. C. Berg, Thai Forest Bull., Bot. 35: 24. 2007.—TYPE: THAILAND. Chaiphaphum, Thungkamang, *van Beusekom et al. 4218* (holotype: BKF; isotypes: K, L, P).

Tree up to 15 m tall; leafy twig whitish puberulous. Lamina: lateral veins 9–11 pairs, the basal pair up to 1/5–1/3 the length of the lamina; petiole puberulous at base and this part usually flaking off; stipules 0.6–1.1(–1.5) cm long, densely puberulous. Figs mainly on spurs, up to 3 together;

peduncle 0.3–0.8(–1.1) cm long, whitish puberulous; basal bracts 1.5–2.5 mm long, glabrous or minutely puberulous; receptacle 0.8–1.2(–1.4) cm diam. when dry; ostiole 2–3 mm in diam.; internal hairs present, minutely and sparse. Figure 5 A.

**Distribution and Habitat**—This subspecies is distributed in Myanmar, Thailand, Cambodia, Vietnam, Peninsular Malaysia, and Singapore; in evergreen or deciduous forest, at altitudes up to 1,400 m.

**Representative Specimens Examined**—CAMBODIA. Kampong Speu: Chbar Mon, 10 km W of Phom Penh, 104° 30' E, 11° 40' N, 3 Apr 2001, *Huq et al.* 10864 (L). MALAYSIA. Kedah: Pulau Adang, Apr 1894, *Anonymous* 15727 (K). Penang: Balik Pulau, 24 Jan 1910, *Anonymous* 14146 (K). Perak: Pulau Pangkor, near Telok Ketapang, 18 Aug 1981, *Chin & Kusen* 3123 (L). Selangor: Pulau Angsa, 21 Nov 1956, *Burkill & Shah* HMB 998 (L, SING). MYANMAR. Bago (Pegu): 15 Aug 1872, *Kurz* 3134 (K). Rangoon (Yangon): Jan 1908, *Meedold* 8149 (K). Tanintharyi: Tenasserim and Andamans, 1862–3, *Helper* KD 4613 (K, L). SINGAPORE. Cathedral Compound, 14 Dec 1934, *Corner s. n.* (SING). THAILAND. Chiangmai: Hot, Rd. No. 108, Maesariang–Hot, Mai Moeng Nao Arboretum, *Pooma et al.* 5814 (L). Khon Kaen: Muang, Tha Pra, 10 Jun 1970, *Smitinand* 11031 (BKF). Nakhon Ratchasima: Nong-ra-wieng, 26 Jan 1995, *Phengklai & Garcia* 207 (BKF). Prachuap Khiri Khan: Hua Hin, Wat Khao Sanam–chai, Nong-kae, 99° 58' 02" E, 12° 31' 16" N, 8 Jan 2002, *Chayamarit et al.* 3036 (BKF). Phangnga: Ko Surin Nua, 16 Apr 1976, *Chemsirivattana & Smitinand* 2110 (BK). Trat: Lam Hob, Lam Takeam, Ko Chang, 11 Jul 1955, *Boonnak* 479 (BKF). VIETNAM. Central Vietnam, without locality, 25 Nov 1941, *Poillane* 30152 (L).

24. *FICUS SUPERBA* (Miq.) Miq., *Ann. Mus. Bot. Lugduno-Batavi* 3: 264, 287. 1867; King, *Ann. Roy. Bot. Gard. (Culcutta)* 1: 59, t. 72. 1887; Gagnep. in *Lecomte, Fl. Indo-China* 5: 773. 1928; Corner, *Gard. Bull. Singapore* 10: 287. 1939; *Wayside Trees* 1: 679. 1940; *Gard. Bull. Singapore* 21: 7. 1965; C. C. Berg and Corner, *Fl. Males. Ser. 1*, 17 (2): 612. 2005. *Urostigma superbum* Miq., *Pl. Jungh.*: 46. 1851; *Fl. Ind. Bat.* 1, 2: 334. 1859.—TYPE: INDONESIA. Java, Koang, *Junghuhn* 285 (holotype: L).

*Ficus tenuipes* S. Moore, *J. Bot.* 63, suppl.: 107. 1925.—TYPE: INDONESIA. Timor, Kailakuk, *S. Moore* 3771 (holotype: BM).

*Ficus timorensis* Decne., *Nouv. Ann. Mus. Hist. Nat. Paris* 3: 495. 1834; Miq., *Ann. Mus. Bot. Lugduno-Batavi* 3: 287. 1867, p.p., in syn. sub *F. superba*; King, *Ann. Roy. Bot. Gard. (Culcutta)* 2: 185. 1887.—TYPE: INDONESIA. Timor, *Herb. Mus. Paris no. 9* (holotype: P?, n.v.; isotype: L).

*Urostigma accedens* Miq., *Fl. Ind. Bat.* 1, 2: 347. 1859.—TYPE: INDONESIA. Timor (not found yet).

Tree up to 30 m tall. Branches drying brown to blackish. Leafy twigs (3–)4.5–12 mm thick, subglabrous or white puberulous. Leaves articulate; lamina ovate to oblong to elliptic to obovate, (6–)9–25(–27.8) by (3–)5.1–13.6 cm, subcoriaceous, apex (sub)acuminate, the acumens blunt, base rounded to cuneate or subcordate, both surfaces glabrous; lateral veins (6–)7–9(–11) pairs, usually furcate away from the margin, the basal pair up to 1/7–1/3 the length of the lamina, sometimes branched, tertiary venation reticulate to partly parallel to the lateral veins; petiole 4–14.5(–20) cm long, glabrous or sometimes puberulous at the base, epidermis persistent; stipules 0.5–1.6(–2.7) cm long, densely white woolly–tomentose, persistent and forming an ovoid terminal bud or sometimes all of them caducous. Figs on up to 0.6–1.2 cm long curved spurs on the

older wood, up to 5 together; peduncle 0.6–1.6 cm long, densely puberulous; basal bracts 2–5 mm long, puberulous, caducous; receptacle subpyriform or subglobose, (0.8–)1.1–1.5 cm diam. when dry, glabrous or usually white tomentose, and the surface wrinkled, white to pink to purple to black at maturity, apex convex; ostiole 2–3 mm in diam., upper ostiolar bract glabrous; internal hairs absent. Staminate flowers near the ostiole, sessile or pedicellate; tepals 2–3, connate, reddish brown. Pistillate flowers sessile or pedicellate; tepals 2–3, ovate or lanceolate, sometimes connate, reddish brown; ovary dark red. Figure 5 B.

**Distribution and Habitat**—This species is distributed in Thailand, Cambodia, Malay Peninsula, Singapore, Indonesia (Sumatra, Java, Lesser Sunda Islands), Timor Este; in coastal forest and monsoon forest, often in rocky places, at low altitudes.

**Representative Specimens Examined**—CAMBODIA. Without locality, Dec 1837, *Pierre* 1330 (P). INDONESIA. Java: Jawa Tengah, Semarang, *Koorders* 9191 (L); Pekalongan, *Koorders* 13521 (L); Jawa Timur: Situbondo, Besuki (Besoeeki), *Koorders* 9345 (L). Nusa Tenggara Barat: Sumbawa, Sultanat Bima, 11 Dec 1909, *Elbert* 3828 (L). Nusa Tenggara Timur: Flores, Wai buba, Makantarak, 19 Apr 1984, *Afriastini* 1573a (L); Sumba, *J. A. J. Verheijen* 4185; West Timor, 18 Jun 1926, *bb* 9811 (L). Sumatra: Riau, Natuna, S of Ranai, Boengoeran, 13 Apr 1928, *van Steenis* 1323 (L, SING). MALAYSIA. Kedah: Pulau Langkawi, Tanjung Burau, 17 Mar 1990, *Kamarudin* FRI 31380 (K). Penang: Tanjung Tokong, 23 Jun 1937, *Henderson* SFN 21413 (SING). Kelantan: Kota Bharu, 21 Apr 1937, *Corner s. n.* (SING). Pahang: Pulau Tioman, Pulau Tulai, 27 May 1927, *Nor* 1855 (SING). Trengganu: Kuala Trengganu, 12 May 1892, *Holtum* SFN 15234 (K, SING). SINGAPORE. Changi Rd., junction of Bedok, 22 Mar 1984, *Kiah & Leong* 686 (SING). THAILAND. Chon Buri: Sattahip, Toong Brong, 9 Jun 1971, *Maxwell* 71–404 (BK). Prachuap Khiri Khan: Pran Buri, Khao Sam Roi Yot National Park, 18 Aug 2002, *Middleton et al.* (BKF, L). Saraburi: Muang, Sahn Lahn forest, 17 Mar 1974, *Maxwell* 74–189 (BK). Trang: Ko Kradan, 11 Feb 1966, *Hansen & Smitinand* 12228 (BKF). TIMOR ESTE. Dili: Dom Aleixo, Bairro do Pité, 22 Feb 2005, *Paiva & Sousa* T 625 (L).

**Notes**—This species is usually confused with *F. subpisocarpa*, but can easily be distinguished by the densely, white woolly–tomentose stipules and the up to 5 figs on long curved spurs (stipules puberulous, up to 4 figs on short spurs in *F. subpisocarpa*).

Specimen *Verheijen* 4185 from Sumba, Indonesia, shows a densely brown instead of white tomentum on the receptacle.

25. *FICUS TSJAKELA* Burm. f., *Fl. Ind.*: 227. 1768; Cooke, *Fl. Bombay* 2: 650. 1908; Worthington, *Ceylon Trees*: 417. 1959; Matthew, *Fl. Tam. Carnatic* 3: 1530. 1983; Manilal, *Fl. Silent Valley*: 260. 1988. *Tsjakela* Rheede, *Hort. Malab.* 3: 87, t.64. 1682, nom. inval. *Urostigma tjakela* (Burm.f.) Miq., *London J. Bot.* 6: 567. 1847. *Ficus tjakela* (Burm.f.) Miq., *Ann. Mus. Bot. Lugduno-Batavi* 3: 287. 1867, nom. illig.; King, *Ann. Roy. Bot. Gard. (Culcutta)* 1: 57, t.70, t. 84X. 1887; King in Hook., *Fl. Brit. India* 5: 514. 1888; Fisher in Gamble, *Fl. Pres. Madras*: 1362. 1928. *Ficus tsjahela* (Burm.f.) M. F. Barrett, *Bull. Torrey Bot. Club* 37(1): 86. 1946, nom. Illig.; Corner, *Gard. Bull. Singapore* 21: 7.; Saldanha and Nicolson, *Fl. Hassan Dist.*: 83. 1976; Corner, *Revis. Handb. Fl. Ceylon* 3: 237. 1981; Nair and Nayar, *Fl. Courtallum* 1: 42. 1986.—TYPE: Rheede (1682) t. 64, based on *Tsjakela* Rheede.

*Urostigma caulobotryum* Miq., *London J. Bot.* 6: 568. 1847.—TYPE: INDIA. Peninsula Ind. Orientalis, *Herb. Wight* KD 2638 (= no. 26) (holotype: E; isotypes: L, U).

*Urostigma ceylonense* Miq., *London J. Bot.* 6: 570. 1847.—TYPE: SRI LANKA. Columbo, Kiribella vel Kiripaella

Cingal, 7 Apr. 1796, *Heyne* ? in herb. Arnott (holotype: K, not yet found).

*Ficus infectoria* Willd., Sp. Pl., ed. 4, 4 (2): 1137. 1806.—TYPE: *Willdenow?* (holotype B, probably lost).

Tree up to 25 m tall. Branches drying dark brown. Leafy twig (1.5–)3–5 mm thick, glabrous, brown, periderm persistent. Leaves articulate; lamina ovate to oblong or lanceolate 8.5–18.2 by 3.7–7.6 cm, coriaceous, apex caudate or acuminate, the acumen blunt, base cuneate, obtuse, or rounded, both surfaces glabrous and upper surface usually shining; lateral veins 8–14 pairs, the basal pair up to (1/7–)1/4–1/3 the length of the lamina, unbranched, tertiary venation reticulate; petiole 1.9–4.5 cm long, glabrous, epidermis persistent; stipules 0.5–1.5 cm long, glabrous, persistent at the shoot apex and forming a terminal bud. Figs just below the leaves or on 1–3 mm long spurs on the older wood, solitary, in pairs or up to 8 together on the spurs, sessile; basal bracts 2–2.5 mm long, glabrous, apex usually lobed, persistent; receptacle subglobose or depressed-globose, 4–7 mm diam. when dry, glabrous, apex convex or flat; ostiole 1.5–2 mm in diam., upper ostiolar bracts glabrous; internal hairs absent. Staminate flowers near the ostiole, sessile; tepals 2–3, ovate or broadly lanceolate, free, red brown. Pistillate flowers sessile or pedicellate; tepals 3–4, ovate or broadly lanceolate, free, red brown; ovary red brown.

**Distribution and Habitat**—This species is distributed in India, Sri Lanka; in grassland, rocky hills, from sea level to ca. 1,475 m.

**Representative Specimens Examined**—INDIA. Karnataka: Mysore, Hassan, Yettinahalla, Shiradi ghat, 5 Apr 1972, *Ramamoorthy & Gandhi* HFP 2737 (K). Tamil Nadu (Madras): Nilgiris, Sep 1883, *Gamble* 12915 (K); Dindigul, Kodaikanal, Shembaganur–Periakulam coolie path, 9 Feb 1985, *Matthew RHT* 40999 (K); Dharmapuri, Harur, Thally, Devarbetta, 19 Mar 1980, *Matthew RHT* 27128 (L); Salem, Yercaud, Yercaud, 26 Apr 1977, *Arockiasamy RHT* 7437 (K). SRI LANKA. North Central: Anuradhapura, Ritigala Strict Natural Reserve, 9 Aug 1973, *Jayasuriya* 1292 (L). Sabaragamuwa: Ratnapura, ca. 10 miles SE of Godakewela on the Pelmadulla–Hambantota Rd., 24 Nov 1974, *Davidse & Sumithraarachchi* 8789 (K, L). Central: Kandy, Peradeniya, Ganoruwa hill, 6 Jun 1968, *Wirawan* 615 (L, K). Western: Colombo, 12 Aug 1952, *Worthington* 6000 (K).

**Note**—There is much confusion regarding the epithet “tsjakela,” “tjakela,” and “tsjahela.” Burman (1768), as the first author, used “tsjakela” and the name refers to Rheede’s (1682) name tsjakela. Therefore, Miquel’s (1867) name “tjakela”, and M. F. Barrett’s (1946) “tsjahela” are considered to be incorrect spelling.

26. *FICUS VERRUCULOSA* Warb., Bot. Jahrb. 20: 166. 1894; Hutch., Fl. Trop. Afr. 6, 2: 114. 1916; C. C. Berg et al., Fl. Cameroun 28: 154, Fig. 51. 1985; C. C. Berg, Fl. Trop. East Afr., Morac.: 63. 1989; Kirkia 13: 260. 1990; Fl. Zambes. 9, 6: 56. 1991; C. C. Berg and Wiebes, African fig trees and fig wasps: 93. 1992; F. White and Dows.–Lem., Evergreen Forest Fl. Malawi: 393. 2001.—TYPE: ANGOLA. Huila, between Monino and Eime, *Welwitsch* 6375 (holotype: B; isotypes: K, P).

*Ficus verruculosa* Warb. var. *stipitata* Mildb. & Burret, Bot. Jahrb. 46: 206. 1911.—TYPE: CAMEROUN. Garua, *Ledermann* 3417 (holotype: B).

*Ficus praeruptorum* Hiern, Cat. Afr. Pl. 1, 4: 1004. 1900.—TYPE: ANGOLA. *Welwitsch* 6373 (holotype: BM; isotypes: B, K, P).

Shrub or small tree up to 5 m tall. Branches drying brown to dark brown. Leafy twigs 1.5–3.5(–5) mm thick, glabrous, puberulous or tomentose, periderm persistent. Leaves not articulate; lamina ovate, elliptic, oblong or lanceolate, 3.5–13.5(–20) by 1.4–5.3(–8.5) cm, coriaceous, apex (sub)acute to obtuse to rounded, base obtuse to rounded to subcordate; both surfaces glabrous, the upper surface usually shining; lateral veins 8–13(–16) pairs, the basal pair up to (1/10–)1/6–1/3 the length of the lamina, unbranched, tertiary venation reticulate, partly parallel to lateral veins; petiole 0.4–2(–3) cm long, glabrous or minutely puberulous, epidermis persistent; stipules 0.3–1.5 cm long, glabrous or puberulous, persistent at the shoot apex and forming a terminal bud or caducous. Figs axillary, just below the leaves or on short spurs on the older wood, solitary or in pairs or up to 4 together on the spurs; peduncle 0.2–0.5 cm long, glabrous or puberulous; basal bracts 1–1.5 mm long, glabrous or puberulous, persistent; receptacle subglobose, 0.5–1 cm diam. when dry, glabrous or minutely puberulous, surface wrinkled when dry, dark purple to dark red at maturity, apex flat or convex; ostiole ca. 2 mm in diam., upper ostiolar bracts ciliate; internal hairs absent. Staminate flowers near the ostiole, sessile; tepals 2–3, ovate or spatulate, free, reddish brown. Pistillate flowers sessile or pedicellate; tepals 2–3(–4), ovate or lanceolate, sometimes connate at the base, reddish brown; ovary red brown.

**Distribution and Habitat**—This species is distributed in Guinea, Benin, Nigeria, Cameroon, Chad, Congo, Angola, Namibia, South Africa, Botswana, Zambia, Zimbabwe, Uganda, Rwanda, Burundi, Kenya, Tanzania, Malawi, and Mozambique; in open grassland and areas with rocky woodland, along streams or in swamps as a low bush, altitudes up to 1,200 m.

**Representative Specimens Examined**—ANGOLA. Benguella, Bailundo, *Wellman* 1906 (K). Huila, between Monino and Eime, *Welwitsch* 6375 (B, K). Malange, 1905, *Gossweiler* 1006 (K). BENIN. Atakora: Natitingou, Taneka–Koko, R. Taneka, 1° 30.95' E, 9° 52.48' N, 27 Jan 2006, *van der Maesen* 7587 (WAG). BOTSWANA. Ngamiland: Moremi Wildlife Reserve, Gadikwe Isl., 30 Jul 1984, *Barker & Reid* 35 (K). BURUNDI. Bururi: Buranga (Dunga), 29° 54' E, 4° 09' S, 20 Oct 1977, *Reekmans* 6548 (K, WAG). Kirundo: Kanyinya, lake Oiseaux, 10 Dec 1967, *Lewalle* 2494 (K). Ruyiki: Bukemba, Mosse, 30° 10' E, 3° 55' S, 11 Jun 1976, *Reekmans* 5279 (WAG). CAMEROON. Northwest: Bamenda, 1958, *Hepper* 2074 (K). North, ca. 10 km. S of Garoua, 18 Dec 1964, *de Wilde & de Wilde-Duyffes* 4987 (K, WAG). CHAD. Chari oriental: Ndelle, 17–20 Dec 1902, *Chevalier* 6866 (K). CONGO. Katanga: Lubumbashi, 8 km of Lubumbashi, Sep 1951, *Schmitz* 3655 (K). GUINEA. Faranah: Dinguiray, Dec 1936, *Jacques-Félix* 1485 (P). KENYA. Western: Kitale, 13 May 1953, *Bogdan* 3733 (K). MALAWI. Central: Ntchisi, Ntchisi forest reserve, 14 Apr 1991, *Radcliffe-Smith* 5982 (K, WAG). North: Mzimba, Mzuzu, Lunyangwa R., 11 Oct 1973, *Pawek* 7369 (K, WAG). MOZAMBIQUE. Maputo: Zitundo and Ponta do Ouro, 31 Jan 1979, *Schäfer* 6680 (K, WAG). Tete: Fingee, Nhimbe, Camarira R., 19 Aug 1976, *Macuácuca & Costa* 213 (WAG). NAMIBIA. Okavango: Omurumba Omatago at Kapupahedi Camp, 17 Feb 1956, *de Winter & Marais* 4750 (K). NIGERIA. Niger: Kontagora, 26 Nov 1905, *Barter* 1317 (K). RWANDA. Northern: Byumba, Marais Kajumbura, Akagara National Park, 30 Mar 1973, *Troupin* 14898 (K). SOUTH AFRICA. Near Kukanje, 26 Sep 1959, *Kirk s. n.* (K). TANZANIA. Rukwa: Sumbawanga, ca. 2 km SW from the junction with the Sumbawanga–Mbala (Zambia) Rd., on the road to Safu, 31° 29' 27" E, 08° 34' 54" S, 14–15 Nov 1993, *Schmidt et al.* 1173 (K). Ruvuma: Songea, 12 km E of Songea by Nonganonga stream, 28 Dec 1955, *Milne-Redhead & Taylor* 7946 (K). UGANDA. Central: Masaka, SW side of lake Nabukabo, 7 Oct 1953, *Drummond & Hemsley* 4669 (K). ZAMBIA. Lusaka, Kalundu, 16 Dec 1976, *Bingham* 2124 (U). North-western: Solwezi, stream W of Inutanda bridge, 4 Jul 1930, *Milne-Redhead* 668 (K). Western: Mongu, Namushakende, 23° 13' E, 15° 25' S, 19 Feb 1999, *Bingham & Luwüika* 11907 (K). ZIMBABWE. Manicaland: Mutare (Umtali), farm on road to Honde valley, 23 Feb 1949, *Chase* 1380 (K). Mashonaland Central: Guruve(Sipolilo), 28 Sep 1978, *Nyariri*

- 380 (K, U). Matabeleland North: Wankie (Hwange), Wankie special nature area A, Aug 1956, *Davies 2060* (K).
27. *Ficus virens* Aiton, Hort. Kew. 3: 451. 1789; Corner, Gard. Bull. Singapore 17: 376. 1960; 21: 9. 1965; Backer & Bakh.f., Fl. Java 2: 35. 1965; Corner, Rev. Handbook Fl. Ceyl. 1, 2: 128, t. 7. 1977; Kochummen, Tree Fl. Malaya 3: 161. 1978; Tree Fl. Sabah & Sarawak 3: 316. 2000; C. C. Berg and Corner, Fl. Males. Ser. 1, 17 (2): 614. 2005.—TYPE: Introduced to Kew about 1762 by James Gordon (holotype: BM).
- Ficus pilasbi* Sm. in Rees, Cycl. 14: n. 3. 1810.—TYPE: NEPAL. Narian Hetty, Dec 1802, *Buchanan s. n.*, (holotype: K, photograph).
- Ficus infrafoliacea* Buch. –Ham. ex Sm. in Rees, Cycl. 14: n. 31. 1810.—TYPE: NEPAL, *Buchanan s. n.* (holotype: K, photograph).
- Ficus infectoria* Roxb., Hort. Bengal.: 66. 1814., excl. syn. Rheede t. 64, non Willd. 1806; Roxb., Fl. Ind., ed. Carey 3: 551. 1832; Miq., Ann. Mus. Bot. Lugduno–Batavi 3: 264. 1867; Kurz, Forest Fl. Burma 2: 446. 1877; King, Ann. Roy. Bot. Gard. (Culcutta) 1: 60, t. 75–78. 1887; F.M.Bailey, Queensl. Fl. 5. 1474. 1902; Ridl., Fl. Malay Penins. 3: 337. 1924; Gagnep. in Lecomte, Fl. Indo–Chine 5: 760. 1928. *Urostigma infectorium* (Roxb.) Miq., London J. Bot. 6: 566. 1847; in Zoll., Syst. Verz. 2: 90. 1854; Fl. Ind. Bat 1, 2: 339. 1859.—TYPE: *Willdenow 1137* (holotype: K).
- Ficus terminalis* B. Heyne ex Roth in Roem. and Schult., Syst. Veg. 1: 513. 1817.—TYPE: INDIA. India orientali legio, *Heyne 1814* (isotype: L).
- Ficus scandens* Buch. –Ham., Trans. Linn. Soc. 15: 149. 1826., non Lam. 1788.—TYPE: ad Matsiae pagos; information based on Berg and Corner 2005 (not found yet).
- Ficus lacor* Buch. –Ham., Trans. Linn. Soc. London, Bot. 15: 150. 1827.—TYPE: Herb. F. (*Buchanan*) *Hamilton 2406* (holotype: E).
- Urostigma cunninghamii* Miq., London J. Bot. 6: 560. 1847. *Ficus cunninghamii* (Miq.) Miq., Ann. Mus. Bot. Lugduno–Batavi 3: 286. 1867; Benth., Fl. Austral. 6: 286. 1873; F.M.Bailey, Queensl. Fl. 5: 1468. 1902. *Ficus infectoria* Roxb. var. *cunninghamii* (Miq.) Domin, Bibl. Bot. 89: 562. 1921. *Ficus lacor* Buch.–Ham. var. *cunninghamii* (Miq.) M.F.Barrett, Amer. Midl. Nat. 36: 422. 1946.—TYPE: AUSTRALIA. Queensland, Brisbane River, *Cunningham s. n.* (holotype: K).
- Urostigma fraseri* Miq., London J. Bot. 6: 561. 1847. *Ficus caulobotrya* Miq. var. *fraseri* (Miq.) Miq., Ann. Mus. Bot. Lugduno–Batavi 3: 287. 1867. *Ficus fraseri* (Miq.) F.Muell., Fragm. Phyt. Austral. 6: 195. 1868, non Miq. 1848. *Ficus infectoria* Roxb. var. *fraseri* (Miq.) Domin, Bibl. Bot. 89: 562. 1921.—TYPE: AUSTRALIA. Queensland, Bremer River, 1829, *Fraser 704* (holotype: K).
- Urostigma psychotriifolium* Miq., London J. Bot. 6: 561. 1847. *Ficus psychotriifolia* (Miq.) Miq., Ann. Mus. Bot. Lugduno–Batavi 3: 286. 1867. *Ficus infectoria* Roxb. var. *psychotriifolia* (Miq.) Domin, Bibl. Bot. 89: 562. 1921.—TYPE: AUSTRALIA. Queensland, Brisbane River, 1829, *Fraser 73* (holotype: K).
- Urostigma aegiophyllum* Miq., London J. Bot. 6: 565. 1847. *Ficus infectoria* Roxb. var. *aegiophylla* (Miq.) Miq., Ann. Mus. Bot. Lugduno–Batavi 3: 286. 1867.—TYPE: INDIA. Bengal, *J. D. Hooker s. n.* (holotype: K).
- Urostigma lambertianum* Miq., London J. Bot. 6: 565. 1847. *Ficus lambertiana* (Miq.) Miq., Ann. Mus. Bot. Lugduno–Batavi 3: 286. 1867. *Ficus infectoria* Roxb. var. *lambertiana* (Miq.) King, Ann. Roy. Bot. Gard. (Culcutta) 1: 60, t. 75–78. 1887. *Ficus lacor* Buch.–Ham. var. *lambertiana* (Miq.) M. F. Barrett, Amer. Midl. Nat. 45: 153. 1951.—TYPE: INDIA. Bombay, *Lambert in herb. Hooker* (holotype: K).
- Urostigma wightianum* Wall. ex Miq., London J. Bot. 6: 566. 1847. *Ficus wightiana* (Wall. ex Miq.) Benth., Fl. Hongk.: 327. 1861; Miq., Ann. Mus. Bot. Lugduno–Batavi 3: 286. 1867. *Ficus infectoria* Roxb. var. *wightiana* (Wall. ex Miq.) King, Ann. Roy. Bot. Gard. (Culcutta) 1: 60, 63, t. 75–77. 1887.—TYPE: INDIA. Bongaloor, *Wallich 4540* (*Herb. Wight.*) (holotype: K; isotype: E).
- Urostigma perseifolium* Miq., London J. Bot. 6: 567. 1847.—SYNTYPES: Ind. Or., Pulney mountains, *Wight KD 2635* (syntype: E); 1836, *Wight KD 3060* (syntype: L).
- Urostigma timorense* Miq., London J. Bot. 6: 569. 1847, non *F. timorensis* Decne. 1834.; Miq., Fl. Ind. Bat. 1, 2: 343. 1859. *Ficus timorensis* (Miq.) Miq., Ann. Mus. Bot. Lugduno–Batavi 3: 286. 1867.—TYPE: INDONESIA. Timor. *Herb. Hook.* (holotype: K).
- Urostigma apiculatum* Miq., London J. Bot. 6: 570. 1847. *Ficus apiculata* (Miq.) Miq., Ann. Mus. Bot. Lugduno–Batavi 3: 286. 1867, non Miq. 1854.—TYPE: INDIA. *Wight 1916* (isotype: E).
- Ficus terminalioides* Griff., Post. Pap. 2: n. 101. 1848; Ic. Pl. Asiat. 4: t. 550. 1854.—TYPE: BHUTAN, no locality, not indicated. (holotype: K, not found yet).
- Urostigma moritzianum* Miq. in Zoll., Syst. Verz. 2: 91, 97. 1854; Fl. Ind. Bat. 1, 2: 342. 1859.—TYPE: INDONESIA. Java, Bandung, *H. Zollinger 851* (holotype: U).
- Urostigma nesophilum* Miq., J. Bot. Neerl. 1: 237. 1861. *Ficus nesophila* (Miq.) F.Muell., Austral. Veg. (Intercol. Exhib. 1866/1867) 5: 26. 1866; Miq., Ann. Mus. Bot. Lugduno–Batavi 3: 268, 286. 1867. *Ficus glabella* Blume var. *nesophila* (Miq.) K.Schum., Fl. Schutzgeb. Südsee: 273. 1900.—TYPE: AUSTRALIA. Quail Island, *Flood s. n.* (holotype: K).
- Ficus monticola* Miq., Ann. Mus. Bot. Lugduno–Batavi 3: 216, 286. 1867.—TYPE: INDIA. Mont Khasia, *J. D. Hooker and T. Thomson (Ficus no. 121)* (holotype: P; isotype: L).
- Ficus saxophila* Blume var. *sublanceolata* Miq., Ann. Mus. Bot. Lugduno–Batavi 3: 260. 1867. *Ficus virens* Aiton var. *sublanceolata* (Miq.) Corner, Gard. Bull. Singapore 17: 377. 1960; Chew, Fl. Australia 3: 35. 1989.—TYPE: INDONESIA. Sumatra, 1859–1860, *W. H. de Vriese and J. E. Teijsman s. n.* (holotype: K; isotype: L).

*Ficus glabella* Blume forma *grandifolia* Miq., Ann. Mus. Bot. Lugduno-Batavi 3: 267. 1867.—TYPE: INDONESIA. Sumatra, Mandheling, 1857–1861, *W. H. de Vriese s. n.* (isotype: L).

*Ficus infectoria* Roxb. var. *forbesii* King, Ann. Roy. Bot. Gard. (Calcutta) 1: 63, t. 78. 1887.—TYPE: INDONESIA. Sumatra, *H.O. Forbes 2701* (holotype: K; isotype: L).

*Ficus syringifolia* C. Fraser ex C. Moore, Handb. N.S.W.: 81. 1893, non Kunth and C. D. Bouché 1847.—TYPE: AUSTRALIA. Brisbane river, Jul 1855, *F. van Mueller s. n.* (holotype: K).

*Ficus carolinensis* Warb. in K.Schum. and Lauterb., Nachtr. Fl. Schutzgeb. Sudsee: 242. 1905; Volkens, Bot. Jahrb. Syst. 31: 462. 1902. *Ficus prolixa* G.Forst. var. *carolinensis* (Warb.) Fosberg, Phytologia 5: 289. 1955.—TYPE: CAROLINE ISLANDS. Yap, *Volkens 263* (holotype: B).

*Ficus nitentifolia* S. Moore, J. Bot 63, Suppl.: 107. 1925.—TYPE: INDONESIA. Timor, *S. Moore 3618* (holotype: BM; isotype: L).

Tree up to 35 m tall. Leafy twig 1–5 mm thick, glabrous or puberulous, periderm persistent or sometimes flaking off. Leaves articulate; lamina ovate to elliptic to lanceolate to obovate, 5.2–18.5(–20) by 2.5–8.5(–9.5) cm, (sub)coriaceous, apex (sub)acuminate, acute, or obtuse, base cuneate, cordate, obtuse, or subattenuate, both surfaces glabrous; lateral veins 8–12(–15) pairs, sometimes furcate away from the margin, the basal pair up to 1/10–1/5(–1/2) the length of the lamina, unbranched or sometimes branched, tertiary venation reticulate to subscalariform; petiole 1.6–6.1 cm long, glabrous, epidermis persistent; stipules 0.25–1.5 cm long, glabrous, puberulous or white tomentose or villose, caducous or sometimes persistent at the shoot apex and forming an ovoid terminal bud. Figs axillary, just below the leaves, or on up to 0.5 cm long spurs on the older wood, solitary, in pairs, or up to 4 together on the spurs, sessile or with a peduncle up to 2.5(–10) mm long, glabrous or minutely puberulous; basal bracts 1.5–4 mm long, covering only the base of the receptacle, glabrous or (minutely) puberulous, persistent; receptacle subglobose (or depressed-globose), 0.4–1.5 cm diam. when dry, surface usually wrinkled, glabrous or minutely puberulous at the apex to white tomentose or villose, turning from white to pink, purple, or black at maturity, apex convex to flat; ostiole (1–)2–4 mm in diam., the upper ostiolar bracts glabrous or puberulous; internal hairs present. Staminate flowers near the ostiole or dispersed, sessile or with a short pedicel; tepals 3–4(–5), ovate or lanceolate, or sometimes connate, reddish brown. Pistillate flowers sessile or pedicellate; tepals 3–4(–5), lanceolate, free or sometimes connate, reddish brown; ovary red brown.

**Note**—Aiton (1789) thought that the type of *F. virens* was introduced from the West Indies in Kew about 1762 by James Gordon, but Corner (1959) believes that Aiton was erroneous. Up to now, the origin of the type is still unclear.

27.1 *FICUS VIRENS* Aiton var. *VIRENS*: Corner, Gard. Bull. Singapore 21: 9. 1965; Chew, Fl. Australia 3: 35. 1989.

Lamina usually broadest below the middle; base (sub)cordate, cuneate, obtuse, or subattenuate; lateral veins usually furcate away from the margin, basal lateral veins up

to 1/8–1/4(–1/2) the length of the lamina, usually branched; stipules 0.25–1.1 cm long, glabrous or puberulous. Figs axillary, just below the leaves, or on short spurs, solitary or in pairs; basal bracts 1.5–3 mm long, minutely puberulous, margin ciliate, apex usually lobed; receptacle 0.4–0.9(–1.2) cm diam. when dry, glabrous or puberulous; ostiole (1–)2–3 mm in diam., upper ostiolar bracts puberulous. Staminate flowers near the ostiole, tepals free.

**Distribution and Habitat**—This variety is distributed in North India, Nepal, Sri Lanka, Bhutan, China (Prov. Yunnan, Hainan, Hong Kong), Myanmar, Thailand, Peninsular Malaysia, Indonesia (Sumatra, Java, Sulawesi, Lesser Sunda Islands, Moluccas), Laos, Vietnam, Micronesia, Timor Este, Papua New Guinea, and Australia; in open secondary shrubby on calcareous soil, in evergreen forest or deciduous forest.

**Representative Specimens Examined**—AUSTRALIA. New South Wales: Sydney, Rose Bay, 12 Nov 1975, *Marchant 12275* (L). Northern Territory: Sir Edward Pellew Group, 136° 49' E, 15° 43' S, 10 Feb 1976, *Craven 3812* (L). Queensland: Atherton, 143° 25' E, 13° 50' S, 10 Sep 1973, *Hyland 6850* (L). Western Australia: Buccaneer Archipelago, Long isl., 16° 33' 31" S, 123° 22' 30" E, 15 Jun 1982, *Hopkins BA0176* (PERTH); Dampier archipelago, Dampier isl., Dec 1986, *Glennon 307* (PERTH); Boiga falls, Drysdale River National Park, 15° 08' S, 127° 06' E, 3 Aug 1975, *Kimberley & Kenneally 3006* (PERTH). BHUTAN. Without locality, 1838, *Griffith KD 4613* (K). CHINA. Hainan: Yaichow, March–July 1933, *How 70848* (L). Hong Kong: Fanling–Sheung Shui, 1 Oct 1973, *Chan 1236* (K). Yunnan: West Yunnan, Tali range, 25° 40' N, Jun 1906, *Bulley 4704* (K). INDIA. Andhra Pradesh: Kadapa (Cuddapah), Feb 1883, *Gamble 10784* (K). Jarkhand: Singbhum, 11 Jan 1903, *Haines 588* (K). Odisha (Orissa): Ganjam, Balirai, Feb 1884, *Gamble 13843* (K). Rajasthan: Tonk, Toda Rai Singh, 22 Sep 1974, *Shetty 1304* (L). West Bengal: Chota–Nagpore Plateau, Dec 1880, *Gamble 8829* (K). NEPAL. Upper Nepal, without locality, *Smith s. n.* (K). INDONESIA. Bali: near Singaraja, 21 Jun 1976, *Meijer 10575* (L). Jawa Barat: Preanger, *Koorders 9161* (L). Jawa Tengah: Semarang, *Koorders 9204* (L); Pekalongan, *Koorders 22473* (L). Jawa Timur: Wana wisata Coban Rondo, Pujon Malang, 6 Sep 1980, *Wiradinata 2037* (L). Maluku: 1859–1860, *de Vriese & Teijsmann s. n.* (L). Nusa Tenggara Barat: Sumbawa, Sultanat Bima, Kologebirge, 8 Dec 1909, *Elbert 3668* (L). Nusa Tenggara Timur: Flores, Flores–Manggarai, 1 Nov 1979, *Schmutz 4262a* (L); Sumba, 29 Jul 1974, *Verheijen 4180* (L); West Timor, *Teysmann 7095* (L); Alor, Kgbola Peninsula, Adang–Jabandar–Alor ketjil, 1938, *Jaag 442* (L). Sumatra Barat: Mt. Sago, near Pajakumbuh, above Padang Mengatas, 8 Aug 1957, *Meijer 7196* (L). Sulawesi Tengah: Halfway Palu and Donggala, Lolu Pertamina, km 27, ca. 119° 45' E, 0° 45' S, 22 Apr 1979, *de Vogel 5016* (L). LAOS. Champasak: Khong, on Isl. and in Mekong R., 28 Apr 1998, *Maxwell 98–492* (L). Saravan: N of Saravan, 4 Aug 1928, *Poilane 15448* (P). MALAYSIA. Kedah: Langkawi, Pulau Chupah, 19 Nov 1941, *Corner SFN 37819* (L, SING). Penang: Nov 1937, *Henderson 257* (SING). MICRONESIA. Caroline Islands, Yap, Nov 1899–Jun 1900, *Volkens 445* (SING). MYANMAR. Bago (Pegu): 15 Aug 1892, *Kurz 3136* (K). Tanintharyi (Tenasserim): 1877, *Gallatly 982* (L). PAPUA NEW GUINEA. Central: W side of Waigani swamp, 8 Aug 1971, *Frodin 533* (L); Yule Isl., ca. 105 km NW of Port Moresby, 25 Sep 1980, *Salmang s. n.* (L). East Sepik: Angoram, Karawari R., 143° 35' E, 4° 40' S, 29 Jul 1967, *Millar & Dockrill NGF 35163* (K, L, SING). Morobe: Chivasing, 17 Dec 1959, *Henty NGF 11652* (K, L, SING). Western: Daru, Tanglide near Kunini, 143° 21' E, 9° 30' S, 9 May 1986, *Simaga 733* (L). SRI LANKA. Central: Kandy, along Mahaweli Ganga, Feb 1979, *Kostermans 27369* (L). North Central: Anuradhapura, Ritigala Strict Natural Reserve, 9 Aug 1973, *Jayasuriya 1312* (L). North Western: Kurunegala, 3 Jun 1973, *Kostermans 24939* (L). THAILAND. Chaiyaphum: Muang, Nafai, Ban–Huagmarkdang, 15 Jan 1970, *Lekagul 64* (BKF). Chiang Mai: Chiangdao, Doi Chiangdao, 8 Apr 1940, *Garrett 1184* (A, L). Kanchanaburi: Huay Bankau, 90° 45' E, 14° 55' N, 10 Nov 1971, *van Beusekom et al. 3661* (BKF, L). Narathiwat: Waeng, Ban Bala, 7 Nov 2002, *Chantarasuwan 2002–0454* (BKF, THNHM). TIMOR ESTE. W of Dili, Tasitolu, 08° 33' 39" S 125° 30' 34" E, 26 Sep 2005, *Cowie 10650* (L). VIETNAM. Ninh Thuan: S of Phan rang, 11–14 Jun 1909, *d'Alleizette s. n.* (L). Quang Tri: 18 Mar 1917, *Poilane 13639* (L).

**Note**—We found this variety to be the most variable taxon in all morphological characters, e.g. (1) leaf size: smallest (*Schmutz SVD 4030*, Flores), 4.1–7.5 by 1.5–3 cm, largest (*Delavay s. n.*, Yunnan) 13–21 by 5.6–9.5 cm; (2) Peduncle; sessile to up to 1 cm long in *Shetty 1304* (India); (3) Diameter of receptacle; smallest (*Corner SFN 37819*, Langkawi) 0.4–0.5 cm in diam., largest (*Wight KD 2635*, India) 1.1–1.2 cm in diam.; and (4) Most receptacles are glabrous, but *Wiradinata 2037* (Java) is pubescent.

27.2 *FICUS VIRENS* Aiton var. **dispersa** Chantaras., var. nov.—**TYPE:** PAPUA NEW GUINEA. New Britain: West Nakanai, Rapuri village near Cape Hoskins, probably 5 Aug 1954, *A. Floyd NGF 6457* (holotype: L; isotypes: K, LAE)

Stipulae gemmas ovoideas terminales formantes, epidermis desquamans. Flores masculi aut numerosi tum prope ostiolum pauci dispersi aut interdum pauci et tantum prope ostiolum.

Lamina ovate to lanceolate, base cuneate to round to subcordate; basal pair of veins up to 1/6–1/4(–1/3) the length of the lamina, sometimes branched; petiole 1–3(–5.5) cm long, epidermis persistent; stipules 0.3–0.9 cm long, glabrous or puberulous, forming an ovoid terminal bud, epidermis of bud scales flaking off. Figs axillary, just below the leaves, or on short spurs, solitary or in pairs; basal bracts 2–3 mm long, glabrous or minutely puberulous, apex usually lobed; receptacle 0.5–0.9 cm diam. when dry; ostiole 2–2.5 mm in diam., upper ostiolar bracts glabrous. Staminate flowers abundant around the ostiole and a few dispersed or a few near the ostiole only; tepals usually connate. Figure 8.

**Distribution and Habitat**—This variety is distributed in Malaysia (Sabah), Indonesia (Borneo, Moluccas, Papua), Timor Este, Papua New Guinea, East Australia, Solomon Isl., New Caledonia, Vanuatu, and Micronesia; in rain forest, swamp forest, at low altitudes or up to 1,600 m in New Guinea.

**Representative Specimens Examined**—AUSTRALIA. Queensland: Atherton, State Forest Reserve, 145° 47' E, 17° 15' S, 16 Dec 1980, *Gray 1865* (K, L). INDONESIA. Kalimantan Timur: 117° 20' E, 0° 30' N, East Kutai Reserve, vicinity of Sengata and Mentoko R., 23 Feb 1979, *Leighton 527* (L). Maluku: Buru, NW Buru, Wae kosi, 3 Nov 1984, *Nootboom 5081* (L). Papua: Mamberamo R., 1974, *Sauveur 3394* (L). MALAYSIA. Sabah: Dahad Datu, Ulu Sg. Segama, Orchid Plateau, 11 Jul 1970, *Cockburn SAN 70907* (L). MICRONESIA. Kusaie: Lela (Lele) Isl., Lela (Lele) Harbor, 19–21 Aug 1946, *Fosberg 26534* (L). Pohnpei (Ponape): Roi–pa, 29 Feb 1936, *Takamatsu 928* (K). Yap: Balabat, 17 May 1936, *Takamatsu 1880* (K). NEW CALEDONIA. Loyalty Isl.: Maré, Loy, 16 Jul 1951, *Baumann–Bodenheim 14701, 14707* (L). South: Dumbea, Estuary of Dumbea R., 22 Apr 1956, *McKee 4466* (L). PAPUA NEW GUINEA. Bougainville: Buin, lower S slopes of lake Loloru crater, ca. 15 miles N of Buin, 30 Jul 1964, *Craven & Schodde 159* (L). Chimbu: E Highlands, 14 Aug 1957, *Robbins 653* (L). East Sepik: along Tiyangaram (Black R.), S of Ambunti, 21 Jun 1966, *Hoogland & Craven NGF 10326* (L). Morobe: near Piera, about 10 miles SE of Garaina, 19 Jan 1964, *Hartley TGH 12628* (L). SOLOMON ISLANDS. New Georgia: 29 Aug 1929, *Waterhouse 315* (K, L). Santa Isabel: Tiratona, 26 Nov 1932, *Brass 3224* (K, L). TIMOR ESTE. Dili: Nein Feto, 16 Jan 2004, *Paiva & Silveira T33* (L). VANUATU. Uri: Malekula, Selenaboro, 9 Nov 1992, *Curry 769* (L).

**Note**—Typical for this variety is the presence of a few staminate flowers dispersed throughout the fig instead of only numerous staminate flowers around the ostiole. In this respect it resembles *F. prolixa*, but most characters are consistent with *F. virens*.

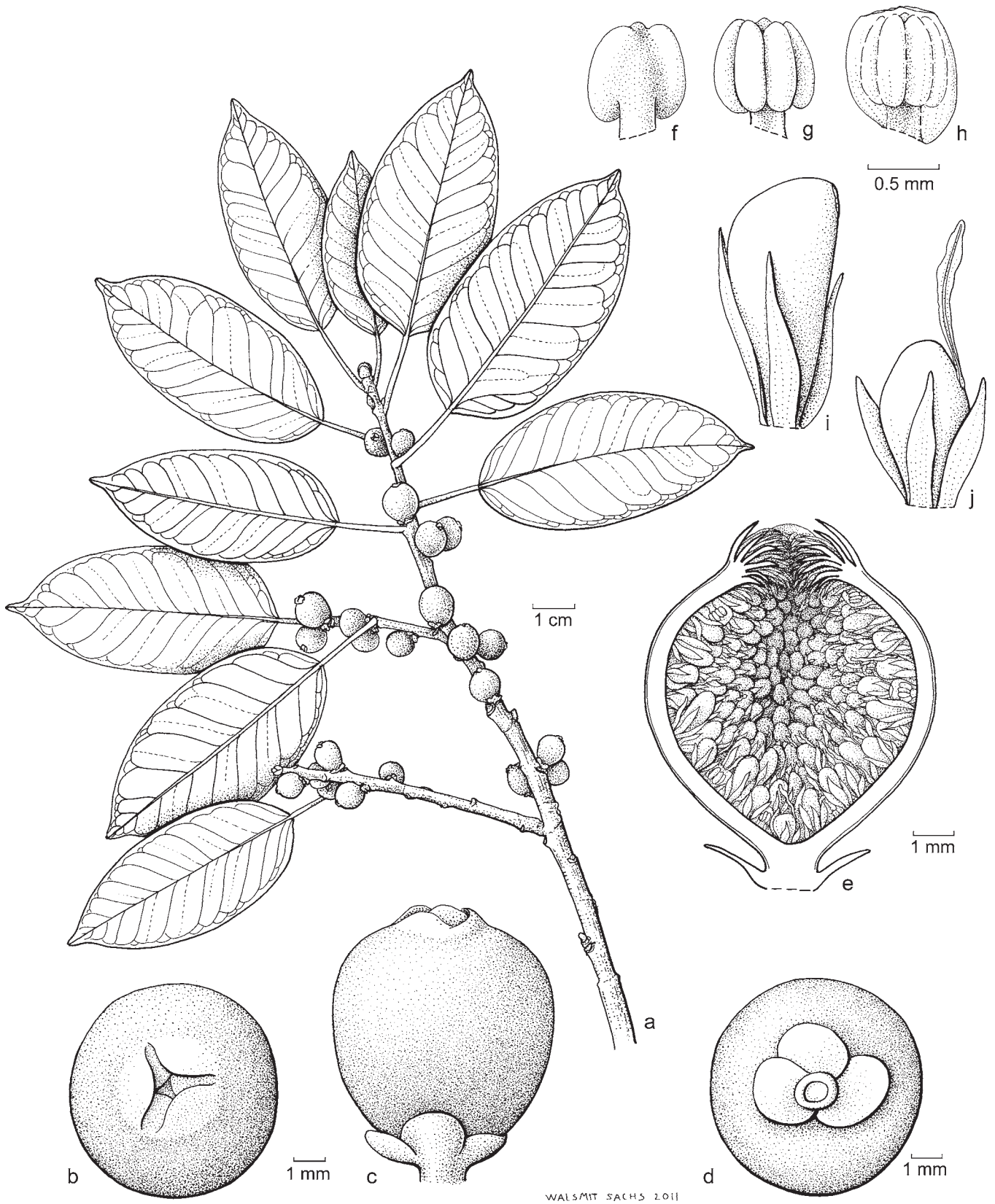
27.3 *FICUS VIRENS* Aiton var. **GLABELLA** (Blume) Corner, Gard. Bull. Singapore 17: 377. 1960. *Ficus glabella* Blume, Bijdr.: 452. 1825; Miq., Ann. Mus. Bot. Lugduno–Batavi 3: 265, 286. 1867; King, Ann. Roy. Bot. Gard. (Culcutta) 1: 49, t. 60. 1887; in Hook.f., Fl. Brit. India 5: 511. 1888; Merr., Enum. Born.: 223. 1921; Ridl., Fl. Malay Penins. 3: 336. 1924; K.Heyne, Nutt. Pl. Ned.–Indië: 571. 1927; Gagnep. in Lecomte, Fl. Indo–Chine 5: 759. 1928; Burkill, Dict. Econ. Prod. Malay Penins.: 1009. 1935; Corner, Wayside Trees 1: 677. 1940; Blumea 6: 308. 1948. *Urostigma glabellum* (Blume) Miq., Fl. Ind. Bat. 1, 2: 340. 1859; Fl. Ind. Bat., Suppl.: 437. 1961.—**TYPE:** INDONESIA. Java, Kiara beas, *Blume s. n.* (holotype: L; isotype: P).

*Urostigma canaliculatum* Miq., London J. Bot. 6: 579. 1847; Fl. Ind. Bat. 1, 2: 340. 1859.—**TYPE:** AUSTRALIA. Prince of Wales Island, *Hb. Hooker* (holotype: K; isotype: E).

Lamina mostly obovate or elliptic; base cuneate or subattenuate; basal lateral veins up to 1/6–1/4 the length of the lamina, unbranched; petiole 1.6–2.5 cm long, epidermis usually persistent; stipules 0.2–0.7 cm long, glabrous or puberulous, usually forming an ovoid terminal bud, epidermis of bud scales usually flaking off. Figs axillary, just below the leaves, or on 3–4 mm long spurs, solitary, in pairs, or up to 3 together on spurs; basal bracts 1.5–2 mm long, glabrous; receptacle 0.6–0.8 cm diam. when dry, glabrous or puberulous; ostiole (1–)2–3 mm in diam., upper ostiolar bracts glabrous. Staminate flowers near the ostiole; tepals connate. Figure 5 G.

**Distribution and Habitat**—This variety is distributed in Thailand, Vietnam, Malaysia, throughout Indonesia, Philippines, Timor Este, Papua New Guinea and Australia; in evergreen forest, deciduous forest, or secondary forest, at altitudes up to 800 m.

**Representative Specimens Examined**—INDONESIA. Jawa Tengah: Semarang, Karangasem, *Koorders 9266* (L); Pekalongan, *Koorders 22585* (L); Banjumas, *Koorders 9290* (L); Djapara, *Koorders 35708* (L); Tegal, *Koorders 9257* (L). Jawa Timur: Besoeki, *Koorders 38937* (L); Kediri, *Koorders 22785* (L); Madioen, *Koorders 38816* (L); Madura, *Koorders 21924* (L). Kalimantan Timur: Kutei, Susuk region, 2 Jul 1951, *Kostermans 5601* (L, SING). Maluku: Ambon, Waai, 31 Oct 1931, *Bank 600* (L); Morotai, Totodoku, 3 Jun 1949, *Kostermans 7870* (L, SING); Seram, 1859–1860, *Teijsmann s. n.* (L). Nusa Tenggara Timur: West Flores, S part of Mt. Ndeki, 14 Apr 1965, *Kostermans & Wirawan 250* (L); South Sumba, 12 Feb 1974, *Verheijen 3867* (L). Papua: near Jayapura, *Kostermans & Soegeng 831* (K, L); Jayawijaya, Angguruk area, 6 Jun 1975, *Sinke 63* (L). Sulawesi Selatan: S shore of Laka Matano, W of Soroako and Taipa, Pulau Lintu, 121° 15' E, 2° 29' S, 23 Jun 1979, *de Vogel 5942* (L). Sumatera Selatan: Bangka–Belitung, Sungai Liat, *Teysmann HB 6848* (L). MALAYSIA. Johore: Mawai, 13 May 1934, *Corner s. n.* (SING). Kedah: Rawei Isl., Aug 1911, *Ridley 15723* (SING). Perak, Larut, Sep 1883, *King 4884* (L). Sarawak: Kuching, Bau, Bau Rd. 19th mile, 26 Jun 1960, *Anderson 12734* (L). Trengganu: Dungun–Marang Rd. 37 ½–38th miles, *Sinclair 39982* (L). PAPUA NEW GUINEA. Chimbu: E Highlands, near Wahgi R., S of Kundiawa, 14 Aug 1957, *Robbins 653* (L). Milne bay: Baniara, E of Nowata airstrip, 149° 44' E, 9° 59' S, 2 Jul 1969, *Kanis 1109* (L). Morobe: 19 Nov 1935, *Clemens 959* (L). AUSTRALIA. Prince of Wales Island, *Hb. Hooker s.n.* (K). PHILIPPINES. Abra: Banglas R., Gangal, Municipality of Sallapadan, 120° 49.6' E, 17° 28.0' N, 20 Nov 1996, *Fuentes PPI 38669* (K, L). Palawan: Mt. Pulgar, Apr 1911, *Elmer 13002* (K, L). Quezon: Tayabas, Jan 1884, *Vidal 909* (K). SINGAPORE. Tanglin post office, 22 Jun 1937, *Corner SFN 33565* (L). THAILAND. Nakhon Nayok: Muang, Khlong Sai, Khao Yai National Park, 101° 23' E, 14° 24.5' N, 19 Feb 1999, *Charienchai 742* (L). Phuket: Thalang, Khao Phra Tao Non–Hunting area, 98° 23' E, 8° 02' N, 21 Apr 2006, *Gardner ST 2606* (L). Songkhla: Rattapoom, Boripat Falls National Park, 2 Apr 1985, *Maxwell 85–364* (E, L). TIMOR ESTE. Ira Malaru: near Los Palos, 127° 04' 58" E, 08° 24' 00" S, 6 Oct 2005, *Cowie & Xavier*



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FIG. 8. *Ficus virens* Aiton var. *dispersa* Chantaras. (Moraceae). A. Twigs with leaves and figs. B. Ostiole. C. Fig. D. Basal bracts. E. Fig in longitudinal section. F. Stamen (back side). G. Stamen (front side). H. Staminate flower with connate tepals. I, J. Pistillate flowers. [A. Floyd NGF 6457 (L)]. Drawing: Anita Walsmit Sachs, 2011.



10841 (L). VIETNAM. Kontum: between Takha and Pakto, 13 Mar 1941, *Poilane* 32314 (L).

27.4 *FICUS VIRENS* Aiton var. **matthewii** Chantaras., var. nov.—TYPE: INDIA. Tamil Nadu (Madras), Dist. Dindigul, Anna, Pachalur, below village, 1 Nov 1987, K. M. Matthew RHT 50937 (holotype: L; isotypes: RHT, SHC).

Stipulae (albae) tomentosae gemmas ovoideas terminales et anguste ovoideas axillares formantes; receptaculum subglobosum vel subpyriforme (1.1–)1.2–1.5 cm diam. in sicco pagina maculata rugosa in sicco.

Lamina usually broadest in the middle to below the middle; base cuneate to subattenuate to obtuse to (sub) cordate; basal lateral veins up to 1/6–1/4 the length of the lamina, sometimes branched; stipules 1.1–1.5 cm long, persistent at the shoot apex and forming a narrowly ovate terminal bud, (white) tomentose; usually forming an axillary bud. Figs axillary or below the leaves, solitary or in pairs; basal bracts 3–4 mm long, puberulous; receptacle (1.1–)1.2–1.5 cm diam. when dry, surface maculate and wrinkled when dry, glabrous, puberulous, or sometimes white tomentose; ostiole 3.5–4 mm in diam., upper ostiolar bracts hairy. Staminate flowers near the ostiole; tepals connate. Figure 9.

**Distribution and Habitat**—This variety is distributed in South India and Sri Lanka; in evergreen forest, at altitudes up to 1,300 m.

**Representative Specimens Examined**—INDIA. Kerala: Kerala shoals, Devicolam–Periyar Rd., Cardamom hill, *Ridsdale* 722 (L). Tamil Nadu (Madras): Dindigul, Pachalur, 1 Nov 1987, *Matthew RHT* 50937 (L); Kodai kanal, Thadiankudisai–Adabur Rd., 4 Aug 1988, *Matthew RHT* 53333 (L); Salem, Attur, Periakalrayans, Nagalur Forest, 10 Mar 1980, *Matthew RHT* 26955 (L). SRI LANKA. North Central: Anuradhapura, Ritigala Strict Natural Reserve, 1 Oct 1972, *Jayasuriya* 927 (L, K). Sabaragamuwa: Ratnapura, near Kalawana, 28 Jun 1972, *Hepper et al.* 4532 (K).

**Note**—This variety shows a distinctive larger receptacle, (1.1–)1.2–1.5 cm diam., than the other varieties.

*FICUS* L. subg. *UROSTIGMA* (Gasp.) Miq. sect. *LEUCOGYNE* Corner, Gard. Bull. Singapore 17: 371. 1960; C. C. Berg, *Experientia* 45: 605, 608. 1989.—TYPE: *Ficus rumphii* Blume

Growth intermittent. Leaves not articulate, with cystoliths at both sides of the lamina. Figs with (2)3 basal bracts; staminate flowers dispersed, usually pedicellate; pistillate flowers with white ovaries.

**Note**—*Leucogyne*, containing two Indian species (*F. amplissima* and *F. rumphii*), was often placed in subsection *Urostigma* (e.g. Berg and Corner 2005). Berg (1989) already indicated the weak morphological difference between *Leucogyne* and *Urostigma*. However, molecular studies (Rønsted et al. 2005, 2008) show that *F. rumphii* is embedded within section *Conosycea*. The two species differ from subsection *Urostigma* (see description), with which they mainly share the intermittent growth. They are pollinated by a special group of fig wasps, formerly the genus *Maniella* (see Wiebes 1979; Berg 1989), now called *Eupristina* subgenus *Parapristina* (Berg and Corner 2005: 603, *Leucogyne* erroneously called '*Leucosyce*'). Species of this group also pollinate some species in subsection *Conosycea*, another argument to place the species in this subsection, because subsection *Urostigma* is pollinated by figs from the genus *Platyscapa*. We refrain

from placing the two species already in subsection *Conosycea*, because we would first like to see *F. amplissima* sampled for phylogenetic analyses and a proper revision of *Conosycea*.

28. *FICUS AMPLISSIMA* J. E. Sm. in Rees, Cycl. 14: n. 68. 1810, non Miq. 1867; Corner, Gard. Bull. Singapore 18: 84. 1961; 21: 11. 1965; K. M. Matthew, Fl. Tam. Carnatic 3: 1515. 1983. *Tsjela* Rheede, Hort. Mal. 3: 85, t. 63. 1682, nom. inval. *Ficus tsiela* Roxb, Hort. Bengal.: 66. 1826, nom. superfl.; Fl. Ind. 3: 549. 1832; King in Hook.f., Fl. Brit. India 5: 515. 1888. *Ficus tsjela* Roxb. ex Buch.–Ham., Tr. Linn. Soc. 15: 149. 1826, nom. superfl.; King, Ann. Roy. Bot. Gard. (Culcutta) 1: t.74. 1887. *Ficus indica* auct. non L.: L., Sp. Pl. 2: 1060. 1753; Vahl. Enum. Pl., ed. 2: 195. 1806; Willd., Sp. Pl., ed. 4, 4(2): 1146. 1806.—TYPE: Rheede (1682) t. 63, based on *Tsjela* Rheed.

*Urostigma pseudobenjamineum* Miq., London J. Bot. 6: 566. 1847. *Ficus pseudobenjaminea* (Miq.) Miq., Ann. Mus. Bot. Lugduno–Batavi 3: 286. 1867.—TYPE: INDIA. Luddaloor, *Wight s. n. in herb. Rupel* (holotype: K).

*Urostigma pseudotsiela* Miq., London J. Bot. 6: 566. 1847. *Ficus pseudotsiela* (Miq.) King, Ann. Roy. Bot. Gard. (Culcutta) 1: t. 74. 1887.—TYPE: *Wight*. in Herb. Hook. (holotype: K).

Tree up to 20 m tall. Branches drying grey–brown to brown, periderm flaking off or sometimes persistent. Leafy twigs 2.5–4 mm thick, glabrous, periderm flaking off. Leaves not articulate; lamina elliptic to ovate, 5.5–13.5(–17) by 3.2–7.5(–8.5) cm, coriaceous, apex acute to acuminate, the acumen blunt, base attenuate to cuneate to obtuse to rounded, both surfaces glabrous; lateral veins 8–10 pairs, the basal pair up to 1/4–1/2 the length of the lamina, sometimes branched, tertiary venation reticulate to partly parallel to the lateral veins; petiole 3.5–7 cm long, glabrous, epidermis persistent; stipules 1.3–1.5 cm long, glabrous or minutely puberulous, usually caducous, sometimes persistent at the shoot apex and forming a terminal bud. Figs axillary or just below the leaves, solitary or in pairs, sessile; basal bracts 3, 1–1.5 mm long, glabrous, persistent; receptacle obovate or subpyriform, 0.8–1 cm diam. when dry, glabrous, purple at maturity, apex flat; ostiole 1–1.5 mm diam., upper ostiolar bract glabrous; internal hairs absent. Staminate flowers dispersed, usually pedicellate; tepals 2–3, ovate or spatulate, free, red brown. Pistillate flowers sessile or pedicellate; tepals 2–3, ovate, free, red brown; ovary white.

**Distribution and Habitat**—This species is distributed in South India and Sri Lanka; in evergreen forest, in rocky places, at altitudes up to 1,000 m.

**Representative Specimens Examined**—INDIA. Andhra Pradesh: Kadapa (Cuddapah), Mar 1883, *Gamble* 10942 (K); Feb 1883, *Gamble* 10981 (K). Tamil Nadu (Madras): Kanchipuram, Chingleput, Jul 1885, *Gamble* 16452 (K); Coimbatore, 18 Nov 1990, *Preyadarsaman* 5 (L); Dharmapuri, Pennagaram, Hokainakkal, Cauvery banks, Veppalkovai pallam, 20 Dec 1978, *Matthew* 20582 (K). SRI LANKA. Central: Matala, Sigiriya, 4 Nov 1949, *Worthington* 4350 (K). Eastern: Kantalai, 9 May 1955, *Worthington* 6737 (K). Sabaragamuwa: Ratnapura, near Turkama, between Nonagama and Ratnapura, 20 Jan 1968, *Wirawan* 814 (K). Western: Negombo, Katunayake, 8 Sep 1962, *Holmes & Worthington* 7639 (K).

**Note**—Ramamoorthy and Gandhi (1976) described 4 basal bracts. We only found 3, however, bracts may be deeply lobed and erroneously appear to be an extra bract.

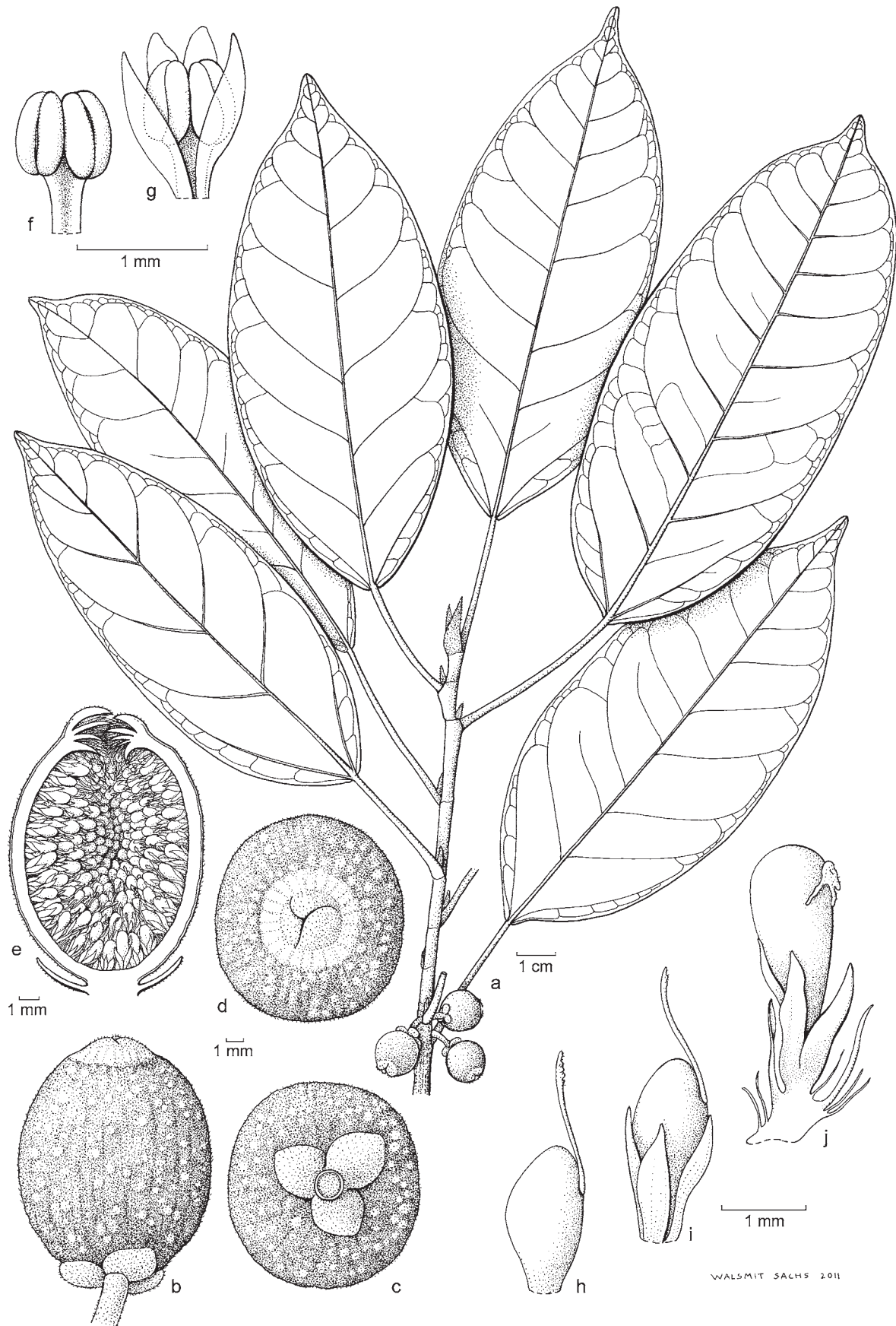


FIG. 9. *Ficus virens* Aiton var. *matthewii* Chantaras. (Moraceae). A. Twig with figs. B. Fig. C. Basal bracts. D. Ostiole. E. Fig in longitudinal section. F. Stamen. G. Staminate flower with free tepals. H. Ovary. I, J. Pistillate flowers. [K. M. Matthew RHT 50937 (L)]. Drawing: Anita Walsmit Sachs, 2011.

29. *FICUS RUMPHII* Blume, Bijdr. Fl. Ned. Ind. 9: 437. 1825; Miq., Ann. Mus. Bot. Lugduno-Batavi 3: 287. 1867; King, Ann. Roy. Bot. Gard. (Calcutta) 1: 54, t. 67B. 1887; Gagnep. in Lecomte, Fl. Indo-Chine 5: 768. 1928; Corner, Wayside Trees 1: 687. 1940; Gard. Bull. Singapore 21: 11. 1965; C. C. Berg and Corner, Fl. Males. Ser. 1, 17 (2): 609. 2005. *Urostigma rumphii* (Blume) Miq. in Zoll., Syst. Verz. 2: 90. 1854; Fl. Ind. Bat. 1, 2: 322. 1859.—TYPE: INDONESIA. Java, *Reinwardt 1121* (holotype: L; isotype: P).

[*Ficus populiformis* Schott ex Miq., Ann. Mus. Bot. Lugduno-Batavi 3: 287. 1867, nom. nud.]

*Ficus religiosa* L. var.  $\beta$  "*Arbor conciliorum* etc." Lam., Encycl. 2, 2: 493. 1788. nom. illig. *Ficus cordifolia* Roxb., Fl. Ind. (Carey ed.) 3: 548. 1832. *Urostigma cordifolium* (Roxb.) Miq., London J. Bot. 6: 564. 1847. *Ficus conciliorum* Oken, Allg. Naturgesch. 3: 1561. 1841, nom. superfl.—TYPE: based on Rumphius: *Arbor conciliorum* Rumph., Herb. Amboin. 3: t.91, 92. 1743.

*Ficus damit* Gagnep., Notul. Syst. (Paris) 4: 88. 1927; in Lecomte, Fl. Indo-Chine 5: 812, f. 93. 1928.—TYPE: VIETNAM. Quang-tri, Lao-bao, *Poilane 1337* (holotype: P).

Tree up to 20 m tall. Branches drying yellow-brown or brown. Leafy twigs 2–6 mm thick, glabrous or white puberulous, periderm flaking off. Leaves not articulate; lamina ovate (3–)4.5–17.6 by (2.8–)4–14.9 cm, (sub)coriaceous, apex acute, acuminate or cuspidate, the acumen sharp, base subcordate, subattenuate, broad cuneate or truncate, both surfaces glabrous; lateral veins 5–8 pairs, the basal pair up to 1/3–2/3 the length of the lamina, branched, below the major basal pair always a pair of smaller basal lateral veins, tertiary venation reticulate to subscalariform; petiole (1.8–)3.6–6.5(–9) cm long, glabrous or puberulous; stipules 1–3.8 cm long, glabrous, persistent at the shoot apex and forming a terminal bud or sometimes caducous. Figs axillary or below the leaves, solitary or in pairs, sessile; basal bracts (2 or) 3, 1–2 mm long, glabrous, persistent; receptacle subglobose or obovate, 1–1.5 cm diam., (usually) wrinkled when dry, glabrous, black at maturity, apex concave to flat to convex; ostiole 1.5–2.5 mm diam., the upper ostiolar bract glabrous; internal hairs absent. Staminate flowers dispersed, mostly pedicellate, usually with a bract at the base of the pedicel; tepals 2–3, ovate, oblong or spatulate, free, reddish brown or dark red. Pistillate flowers sessile or pedicellate; tepals 2–3(–4), ovate, oblong, or spatulate, free, reddish brown to dark red; ovary white (or pale yellow). Figure 5 C.

**Distribution and Habitat**—This species is distributed in India, Nepal, Bhutan, Bangladesh, Myanmar, Thailand, Laos, Cambodia, Vietnam, and Indonesia (Java, Moluccas, Lesser Sunda Islands); in coastal and inland forest, often in rocky places (limestone), at altitudes up to 380 m.

**Representative Specimens Examined**—BANGLADESH. Chittagong: 31 Dec 1850, *J. D. Hooker & T. Thomson 8046* (K). BHUTAN. Western: Samchi, 26° 54' N, 89° 06' E, 28 Feb 1982, *Grierson & Long 3284* (K). CAMBODIA. Kampong Speu: 20 Jan 1928, *Poilane 14505* (K). Siem Reap: Puok, Borai forest, 17–20 km W from Siem Reap, 26 Mar 2001, *Huq & Phurin 10858* (L). Stung Treng: Thala Bavevath, Preah Rum Kel, *Meng 155* (K, L). INDIA. Assam: Burnihat, Khasia hill, 4 Jun 1949, *Koelz 22871* (K, L). Jharkhand: Ranchi, 15 Nov 1915, *Haines 2504* (K). Tamil Nadu (Madras): Ganjam, 1889, *Gamble 21680* (K). South Andaman Islands: Shore Gaint hill, 6 Jan 1892, *King s. n.*(L).

Uttarakhand: Mussoorie, Sainji to Kempti, 12 Jul 1944, *Stewart 21018* (K). INDONESIA. Java: Jakarta, *Reinwardt 1121* (L). Maluku: Ambon, Jul–Nov 1913, *Robinson 180* (L); Babar, Pulau Wetan, Herleh, 28 Nov 1956, *van Borssum Waalkes 3009* (L); Buru, Namlea, 5 Apr 1937, *Boschproefstation bb 22799* (L, SING); Obi, 30 Oct 1937, *Nodi 480* (L); Seram, Central Seram, Kecamatan Tehoru, Manusela National Park, 18 Feb 1985, *Kato et al. C-7604* (L). Nusa Tenggara Barat: Sumbawa, Sultanat Bima, 16 Dec 1909, *Elbert 3881* (L). Nusa Tenggara Timur: Sumba, 12 Jul 1974, *Verheijen 4224* (L); Alor, Kabola Peninsula, Adang–Sabandar–Alor ketjil, 4 May 1938, *Jaag 418* (L). LAOS. Champasak: Mehkong R., Khon Isl., Sompamit falls, 28 Apr 1998, *Maxwell 98–495* (L). MYANMAR. Kachin: Myitkyina, 16 Jan 1958, *McKee 6079* (K). Tanintharyi (Tenasserim): Tavoy, 12 miles from Paungdaw, ca. 98° 30' E, 14° 00' N, Paungdaw R. at the junction with the Banchaung R., 25 Aug 1961, *Keenan et al. 1203* (K). Yangon: Mingaladon, Dec 1937, *Dickason 6803* (L, SING). NEPAL. Eastern: Illam–Jog Mai–Ranga Pant, 8 Dec 1963, *Hara et al. 6300828* (K). THAILAND. Chiang Mai: Chiengdao, Doi Chiengdao, Ban Tham, 1 Mar 1958, *Bunchuai 756* (BKF). Chon Buri: Siracha, Si Chang Isl., at base of Kow Kwang and behind the shore, 13 Feb 1993, *Maxwell 93–143* (L). Kanchanaburi: Sangkhlaburi, Ban Sanehpawng, Lai Wo, Toong Yai Naresuan Wildlife Sanctuary, 17 Mar 1993, *Maxwell 93–272* (L). Prachuap Khiri Khan: Bangsaphan, 20 May 1890, *Keith 410* (SING). Sakon Nakhon: Phu Phan, 5 Dec 1962, *Suvarnakoses 2013* (BKF). Satun: Muang, Tarutao Isl., between Pante Malacca Bay and Ao Jahk, Tarutao National Park, 17 Apr 1987, *Maxwell 87–373* (BKF, L). VIETNAM. Ho Chi Minh (Saigon). Botanical Garden, 30 Jan 1919, *Chevalier 361*(K, L). Quang Tri: Lao Bao, 20 May 1921, *Poilane 1337* (P).

**Note**—This species is often confused with *F. religiosa*, but differs in the acute, acuminate or cuspidate leaf apex, lateral veins 5–8 pairs, the basal pair up to 1/3–2/3 the length of the lamina, basal bracts of the fig 1–2 mm long (versus apex caudate, lateral veins 7–11 pairs, the basal pair up to (1/8–)1/7–1/5(–1/4) the length of the lamina, basal bracts 3–5 mm long in *F. religiosa*).

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