

Two New Species of *Licania* (Chrysobalanaceae)

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ABSTRACT. *Licania adolphoduckei* and *L. sother-siae* from the Reserva Florestal Adolpho Ducke near Manaus, Brazil, are described as new, and their relationship within the genus is discussed.

Key words: Amazonia, Brazil, Chrysobalanaceae, *Licania*.

In the course of fieldwork and preparation of an account of the Chrysobalanaceae for a Flora of the Reserva Florestal Adolpho Ducke, 23 km from the city of Manaus, Brazil, two new species have been found that were not included in previous studies of the family (Prance, 1972, 1989). Both species belong to *Licania* subg. *Licania* sect. *Hymenopus* Benth.

Licania adolphoduckei Prance, sp. nov. TYPE: Brazil. Amazonas: Reserva Florestal Adolpho Ducke, Manaus, 6 May 1997 (fl), P. A. C. L. Assunção 502 (holotype, INPA; isotype, K). Figure 1.

Species *L. reticulata* affinis sed floribus 1–1.5 mm longis (haud 2.5 mm), foliis 8–13.5 × 3.5–6.5 cm (haud 16–20 × 6–8 cm), laminis versus basim sine glandulis, petiolis decurrentibus, fructibus extus lenticellatis (haud laevis), haud costatis, staminibus 5 (haud 6–7) differt.

Tree to 15 m tall, the young branches glabrous. Leaf lamina oblong, coriaceous, 8–13.5 × 3.5–6.5 cm, cuneate at base, acuminate at apex, the acumens 3–10 mm long, glabrous on both surfaces, with scattered glands beneath; midrib prominulous above, prominent and glabrous beneath; primary veins 12 to 16 pairs, prominulous on both surfaces, 7–11 mm between veins; petiole 4–6 mm long, glabrous, rugose, eglandular, with lamina base slightly confluent. Stipules axillary, interpetiolar, ca. 2 mm long, persistent. Inflorescences of terminal and subterminal racemose panicles, the rachis sparsely puberulous. Bracts and bracteoles ca. 1 mm long, ovate, persistent, chartaceous, puberulous on exterior. Flowers 1–1.5 mm long, borne in few-flowered cymules attached to rachis and primary branches by short peduncles. Receptacle campanulate, sparsely gray puberulous on exterior, tomentose within; pedicels 0.5–1 mm long. Calyx lobes

5, triangular, puberulous on exterior. Petals 5, glabrous on exterior. Stamens 5, inserted around complete circle; filaments shorter than calyx lobes, glabrous, united at mid point, anthers deltoid. Ovary inserted at base of receptacle, puberulous; style puberulous on lower portion. Fruit ovoid, 6–8 cm long, 4–5 cm broad, constricted near to base, exocarp glabrous, lenticellate, mesocarp 1–2 mm thick, endocarp thin, 0.5 mm thick, bony, glabrous within.

Distribution and habitat. Known only from Central Amazonia in the vicinity of Manaus and the Rio Urubu. Growing in forest beside rivers and streams, on sandy soil.

This species is close to *L. reticulata* Prance but differs in the smaller flowers, which are borne in few-flowered cymules on the primary inflorescence branches, the smaller leaves, the bases of which are decurrent onto the petiole, the larger fruit, which is not longitudinally costate, and the smoother much less conspicuous secondary leaf venation. It is also close to *L. laevigata* and differs in the smaller flowers and inflorescence, the sparse gray puberulous rather than densely brown-tomentose exterior of the flowers, the primary veins, which are 7–11 mm apart rather than 12–18 mm, and in the larger ovoid fruit. The large fruit easily distinguishes this species from all other members of the *Licania heteromorpha* complex of section *Hymenopus* L.

Some of the material now placed in *L. adolphoduckei* was previously placed in *L. reticulata* by me (Prance, 1972), and the collections Ducke 488 and RB25031 were cited in the original description as paratypes of *L. reticulata*. The detailed collections and observations of the Flora of the Reserva Florestal Adolfo Ducke project have enabled me to distinguish between these two species, and so it is most appropriate to name it for Ducke.

Paratypes. BRAZIL. Amazonas: Reserva Florestal Adolpho Ducke, Manaus–Itacoatiara road, km 26, 02°56'S, 59°58'W, 25 Mar. 1997 (fl bud), J. E. L. S. Ribeiro 1869 (INPA, K), 23 Nov. 1993 (fr), J. E. L. S. Ribeiro 1162 (INPA, K), 1 Feb. 1995 (fr), J. E. L. S. Ribeiro 731 (INPA, K), 26 Apr. 1996 (young fr), J. E. L. S. Ribeiro 1823, 1993 (INPA, K), 26 Apr. 1996 (old fl), A. Vicentini 350 (INPA, K); Estrada do Aleixo, Manaus, 17 May 1932

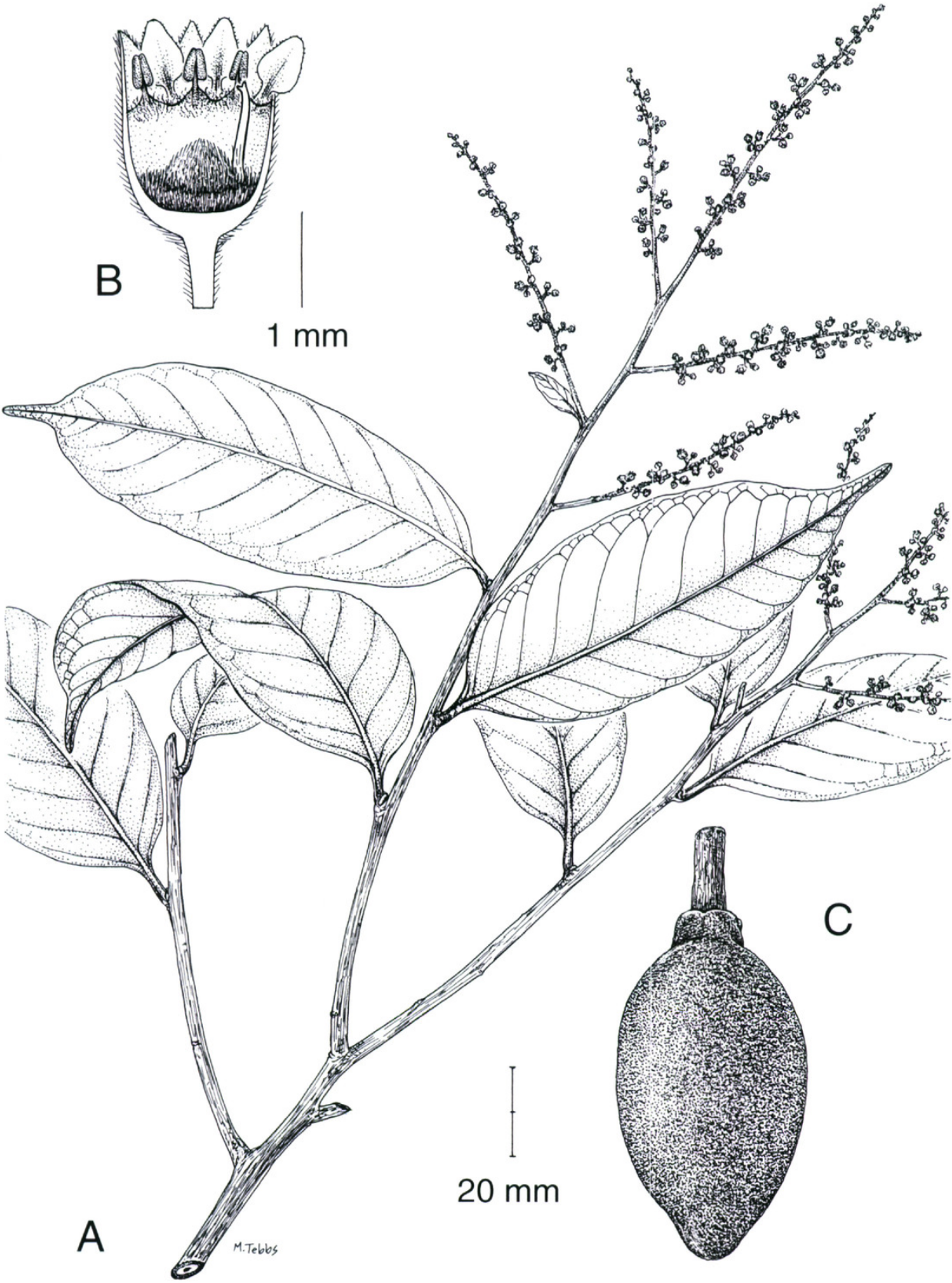


Figure 1. *Licania adolphoduckei* Prance. —A. Habit (Calderón *et al.* 2944). —B. Half flower (Assunção 502). —C. Fruit (Ribeiro *et al.* 1162). (A, C to 20-mm scale and B to 1-mm scale; drawn by M. Tebbs.)

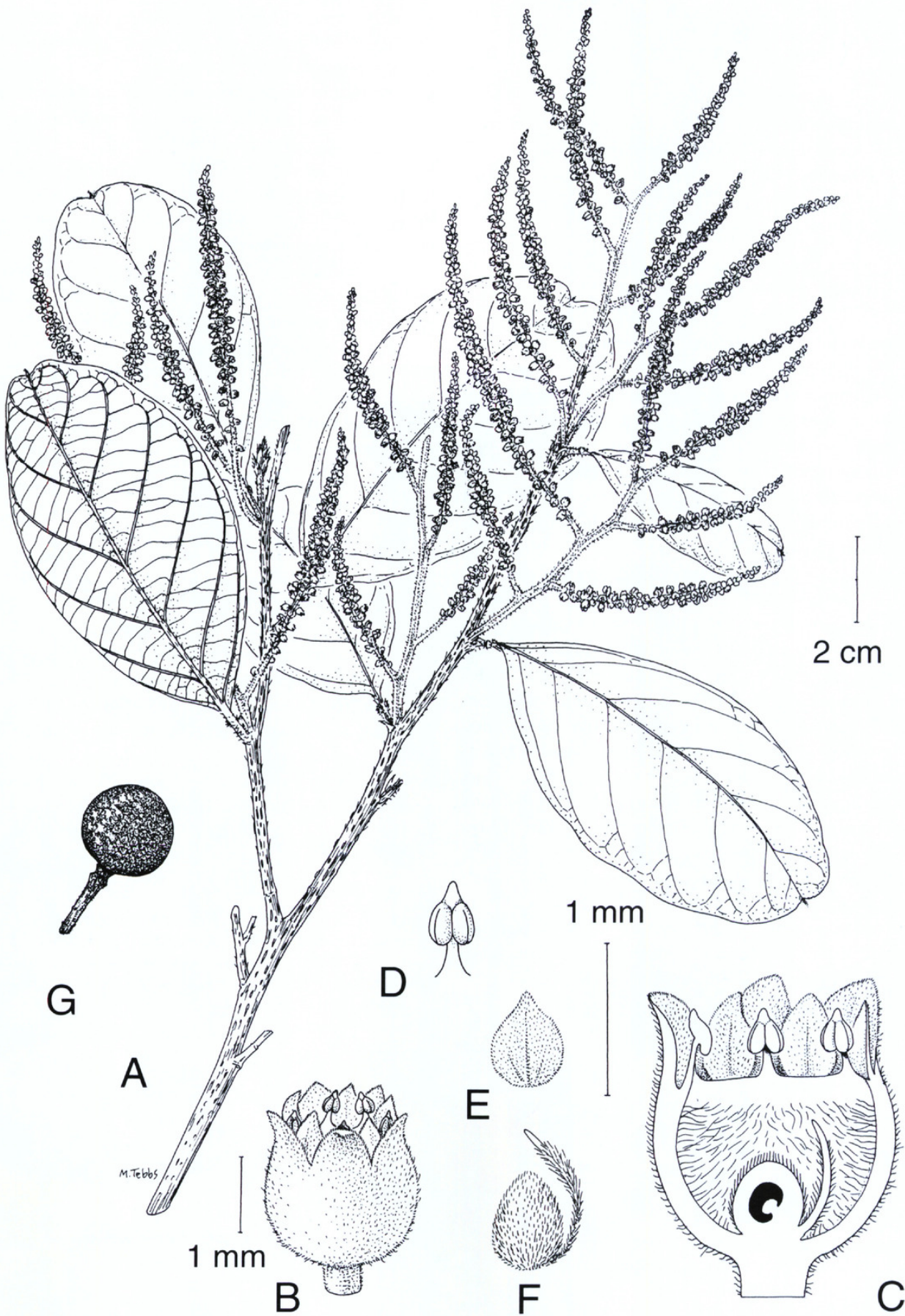


Figure 2. *Licania sothersiae* Prance. —A. Habit. —B. Flower. —C. Half flower. —D. Stamen. —E. Petal. —F. Ovary. —G. Fruit. (A Ribeiro 1142 and B–G Ribeiro & Pereira 1878; A, G to 2-cm scale, B to small 1-mm scale, C–F to large 1-mm scale; A, G drawn by M. Tebbs and B–F drawn by J. M. Fothergill.)

(fl), A. Ducke RB 25031 (K, RB), 5 May (fl), A. Ducke 488 (A, F, IAN, K, MO, NY, R, RB 35569, S, US); Rio Urubu, Iracema Falls, 6 Aug. 1979 (fl), C. Calderón 2944 (INPA, K, US).

Licania sothersiae Prance, sp. nov. TYPE: Brazil. Amazonas: Reserva Florestal Adolpho Ducke, Manaus, 13 Aug. 1993 (fl), J. E. L. S. Ribeiro 1142 (holotype, INPA 178370; isotype, K). Figure 2.

Species *L. heteromorpha* affinis sed petiolis 8–13 mm longis, ad medium cum glandulis duabus munitis, floribus in cymulis differt.

Tree to 20 m tall, the young branches puberulous-glabrescent with narrowly oblong lenticels. Leaf lamina oblong-elliptic, 5.5–11 × 3–6 cm, retuse at apex, cuneate at base, glabrous above, glabrous beneath except for very few stiff appressed hairs on midrib and primary veins; midrib prominent above, with few sparse appressed hairs on both surfaces; primary veins 6 or 7 pairs, prominent above, prominent beneath, secondary venation conspicuously reticulate beneath; petioles 8–13 mm, sparsely hirsutulous, with 2 prominent subopposite glands on middle. Stipules lanceolate, axillary, 5–6 mm long, membranous, caducous. Inflorescences of terminal and subterminal panicles of racemes, the flowers sessile on primary branches and not grouped into cymes, the rachis and branches shortly appressed tomentulous. Bracts and bracteoles minute, 0.5–1 mm long, lanceolate, membranous, persistent. Receptacle campanulate, puberulous on exterior, tomentose within. Calyx lobes acute, puberulous on both surfaces. Petals 5. Stamens 6–7, inserted in a complete circle, filaments shorter than calyx lobes, free to base. Ovary inserted at base of receptacle, lanate pubescent. Style arising to base of anthers, pubescent. Fruit globose, ca. 2 × 2 cm; exocarp glabrous, lenticellate.

Distribution and habitat. Known only from the vicinity of Manaus, Brazil, in forest on terra firme.

This is another taxon resulting from the better understanding of material formerly placed in *Licania heteromorpha* Benth. The intensive field studies in the Reserva Florestal Adolpho Ducke have led to the recognition of this species and also to the reinstatement of *Licania prismatocarpa* Spruce ex Hooker f., which was placed in synonymy under *L. heteromorpha* in Prance (1972).

Licania sothersiae differs from *L. heteromorpha* and *L. prismatocarpa* in the much longer petioles with two prominent median glands and from *L. prismatocarpa* in the inflorescence with flowers borne directly on the primary inflorescence branches. The specific epithet is for Cynthia A. Sothers, who worked up Chrysobalanaceae for the Field Guide of the Ducke Reserve and who is assisting me with a monograph of Chrysobalanaceae.

Paratypes. BRAZIL. Amazonas: Reserva Florestal Adolpho Ducke, Manaus–Itacoatiara road, km 26, 02°56'S, 59°58'W, 16 Dec. 1996 (fr), C. A. Sothers & C. F. da Silva 959 (INPA, K), 26 Mar 1997 (fr) J. E. L. S. Ribeiro & E. da C. Pereira 1878 (INPA, K).

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