Validation of the name *Garcinia leptophylla* (Clusiaceae)

Validação do nome *Garcinia leptophylla* (Clusiaceae)

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Abstract: During the continuous production of the "Catálogo de plantas e fungos do Brasil" (2010), some new combinations under *Garcinia* were proposed; however, they are invalid, since the respective basionyms were not indicated. Here, we propose the validation of the name *Garcinia leptophylla* Bittrich, a new name proposed for *Rheedia longifolia* Planch. & Triana. A lectotype for the name is also designated.

Keywords: Brazilian flora. Amazon forest. Nomenclature. *Rheedia longifolia*. Taxonomy.

Resumo: Durante a produção do "Catálogo de plantas e fungos do Brasil" (2010), algumas novas combinações foram propostas em *Garcinia*, entretanto, elas são consideradas inválidas, uma vez que seus respectivos basiônimos não foram indicados. Neste artigo, propomos a validação do nome *Garcinia leptophylla* Bittrich, um novo nome apresentado para *Rheedia longifolia* Planch. & Triana, bem como designamos um lectótipo.

Palavras-chave: Flora brasileira. Floresta amazônica. Nomenclatura. *Rheedia longifolia*. Taxonomia.

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INTRODUÇÃO

Garcinia is a pantropical genus in Clusiaceae and comprises more than 250 species common in lowland tropical forests (Sweeney, 2008), with most species occurring in the Old World. In Brazil, the genus is represented by at least seven species, of which two are endemics (JBRJ, s. d.). *Garcinia* is easily distinguished from other genera of Clusiaceae in Brazil, by the combination of the following characters: plants dioecious, petiole bases deeply excavated, inflorescences axillar with fasciculated flowers, and baccate fruits. The leaves show generally conspicuous secretory channels on their abaxial surface.

While the taxonomy of *Garcinia* has been recently improved in the Paleotropics with the publications of several nomenclatural notes and new species (Sabu *et al*., 2013; Sarma *et al*., 2016; Sosef & Dauby, 2012; Sweeney & Rogers, 2008), new data about the neotropical species are scant. The last taxonomic treatment for *Garcinia* (as *Rheedia* L.) in Brazil was provided by van den Berg (1979). In this revision, the author described eight species [*R. acuminata* (Ruiz & Pav.) Planch. & Triana is now considered a synonym of *Garcinia madruno* (Kunth) Hammel] and provided a taxonomic key for the *Rheedia* L. species of Brazil. For some time already, the separation of the genera *Garcinia* and *Rheedia*, both described by Linnaeus in the first edition of Species Plantarum (1753), was considered as possibly artificial (Robson, 1958; Adams, 1970; Stevens, 2007). Phylogenetic studies (Sweeney, 2008; Ruhfel *et al*., 2011) later showed that *Rheedia* is in fact nested in the larger genus *Garcinia* and therefore was synonymized under *Garcinia*. Besides the revision of van den Berg (1979), some local floras provided descriptions of a few Brazilian species, such as in the *Flora da Reserva Ducke* (Ribeiro & Bittrich, 1999), *Flora fanerogâmica do estado de São Paulo* (Bittrich, 2003), *Flora do Distrito Federal* (Alkimim *et al*., 2012) and *Flora das cangas da Serra dos Carajás* (Alencar & Marinho, 2017).

During the continuous production of the Flora of Brazil, some new combinations under *Garcinia* for species originally published under *Rheedia* and *Tovomita* Aubl. were proposed [i.e. *Garcinia albuquerquei* (M.E. Berg) Bittrich, *Garcinia calyptrata* (Schltdl.) Bittrich, and *Garcinia leptophylla* Bittrich]. These combinations were included in the first volume of the "Catálogo de plantas e fungos do Brasil" (Forzza *et al*., 2010). However, they are invalid, since the respective basionyms were not included in the catalogue (see Article 41.1 of the International code of nomenclature for algae, fungi, and plants – McNeill *et al*., 2012). *Garcinia albuquerquei* (M. E. Berg) Bittrich was recently validated in Cabral *et al*. (2017); and the epithet *calyptrata* is being proposed for rejection against the younger epithet (*G.*) *gardneriana* (V. Bittrich & L. C. Marinho, personal communication). Here, we propose the validation of and a lectotype for *Garcinia leptophylla*.

RESULTS AND DISCUSSION

Garcinia leptophylla Bittrich, *nom. nov.*
[non *Garcinia longifolia* Blume, Bijdr. Tot de flora van Nederlandsch Indie 1: 214. 1825]
Rheedia longifolia Planch. & Triana, Ann. Sci. Nat., sér. 4, Bot. 14: 322. 1860

Type: BRAZIL. Amazonas: Prov. Alto Amazonas, prés de Panure, Rio Uaupés [tributary of Rio Negro], 1852, R. Spruce 2441 (Lectotype, designated here: P 01901278!; isolectotypes: BR 0000008675903!, F 0054518F, K 2-sheets 000488569!, 000488570!, MG 019616!, NY 00076029!, P 01901279!, W 2-sheets W 1889-0318026!, W 1889-0111933!) (Figure 1).

DIAGNOSIS

Garcinia leptophylla differs from *G. macrophylla*, the other Brazilian species with conspicuously long leaves, by the angular branches (*versus* cylindrical branches), leaf blade strongly coriaceous, opaque and with black dot glands abaxially (*versus* subcoriaceous, shining on both surfaces and black gland dots absent), and smaller flowers up to 5 mm diameter (*versus* diameter of flowers larger than 5 mm).

Figure 1. *Garcinia leptophylla*: A) Lectotype; B) detail of the petiole showing the transverse striations; C) detail of the abaxial leaf blade surface; D) fascicle of male flowers laid out; E) male flower (A from P01901278; B-C, E from W-1889-0318026; D from P01901279). Photos: V. Bittrich (A) and L.C. Marinho (B-E).

Trees up to 20 m, branches glabrous, angular; exudate yellow, plants dioecious. Petioles 2-3.5 cm long, with conspicuous transverse striations, angular, glabrous. Leaf blades 21.5-29 × 6.7-11.2 cm, elliptic-lanceolate, strongly coriaceous, base attenuate or cuneate, margin entire, revolute *in sicco*, apex acute or rounded, adaxial surface shining, abaxial surface opaque with numerous black resiniferous dot glands. Midvein prominent on both surfaces, secondary veins 19-22 pairs, forming an angle 50-70° with the midvein, slightly visible on adaxial surface, prominent of abaxial surface, arched, reticulating near the edge of the blade, intersecondary veins similar to the secondary ones, intramarginal vein present; secretory canals inconspicuous. Inflorescences in axillary fascicles, with up to ca. 40 flowers. Flowers ca. 5 mm diameter *in sicco*; pedicels elongated, 1.5-2.5 cm long, transversally striated; sepals 2, 2 × 2 mm, deltoid, concave, apex rounded, base truncated; petals 4, 4-5 × 3-3.5 mm, green, lanceolate to oblanceolate, reflexed, apex rounded, base truncated; male flowers with stamens 25-30, ca. 3 mm long, white; nectary disc ± low hemispherical-shaped, in the center of flower, 1-1.5 mm high, smooth. Fruits 2-2.2 × 1.7-1.9 cm, green when immature, smooth with projections on the apex *in sicco*, obovate; calyx, corolla and staminodes persistent: sepals ca. 3 × 2 mm, petals ca. 5 × 3.5 mm and staminodes ca. 2 mm long, terete to dorsiventrally compressed, base broader than apex, vestigial anthers present; rostrum absent or present (2-4 mm long); pedicel of the fruit 2.7-3.5 cm long.

ETYMOLOGY

From the Greek *leptos* (= slender, slim); and *phyllon* (= leaf).

DISTRIBUTION

Van den Berg (1979, p. 50) considered this species to be endemic "in the geographical region belonging to the Purus and Madeira-Mamoré River basins, in Brazilian Amazonia" (south-western Amazonia). However, the type specimens were collected in the upper Rio Negro region, near the Rio Uaupés. Now, we extend the known distribution to Bolivia and the state of Rondônia in Brazil, localities included in the Madeira River basin.

SPECIMENS EXAMINED

BOLIVIA. Pando: without municipality, west of rio Madeira, 12 km above Abunã, 20 Jul 1968, fr., G.T. Prance *et al*. 6230 (Harvard University Herbaria - HUH, New York - NY). BRAZIL. Amazonas: Humaitá municipality, on plateau between Livramento river and Ipixuna river, 7-18 November 1934, fr., B.A. Krukoff 7174 (HUH, NY). Without municipality, Curuquetê river, vicinity of Cachoeira Santo Antonio, 15 July 1971, G.T. Prance *et al.* 14248 (NY, Wien - W). Rondônia: without municipality, road to Cassiterite Mines in *Serra dos Três Irmãos*, north bank Madeira river, 05 July 1968, bud, G.T. Prance *et al.* 5649 (Herbário da Amazônia Meridional - HERBAM, HUH, NY).

COMMENTS

Van den Berg (1979) considered a specimen in herbarium Kew as the holotype. However, there are two specimens in Kew, and Planchon & Triana (1860) did not designate a holotype. They most probably studied the specimens in Paris, where both worked regularly together on various taxonomic projects (Diaz & Lourteig, 1989). For this reason, we propose the specimen with barcode P 01901278 as lectotype of *G. leptophylla*.

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