



A striking new species of *Amaioua* (Gardenieae-Rubiaceae) from the Colombian Andes

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Abstract

A new species of *Amaioua*, *A. macrosepala*, is described and illustrated. It is found at 1700–2080 m elevation in the Cordillera Central of the Colombian Andes. This new species is easily distinguished from all other species of *Amaioua* by its persistent, foliose calyx lobes.

Resumen

Una nueva especie de *Amaioua*, *A. macrosepala*, es descrita e ilustrada. Es encontrada entre 1700–2080 m de altura en la Cordillera Central de los Andes colombianos. Esta nueva especie se distingue fácilmente de todas otras especies de *Amaioua* de su lobos calicinos foliaceos y persistentes.

Key words: *Alibertia* group, Gardenieae, Rubiaceae

Amaioua Aublet (1775: 13) is small neotropical genus of trees and treelets ranging from Mexico and Cuba to southern Brazil (state of Santa Catarina). The genus is a member of the *Alibertia* group, a group of 12 genera (Persson & Delprete, in press), all which are characterized by being dioecious and by having pollen released as monads. *Amaioua* is closely related to *Duroia* Linnaeus filius (1781: 209), with which it shares calyprate circumscissile caducous stipules. These two genera have traditionally been separated by the number of female flowers per inflorescence, viz. many in *Amaioua* vs. usually only one in *Duroia* (Schumann 1889, 1891). The fruits of *Amaioua* are usually rather small, ca. 1–2 × 1–1.5 cm, whereas in *Duroia* they are usually two to five times larger. However, small fruits can also be found in *Duroia*, e.g. *D. costaricensis* Standley (1919: 208; Burger & Taylor 1993; Persson pers. obs.), as well as several fruits per infructescence, e.g. *D. genipoides* Spruce ex K. Schumann (1889: 364; Taylor & Steyermark 2004). The generic limits between *Amaioua* and *Duroia* are thus somewhat unclear and they might be two non-monophyletic genera, a notion that is partially supported by a phylogenetic analysis of the *Alibertia* group (Persson 2000).

Nine species are currently accepted in *Amaioua* (Govaerts *et al.* 2015). The delimitations of most species are little-understood, and the genus is clearly in need of revision. In contrast, the new species described here, *Amaioua macrosepala*, is readily distinguished from all other *Amaioua* by its globose fruits with persistent leaf-like calyx lobes.

Amaioua macrosepala C. H. Persson & E. Méndez *sp. nov.*, Fig. 1 A–D

Type:—COLOMBIA. Caldas: Mun. Pensilvania, vereda El Congal, microcuenca El Congal, 05°22'51.3"N, 75°07'00.1"W, 2079 m, 6–12 August 2013 (fr), E. Méndez Vargas 7015 (holotype CUVV 052852!; isotype GB-0147061!).

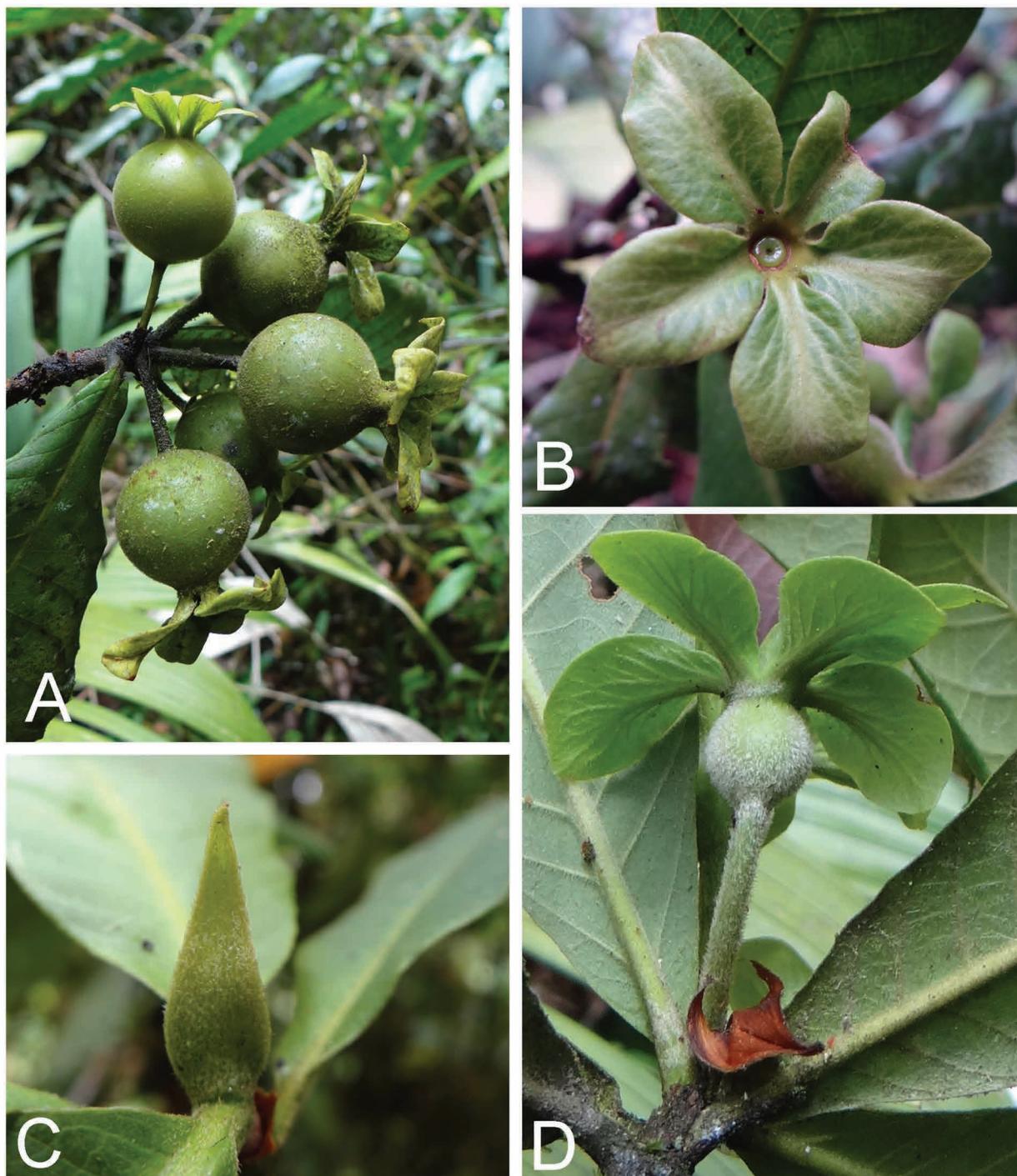


FIGURE 1. A–D. *Amaioua macrosepala*. **A.** Infructescence. **B.** Leaf-like sepals seen from above. **C.** Calyprate stipule. **D.** Solitary young fruit. Photos from the type, *E. Méndez Vargas 7015*, by Enrique Méndez Vargas.

Supposedly dioecious shrub, 2–5 m tall. Branchlets 4–7 mm thick, densely sericeous. Stipules forming a circumscissile cap over the shoot apex, shed immediately as shoot extends, elliptic to slightly ovate, to 20 mm long, densely sericeous outside, glabrous inside with 1–1.5 mm long reddish colleters at base, apex acute. Leaves opposite, subsessile; petioles 2–4 × ca. 1.5 mm, sericeous; blades slightly elliptic-obovate, 13–22 × 4–6.5 cm, papyraceous, acute at base, acuminate at apex with acumen to 2.8 cm long, glabrous or sparsely hirtellous above, densely sericeous along the prominent midvein and the prominent secondary veins below, tertiary and quaternary venation distinct, secondary veins 15–20 on each side of the midrib; domatia absent. Flowers unknown. Young fruit pubescent. Infructescence a cyme or umbel-like cyme with 3–5 fruits; fruits rarely solitary, terminal, sessile or with peduncle to 6 mm long, pedicels 1.5–2.5 cm

long, sericeous. Fruits globose, 1.5–2.0 × 1.5–2.0 cm, puberulent, green when fresh, brown when dry, crowned by a persistent calyx with foliaceous lobes, calyx tube very short, to 1 mm long; lobes 5, contorted, imbricate or sometimes open, elliptic, 1.4–1.7 × 0.8–1.2 cm, conspicuously narrower at base, acute to shortly acuminate at apex, midvein wide and distinct, secondary veins distinct and numerous, lobes minutely puberulent above, densely puberulent or sericeous along veins beneath. Seeds numerous, embedded in a placental pulp; immature seeds lenticular, 7 × 5 × 0.5 mm.

Distribution and habitat:—*Amaioua macrosepala* is endemic to the Central cordillera of the Colombian Andes where it occurs in the understory of cloud forests at 1700–2080 m elevation.

Conservation status: According to the IUCN Red list (IUCN 2010) *Amaioua macrosepala* is considered Endangered (EN subcriteria B2a—severely fragmented or known to exist at no more than five locations) as it is known to occur only in two localities not subjected to conservation.

Phenology:—Fruiting collections were made in January, June and August.

Amaioua macrosepala is presumably a dioecious shrub similar to *Amaioua pedicellata* Dwyer (1980: 30) by sometimes having an umbelliform infructescence and globose fruits. It differs from all other *Amaioua* species in having large leaf-like, almost free, calyx lobes vs. small linear lobes of a few mm in length. *Duroia valesca* C.H. Persson & Delprete (2010: 525) and *Riodocea pulcherrima* Delprete (1999: 18), from the Atlantic forest of SE Brazil, have similar leaf-like calyx lobes, but both of these species differ from *Amaioua* in having solitary fruits and calyx lobes clearly overlapping. In addition, *Duroia valesca* is immediately distinguished by its 4(5)-whorled leaves vs. opposite in *A. macrosepala*, and *R. pulcherrima* differs in having large foliose persistent stipules vs. calyptrate caducous stipules in *A. macrosepala*.

Etymology:—The specific epithet of this species refers to the large leaf-like calyx lobes that are fused at the base (calyx tube to 1 mm long).

Additional specimens examined (Paratypes):—COLOMBIA. Antioquia: Mun. Santo Domingo, Cgto. Santiago, vertiente oriental de la Cordillera Central, 6°32'56.2"N, 75°08'41.1"W, 1704 m, 20 June 2014 (fr), *A. Camargo García* 855 (HUA photo). Caldas: Mun. Pensilvania, Vereda El Congal, finca El Congal, 05°22'51.3"N, 75° 07'00.1"W, 2079 m, 21 February 2014 (fr), *E. Méndez Vargas & N. Londoño* 7354 (CUVC, GB).

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