NOVELTIES IN NEOTROPICAL DILLENIACEAE

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ABSTRACT

A new species of *Doliocarpus* (Dilleniaceae), **Doliocarpus putumayensis** Aymard from the Porvenir River (affluent of the lower Putumayo River), and the middle Caquetá River in the state of Amazonas was found during the examination of specimens for the Dilleniaceae treatment for the *Flora de Colombia*. This species is not clearly related to any other *Doliocarpus* species, however, it shows certain similarities with *D. magnificus* Sleumer in its leaves size, shape, and the fruit size and pubescence. Nonetheless, *P. putumayensis* differs in its tertiary venation, inflorescence size, sepal number and shape, anthers glabrous with a connective broadened, and fruit densely adpressed pubescent. An updated key to the species of *Doliocarpus* of Colombia is provided, and a previously described subspecies from Brazil is elevated to the rank of species (i.e., *Doliocarpus brevipedicellatus* Garcke subsp. *hilarianus* Kubitzki to **D. hilarianus** Aymard).

KEY WORDS: Flora of Colombia, Brazil, Amazonia, Dilleniaceae, *Doliocarpus*

RESUMEN

Durante el estudio de los especímenes para la elaboración del tratamiento de la familia Dilleniaceae para la *Flora de Colombia*, se encontró una nueva especie del género *Doliocarpus,* que se describe, ilustra y se discute su afinidad. **Doliocarpus putumayensis** se conoce de los bosques húmedos del río Porvenir (afluente del bajo río Putumayo) y del río Caquetá medio, respectivamente. Está especie no posee relación con ninguna especie en particular del género, sin embargo, posee cierta similitud con *D. magnificus* Sleumer, de la cual difiere en la venación terciaria, el tamaño de las inflorescencias, el número y forma de los sépalos, las anteras glabras con el conectivo engrosado y los frutos densamente adpresos pubescentes. Se incluye una clave actualizada de las especies del género *Doliocarpus* para Colombia, y se eleva una subespecie descrita de Brasil al rango de especie (i.e., *Doliocarpus brevipedicellatus* Garcke subsp. *hilarianus* Kubitzki a **D. hilarianus** Aymard).

INTRODUCTION

The pantropical family Dilleniaceae with 11 genera and about 500 species, is notably diverse in the New World (Fraga & Stehmann 2010; Aymard & Kelloff 2016), with representatives extending into the Old World and temperate Australia (Horn 2006, 2009). The infra classification of the family has been changed over the last decade though the results of several phylogenetic studies, as a consequence, currently four subfamilies had been recognized (Delimoideae, Dillenioideae, Doliocarpoideae, and Hibbertioideae, see Horn 2006, 2009; Fraga 2012). Among the neotropical genera, *Doliocarpus* Rolander is the most diverse, it includes about 50 species distributed throughout southern Mexico, Central America, the Antilles, the Guianas,Venezuela, Colombia, Ecuador, Perú, Bolivia, Brazil, and Paraguay (Aymard & Kelloff 2016). Within the family, this genus is distinguished by its vining to woody lianas (rarely erect or scandent shrubs); having ramiflorous inflorescences, racemose, fasciculate or glomerate; an unicarpellate, 1-celled ovary; fruit a berry , sometimes opening irregularly, and seeds completely covered by a white aril (Todzia & Aymard 2013). The genus was monographed by Kubitzki (1971), who divided it into two sections: section *Calinea* Eichler, characterized by having leaves with tertiary nerves subparallel (rarely reticulate), erect-flexuose filaments with introrse anthers at anthesis, and a glabrous or pilose ovary, and section *Doliocarpus* having leaves with tertiary nerves reticulate, reflexed filaments with anthers extrorse at anthesis, and ovary always pilose. Although the stamen character (filaments at anthesis) represents a reliable morphological feature when assigning specimens of *Doliocarpus* to these two sections, it is usually the case that most specimens do not have flowers at anthesis, or have flowers lacking petals, many having instead young fruits with persistent sepals and stamens. Leaf venation, therefore, is perhaps the most valuable character to distinguish the two sections of this genus (Aymard 2015).

This contribution increases the number of *Doliocarpus* species known from Colombia to twenty-four, with five of them endemics (*D. chocoensis* Aymard, *D. lopez-palacii* Aymard, *D. putumayensis* Aymard, *D. schultesianus* Aymard, and *D. triananus* Aymard). In addition, with the objective of enabling the identification of these species, an emended key for all species of *Doliocaprpus* from Colombia is provided. The new species was discovered though of an unidentified Dilleniaceae collection stored in the Herbarium COAH during the preparation of the Dilleniaceae treatment for the *Catálogo de plantas y liquenes de la flora vascular de Colombia* (Aymard 2016), and the *Flora de Colombia* (being carry out by the Instituto de Ciencias Naturales, Facultad de Ciencias, of the Universidad Nacional de Colombia).

TAXONOMIC TREATMENT

Doliocarpus putumayensis Aymard, sp. nov. (**Fig. 1**). TYPE: COLOMBIA. AMAZONAS: Tarapacá, río Porvenir (cuenca baja del río Puyumayo), sector Ventura, bosques de terraza baja y vega inundable, aprox. 02°33'0.92"S; 70°11'0.92"W, 80 m, 12 Jul 2006, *J. Navarro-López, M. Sánchez, J. Carvajal, y R. Florez 1152* (HOLOTYPE: COAH).

Doliocarpus putumayensis is not evidently related to any other *Doliocarpus* species, however it shows certain similarities with *D. magnificus* Sleumer, it differs in its tertiary venation subparallel; inflorescence racemose, 5–8 mm long; sepals 5, 5–6 mm long, widely-ovate; anthers ca. 0.5 mm long, glabrous with a connective broadened; and the fruit ca. 12 mm diam, densely adpressed pubescent, with the persistant sepals on the fruit ca. 6 mm long.

Plant a liana; **branches and branchlets** sulcate, densely shorty pilose, sparsely pilose or glabrescent when mature, bark flaking off when mature. **Leaves** subcoriaceous, obovate or lanceolate-obovate, 15–29 × 5–10 cm, the base cuneate, the apex acuminate, acumen 5–11 mm long, blades glabrous on the upper surface, adpressed pubescent along the sulcated midrib, glabrous on the lower surface, except along the midrib and the secondary nerves, where they are covered by long trichomes, 1–2 mm long, margins not revolute, crenate in the lower half, dentate mostly in the upper half, lateral nerves 13–14, linking ca. 2 mm close to the margin mostly in the lower half, running straight toward the margins mostly in the upper half, tertiary venation subparallel, evident in both sides; petioles stout, 1–3.5 cm long, 2–4 mm wide, exalate, canaliculate, densely adpressed pubescent only along the groove. **Inflorescence** axillary, racemose, 5–8 mm long, rachis densely adpressed pubescent, trichomes brown, bracts 2, situated at the base of the inflorescence, widely ovate, 5–7 × ca. 4 mm, pubescence like the inflorescence externally, glabrous internally, bracteoles elliptic-lanceolate, ca. 4 × 1–1.5 mm, pubescence like the inflorescence externally, glabrous internally. **Flowers** pedicelate, pedicels 4–5 long, sepals 5, 5–6 × 3–4 mm, widely-ovate, adpressed pubescent externally, more densely at the midrib, glabrous to sparsely pilose internally, petals not seen, stamens 20–30, filaments glabrous, 8–10 mm long, anthers ca. 0.5 mm long, glabrous; ovary not seen, **Fruit** ca. 12 mm diam., densely adpressed brown pubescent; seed 1, ca. 8 × ca. 4 mm, reniform, black, shiny, covered by a white aril.

Phenology.—Known only from mature flower and young fruit.

Distribution and habitat.—Known only from the type and paratypes localities, where it has been collected in riverine wet forests from the "río El Porvenir" (a small affluent of the left side of the lower Putumayo River), and the middle Caquetá River. However, this species probably has a wider distribution in the moist forests located in this portion of the northwestern Amazon region, an area not sufficiently explored botanically.

Eponymy.—This species is named in honored the Putumayo River (or rio Içá in Brazil), which defines the currently border among the Colombia, Ecuador, and Perú Amazon region. In Colombia, the Putumayo basin covers ca. 54,000 km and is home to twelve indigenous nations (i.e., Kamëntsá, Boras, Inganos, Kofanes, Kokamas, Murui, Sionas, Tikunas, and Yaguas). These communities have lived for centuries along the Putumayo River basin, a largely still pristine region with a diverse flora and fauna.

Conservation status.—According to the IUCN Red List this species has a category DD (data deficient). More information and research is required and may show that this species should be placed under the threatened classification (IUCN 2016).

Additional specimens examined: **COLOMBIA. Depto. Amazonas:** Río Caquetá, 4.6 km aguas arriba de la boca del quebradón de La Culebra, 00°56'S, 71°47'W, 29 Aug 1997, *M. Sánchez, A. Duque y P. Miraña 5161* (COAH); Río Caquetá, 1.8 km aguas abajo de la boca del quebradón

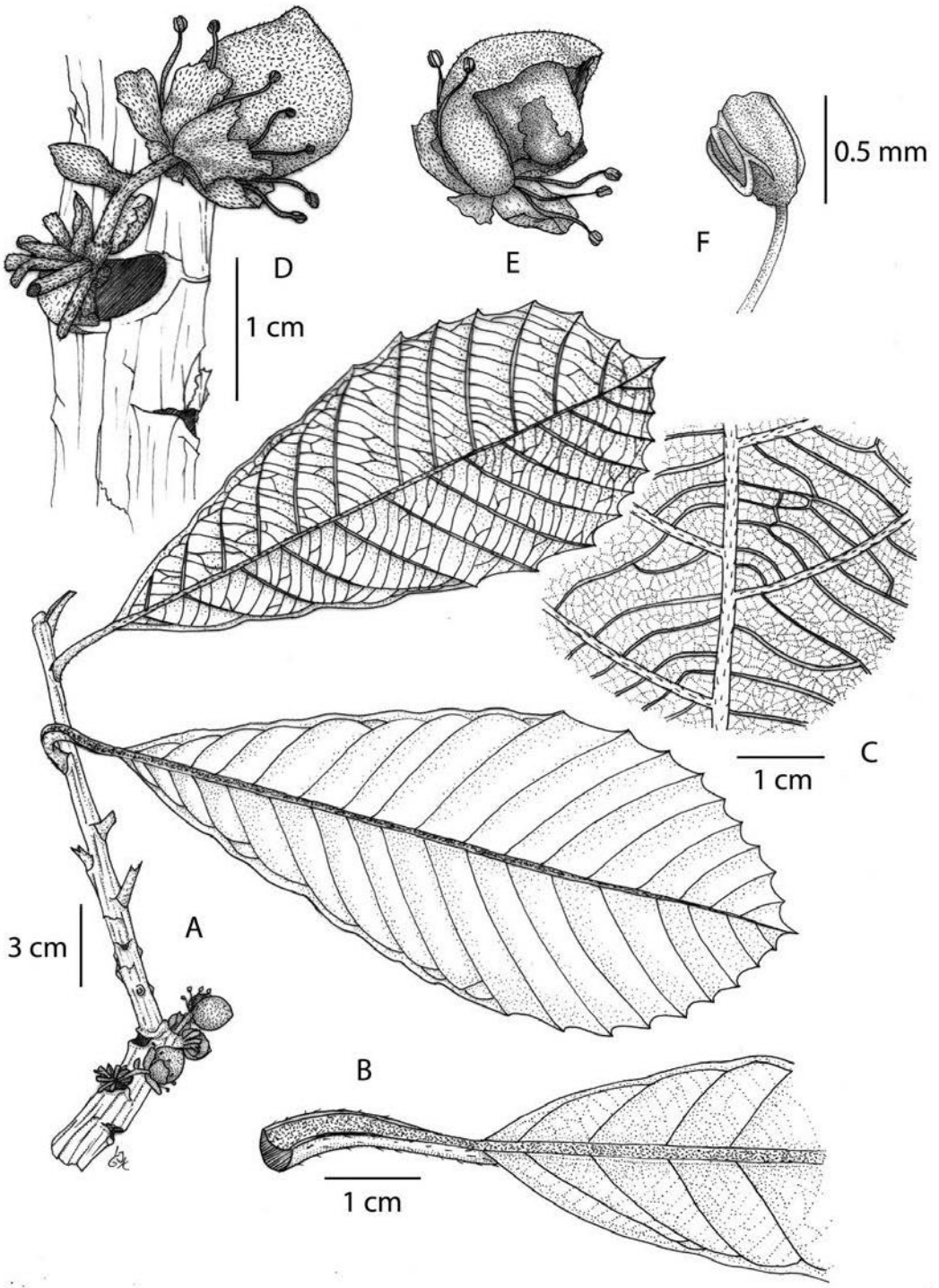

Fig. 1. *Doliocarpus puyumayensis* Aymard. **A.** Habit showing the leaves blades and shorter inflorescences. **B.** Detail of petiole. **C.** Detail of tertiary venation on the lower surface. **D.** Detail of inflorescence. **E.** Detail of fruit showing the seed covered by the aril. **F.** Detail of anther showing the broadened connective. A–F drawn from *Navarro-López et al. 1152* (COAH). Drawing by Laura J. Giraldo-Kalil.

de La Culebra, 00°58'S, 71°44'W, 20 May 2000, *M. Sánchez, A. Duque y P. Miraña 5632* (COAH); Puerto Santander, Bocaduché, 00°40'S, 72°07'W, 05 Sep 1997, *J.M. López, A. Idarraga y W. Rodrígues 248* (COAH, HUA).

Taxonomic notes.—Because of its subparallel tertiary venation, *Doliocarpus putumayensis* belongs in section *Calinea* (Kubitzki 1971). This new species is not apparently allied to any other, however it shows certain similarities to *Doliocarpus magnificus* Sleumer in its leaves size, shape, and the fruit size and pubescence. Nevertheless, *D. putumayensis* differs from the latter in its tertiary venation subparallel (vs. reticulate), inflorescence racemose, 5–8 mm long (vs. solitary flower or fascicles, 2–3 mm), sepals 5, 5–6 mm long, widely-ovate (vs. sepals 7, 3–12 mm long, obovate), anthers ca. 0.5 mm long, glabrous with a connective broadened (vs. 2–3 mm long, lax pilose, and connective linear), and fruit ca. 12 mm diam., densely adpressed pubescent, sepals ca. 6 mm long (vs. ca. 15 mm diam., sparsely pilose, sepals 15 mm long).

Doliocarpus hilarianus (Kubitzki) Aymard, comb. et stat. nov. Basionym: *Doliocarpus brevipedicellatus* Garcke subsp. *hilarianus* Kubitzki, Mitt. Bot. Staatssamml. München 9:46. 1971. Type: BRAZIL. Minas Gerais: Bois à Guardamor près Paracatu, *A.F.C.P. de Saint-Hilaire s.n.* (holotype: MO; isotype: M).

Taxonomic history.—*Doliocarpus brevipedicellatus* Garcke subsp. *hilarianus* Kubitzki was described as a new subspecies during the revision of the genus *Doliocarpus* (Kubitzki 1971). However, the examination of the original and additional material (i.e., Tropicos and the SpeciesLinkNetwork data base) indicates that it should be treated as a separate species, which can be distinguished from *D. brevipedicellatus* by the characters indicated in the below key. In addition, the geographical distribution of this species are distinct, *D. hilarianus* is endemic from Brazil (Goiás, Maranhão, Mato Grosso, Minas Gerais), in Cerrado biome over sandy soils, and in the edge of gallery forest, 400–1000 m, while *D. brevipedicellatus* is widely distribute from Nicaragua, Costa Rica, and Panamá in Central America; the Antilles; Venezuela, Guianas, Colombia, Ecuador, Perú, Brazil, and Bolivia in South America, in *Pinus* forests, evergreen lowland forests, and shrubby upland savannas 50–300 m.

1. Leaves coriaceous, ovate to obovate-elliptic, short acuminate (ca. 5 mm), dull in both sides, secondary veins 9–13; tertiary venation not prominent and domatia present in the lower surface, petioles stout, 7–10 × ca. 3 mm; floral botton ca. 5 mm diam., sepals ovate, interior 3.5–4 mm long _____ **D. hilarianus** (Kubitzki) Aymard
1. Leaves chartaceous to subcoriaceous, lanceolate to lanceolate-elliptic, long acuminate (0.5–2 cm long), glossy in both sides, secondary veins 5–9; tertiary venation prominent and without domatia in the lower surface; petioles slender, 4–8 × ca. 1 mm; floral bottom ca. 1–2 mm diam., sepals ovate-elliptic, interior 2–3 mm long _____ **D. brevipedicellatus** Garcke

Additional specimens examined: **BRAZIL. Goiás:** 1 km W of Jaraquá, 800 m, 18 Jul 1984, *S.A. Mori et al. 16844* (CEN, CEPEC, HBG, MO, NY). **Minaçu:** Estrada Nova Minaçu-Serra da Mesa, 13°40'S, 48°12'W, 900 m, 11 Sep 1991, *T.B. Cavalcanti et al. 1009* (NY). Estrada para a subida da serra desde Pirenápolis, primeira estrada em direção da Cachoeira da Andorinha, Pirenópolis, -15.8397°, -48.9267°, 800 m, 18 Aug 2007, *P.G. Delprete 10298* (NY); Córrego Ferros, Mineiros, -17.5694°, -52.5511°, 24 Jul 1974, *G. Hatschbach 34740* (MBM). **Maranhão:** Morro de Baleia, 2 km towards Carolina from Pedra Caída, 07°03'S, 47°27'W, 01 Jul 1993, *J.A. Ratter et al. R6707* (NY). **Mato Grosso:** Upper Rio Araguaia, from 15 to 70 km S of Xavantina, 400–500 m, 26 Jun 1966, *H.S. Irwin et al. 16876, 17024, 17276, 17456* (GH, M, MO, NY); Alto Araguaia, Rib. Claro, 22 Jul 1974, *G. Hatschbach 34650* (INPA, MBM, NY); Nobres, 18 km S of Rio Celeste, 12°27'S, 55°40'W, 29 Apr 1985, *W.W. Thomas et al. 3895* (NY); Estrada Santarém-Cuiabá road, BR 163, km, 763, Colider, 09°35'S, 54°35'W, 19 Apr 1983, *I.L. Amaral et al. 851* (NY); Alto Garças, arredores, Alto Garças, 16.9439°, -53.5281°, 22 Jul 1974, *G. Hatschbach 34701* (MBM). **Minas Gerais:** San José de Geribá, no date, *R.S. Santos & A. Castellanos 28270* (NY); São José do Ceribá, Fazenda S. José, 13 Sep 1963, *R.S. Santos 24169* (NY).

EMENDED KEY TO THE SPECIES OF *DOLIOCARPUS* OF COLOMBIA (BASED ON AYMARD 1998, 2007, 2015)

1. Tertiary venation reticulate; leaves with verrucosities on the lower surface.
   2. Lateral nerves terminating at the margin; sepals glabrous externally; fruits covered by trichomes 3–5 mm long _____ **D. olivaceus** Sprague & R.O. Williams ex Standl. (Antioquia, Chocó)
   2. Lateral nerves arched and joined close to the margin; sepals adpressed pilose externally; fruits covered by trichomes 5–10 mm long.
      3. Branches terete; leaves shiny on the upper surface, glabrous on the lower surface; margins entire to subsinuate _____ **D. nitidus** (Triana) Triana & Planch. (Antioquia, Chocó, Cundinamarca, Huila, Ibagué, Tolima, Santander)
      3. Branches angulate; leaves dull on the upper surface, adpressed-pubescent on the lower surface; margins sinuate to dentate mostly in upper half _____ **D. major** J.F. Gmel. (Amazonas, Antioquia, Caquetá, Chocó, Guaviare)
1. Tertiary venation subparallel; leaves without verrucosities on the lower surface.
   4. Erect or scandent shrubs.
      5. Petioles glabrous; sepals appressed-pubescent or laxe pilose on the outside.

6. Leaves coriaceous, not conduplicate, base attenuate, apex obtuse, rotundate or shortly acuminate, petiole stout, 3–5 mm wide; inflorescence not longer than 4 mm, pedicels 0–1 mm long _____ **D. leiophyllus** Kubitzki (Guianía, Vichada)
6. Leaves rigid-coriaceous, always conduplicate (in herbarium specimens), base acute, apex acuminate; petiole stender, ca. 1.5 wide; inflorescence 5–10 mm long, pedicels 2–4 mm long _____ **D. spraguei** Cheesman (Vichada)

5. Petioles tomentose or appressed pilose; sepals glabrous to sparsely pilose or sericeous on the outside.
7. Petioles not winged, 5–8 mm long; blades obovate-elliptic, 5–7 cm long, shiny and strongly reticulate on the upper surface; lateral nerves 5–7, pilose on the upper surface; sepals sericeous on the outside; fruits glabrous _____ **D. paucinervis** Kubitzki (Guianía)
7. Petioles subwinged, 10–20 mm long; blades obovate, lanceolate-obovate, 7–20 cm long; dull and venation evident or inconspicuous on the upper surface; lateral nerves 9–14(16), glabrous on the upper surface; sepals glabrous to sparsely pilose on the outside, fruit sparsely pilose _____ **D. savannarum** Sandwith (Guianía)

4. Woody lianas or vines.
8. Inflorescences sessile or with peduncles 1–10 mm long.
9. Inflorescences racemose (peduncle with 2 to 6 flowers).
10. Leaves conduplicate, rigid-coriaceous; margins in the upper half of the leaf blade entire _____ **D. spraguei** Cheesman (Vichada)
10. Leaves not conduplicate, subcoriaceous or coriaceous; margins dentate mostly in the upper half; sepals ovate-elliptic or broadly ovate.
11. Leaves obovate-oblong; sepals obovate-elliptic, puberulent to glabrescent externally _____ **D. amazonicus** Sleumer (Amazonas)
11. Leaves obovate, lanceolate to elliptic; sepals ovate-elliptic or widely-ovate; sparse pilose or adpresssed pubescent externally
12. Leaves lanceolate to elliptic, 6–15 cm long, 6–9 secondary nerves, base attenuate; pedicels sparsely pilose, sepals ovate-elliptic, fruit 5–6 mm diam., glabrous _____ **D. brevipedicellatus** Garcke (Antioquia, Bolívar, Chocó, Córdoba, Guainía, Guaviare, Meta, Vaupés, Vichada)
12. Leaves obovate or lanceolate, 15–29 cm long, 13–14 secondary nerves, base cuneate; pedicels pubescent, sepals widely-ovate, fruit ca. 12 mm diam., densely adpressed pubescent _____ **D. putumayensis** Aymard (Amazonas)

9. Inflorescences fasciculate, glomerulate not racemose (peduncle with a single flower).
13. Leaves 2–4 cm wide, petiole 4–7 mm long; sepals oblong; fruit 4–6 mm diameter _____ **D. chocoensis** Aymard (Chocó)
13. Leaves 4–15 cm wide, petiole 0.7–5 cm long; sepals obovate, ovate, elliptic or obovate-elliptic; fruit 5–20 mm diameter.
14. Leaf blades with tertiary venation prominently areolate on the lower surface _____ **D. areolatus** Kubitzki (Guianía)
14. Leaf blades with tertiary venation not prominent on the lower surface.
15. Leaves 12–35 cm long.
16. Branches, branchlets, and blades covered by yellow trichomes; leaves opposite, petioles 5–6 mm long, peduncles 0.5–1 mm long _____ **D. pruskii** Aymard (Antioquia, Guaviare)
16. Branches, branchlets, and blades glabrescent if pubescent not covered by yellow trichomes; leaves alternate, petioles 1.5–5 cm long, peduncles 0.5–7 mm long.
17. Leaves black punctate on the lower surface; petiole 3–5 cm long; peduncle 4–7 mm long _____ **D. lopez-palacii** Aymard (Antioquia)
17. Leaves not black punctate on the lower surface; petiole 1.5–3 cm long; peduncle 0.5–1 mm long _____ **D. foreroi** Aymard (Chocó, Valle)
15. Leaves 5–12 cm long.
18. Leaves pilose on upper surface.
19. Leaves elliptic, dense pubescent on the lower surface; peduncle ca. 2 mm long, sepals ciliate at the margins, fruit completely pubescent (covered by yellow stinging trichomes) _____ **D. schultesianus** Aymard (Vaupés)
19. Leaves obovate or obovate-elliptic, tomentulose on the lower surface, peduncle 2–7 mm long, sepals not ciliate at the margins, fruit sparsely adpressed pilose _____ **D. macrocarpus** Mart. ex Eichler (Amazonas, Santander, Vaupés)
18. Leaves glabrous on upper surface.
20. Leaves lanceolate or lanceolate-elliptic, coriaceous, the margins subrevolute; petioles 0.5–2 mm wide; sepals elliptic, 2–4.5 mm long, glabrous or sparsely pilose on the outside _____ **D. savannarum** Sandwith (Guainía)
20. Leaves elliptic or elliptic-oblong, rigid-coriaceous, the margins strongly revolute; petioles 3–4 mm wide; sepals ovate-elliptic, 5.5–6 mm long, appressed-pilose on the outside _____ **D. liesneri** Aymard (Guainía)

8. Inflorescences with peduncles longer than 12 mm.
21. Inflorescences racemose (peduncle with 2 to 10 flowers).
22. Leaves coriaceous, oblanceolate-obovate or lanceolate, the margins entire or subsinuate; sepals elliptic _____ **D. novogranatensis** Kubitzki (Amazonas, Chocó, Meta)
22. Leaves subcoriaceous, obovate-lanceolate, the margins dentate; sepals obovate or obovate-oblong _____ **D. multiflorus** Standl. (Amazonas, Antioquia, Caquetá, Chocó, Valle)

21. Inflorescences fasciculate not racemose (peduncle with a single flower).
    23. Sepals lax pubescent to glabrescent on the outside; fruits glabrous.
        24. Leaves 14–30 × 10–20 cm.
            25. Stems, petioles, and leaf blades glabrous or with sparse, non-ferrugineous pubescence _____ **D. dentatus** subsp. **latifolius** Kubitzki (Guianía, Vaupés)
            25. Stems, petioles, and leaf blades with spreading, ferrugineous pubescence _____ **D. dentatus** subsp. **ferrugineus** (Rusby) Kubitzki (Chocó)
        24. Leaves 6–12 × 5–8 cm.
            26. Leaves chartaceous or subcoriaceous, serrate mostly in the upper half of blades.
                27. Leaves glabrous or with sparse non-ferrugineous pubescence _____ **D. dentatus** subsp. **dentatus** (Amazonas, Arauca, Bolívar, Boyacá, Caquetá, Chocó, Cesár, Magdalena, Meta, Vaupés)
                27. Leaves densely ferrugineous pubescent _____ **D. dentatus** subsp. **esmeraldae** (Steyerm.) Kubitzki (Caquetá)
            26. Leaves coriaceous to rigid-coriaceous, crenate or sinuate mostly in the upper half.
                28. Leaves crenate, ovate-elliptic, the apex rounded or short acuminate _____ **D. dentatus** subsp. **undulatus** (Eichl.) Kubitzki (Caquetá, Guianía, Vaupés)
                28. Leaves sinuate, obovate or elliptic, the apex strongly cuspidate _____ **D. dentatus** subsp. **obovatus** Aymard (Amazonas)
    23. Sepals on the outside and fruits densely pubescent.
        29. Margins entire or subsinuate; petioles 3–4.5 cm long; sepals pubescent on the inside _____ **D. robustus** Aymard (Valle)
        29. Margins dentate or sinuate-crenate; petioles 1–2.5 cm long; sepals glabrous on the inside.
            30. Leaves obovate or obovate-elliptic; margins sinuate-crenate; peduncles adpressed-pubescent; fruits covered by trichomes short and long _____ **D. hispidobaccatus** Aymard (Amazonas, Caquetá)
            30. Leaves elliptic or elliptic-obovate; margins dentate; peduncles hispid; fruits covered by a single trichomes size.
                31. Leaves wide elliptic or elliptic-obovate, 10–21 × 4–10 cm, base cuneate, margins in the upper half of the leaf blade dentate petiole ca. 15 mm long; peduncles with 2 coriaceous bracteoles; sepals broadly ovate to suborbicular, densely yellow hispid-pubescent externally; fruit 9–10 mm diam., covered by yellow trichomes _____ **D. hispidus** Standl. & L.O. Williams (Caquetá, Valle)
                31. Leaves elliptic, 5–13 × 3–6 cm, base attenuate, margins dentate along the blade, petiole 5–10 mm long; peduncles with 3 papyraceous bracteoles; sepals ovate, adpressed sericeous externally; fruit ca. 12 mm diam., covered by white trichomes _____ **D. triananus** Aymard (Antioquia)

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