

Excerpt from:

Anderson, W. R. 1981. Malpighiaceae in *The botany of the Guayana Highland, Part XI*. Mem. New York Bot. Gard. 32: 21–305.

9. *Glandonia* Grisebach in Martius, Fl. Bras. 12(1): 23. 1858.

Shrubs or trees; leaves often bearing abaxial glands; stipules interpetiolar, linear, the adjacent stipules from opposite leaves connate in pairs, the 2 pairs at each node conduplicate and equitant over the apical bud, caducous, the members of a pair often splitting apart before falling off. Inflorescence terminal, usually simple, a raceme of short cincinni, the bracts and bracteoles persistent, the lowest bracteole and alternate subsequent bracteoles bearing a large eccentric abaxial gland. Flower buds circinate, conical or pyramidal, the outermost petal completely covering the others. Sepals all biglandular, the glands obovate, com-

pressed. Petals strongly trimorphic, the outermost with the limb conical-galeiform, its claw recurved after anthesis, the other 3 laterals flat or crumpled or folded, recurved, the posterior with the flat or reflexed limb borne on a stout, erect claw. Receptacle glabrous on both sides of stamens. Filaments very short, connate at base, densely hirsute on both sides; all 10 anthers fertile, similar, subulate, the locules linear, quite distinct, tapering at the apex into 2 sterile awn-like extensions ca 0.5 mm long, exceeding the slender connective. Ovary with 3 completely connate carpels, 1 anterior and 2 posterior, all 3 locules fertile; styles 3, apical, inbent at the apex in bud, never fully straightened, subulate, the stigma minute and terminal. Fruit an indehiscent fibrous nut, cylindrical or truncate-conoid, dry at maturity and without a stone, containing only 1 locule completely filled by 1 large seed (through abortion of the other 2 ovules and collapse of their locules); seed spheroid or cylindroid, the cotyledons large, fleshy, straight and not folded, equal or one larger and slightly embracing the other.

Type. *Glandonia macrocarpa* Grisebach.

Glandonia comprises three geographically disjunct species, one from the upper Rios Negro and Orinoco, one from the vicinity of Manaus, and one from the upper Rios Purús and Madeira. The species are similar, particularly the latter two, but seem to be meaningful biological entities.

The fruit of *Glandonia*, like that of *Burdachia*, has a fibrous, inedible husk which imparts buoyancy to the mature fruit. This is presumably an adaptation for dispersal by water. All three species are usually found growing near rivers or in periodically inundated savannas or igapós.

Key to the Species of *Glandonia*

1. Lamina minutely papillose below (Fig 12c), coriaceous; stems, stipules, petioles, and midrib below appressed-tomentose, persistently so or eventually glabrate. 1. *G. williamsii*.
1. Lamina nearly or quite smooth below (Fig 12d), papyraceous; stems, stipules, and leaves glabrous (? or very soon glabrescent).
 2. Inflorescence (13–)17–28 cm long, open, with 1–2.5 cm between pairs of cincinni; lamina 15–26 cm long, 6–10 cm wide, strongly obovate; floriferous peduncle 0–1(–2) mm long, nearly or quite included by the subtending bracteole; posterior petal with large glands on proximal $\frac{1}{3}$ – $\frac{1}{2}$ of limb; pedicel 10–12 mm long. 2. *G. macrocarpa*.
 2. Inflorescence 5–11 cm long, with the cincinni crowded, up to 1 cm apart; lamina 9–18 cm long, 3.5–6.5(–8) cm wide, elliptical or slightly obovate; floriferous peduncle 2–3 mm long, raising the joint beyond the subtending bracteole; posterior petal with few small glands at base of limb; pedicel 6–8 mm long. 3. *G. prancei*.

1. *Glandonia williamsii* Steyermark, Fieldiana Bot. 28(2): 288. 1952.

Fig 12c & 29e–k.

Shrubs or small trees 2–8 m tall, the young vegetative stems flattened and tomentose or sericeous, becoming terete and glabrate in age. Lamina of the larger leaves 10–22 cm long, 3.3–10.3 cm wide, elliptical or slightly ovate or obovate, cuneate or rounded at the base, revolute at the margin, obtuse to acuminate at the apex, coriaceous, minutely papillose below, appressed-tomentose to glabrate, bearing (0–)2(–6) large glands below at the base by the midrib and several small glands distally, the lateral veins and reticulum moderately prominent below; petiole 11–24 mm long, tomentose to glabrate, eglandular; stipules 9–21 mm long, abaxially tomentose to glabrate. Inflorescence 5–18 cm long, appressed-tomen-

tose or sericeous, the cincinni mostly less than 1 cm apart, containing 3–5 flowers; bracts and bracteoles ovate, abaxially sericeous, the bracts 3–5 mm long, the bracteoles 2–3 mm long; floriferous peduncle (1–)2–4 mm long. Pedicel 8–10 mm long, densely tomentose or sericeous. Sepals 1.5–2 mm long beyond the glands, 2–2.5 mm wide, rounded, abaxially sericeous, adaxially glabrous, the glands 2–3 mm long. Petals “white” or “yellow” (perhaps the outermost yellow and the others white), glabrous or bearing a tuft of hairs abaxially at base of claw, the outermost with the “helmet” 5–6 mm long, 4–4.5 mm in diameter, erose, the claw 3–4 mm long, the other 3 laterals with the limb 4–6 mm long, 4–5.5 mm wide, obtusely sagittate, flat to conduplicate, eglandular and denticulate or erose, the claw 3.5–4.5 mm long, the posterior petal with the limb 4–5.5 mm long, 3–4 mm wide, rounded-sagittate, bearing on each side ca 10 glands on the proximal half and distally eglandular, erect or reflexed, the claw 3.5 mm long. Filaments 1.3 mm long, densely hirsute; anthers 3.5–5 mm long, bearing a tuft of straight hairs on the connective just above the insertion of the filament. Ovary 1.3 mm high, pyramidal, glabrous; styles 4.5–5.5 mm long, subequal, glabrous, the terminal 0.5 mm bent over. Fruit 14–22 mm long, 12–14 mm in diameter, cylindrical becoming conoid at maturity, bearing 7–9 low, rounded, longitudinal ribs.

Type. *Ll. Williams 14154*, Yavita, 128 m, Alto Orinoco, en sabanetas periódicamente anegadas, Amazonas, Venezuela, 2 Feb 1942 (holotype F! isotypes F! VEN!).

Distribution. Upper Río Orinoco and upper Rio Negro. VENEZUELA. Amazonas: São José Casiquiare, *Fróes 21509* (NY); NW base of Cerro Yapacana, Yapacana caño laguna, elev 125 m, *Maguire & Wurdack 34487* (NY) & *34610* (MICH, NY, VEN); Piedra Catipán, Río Yatua, elev 100–140 m, *Maguire et al 36493* (MICH, NY, US, VEN); riverine forest near Laja Catipán, elev 100–140 m, *Maguire et al 37554* (MICH, NY, US, VEN); type, q v; cerca del Río Temí, sabanetas periódicamente anegadas, elev 128 m, *Williams 14168* (F, VEN); Río Guainía, Bajo Caño San Miguel, elev 127 m, *Williams 14884* (F, US, VEN). BRAZIL. Amazônia: Rio Negro, Içana, Cach. Maçarico, *Fróes 22233* (IAN); Rio Negro, Içana, Cach. Tunuhy, *Fróes 22280* (IAN); Igarapé Toury, afl. do Rio Negro, *Fróes 27909* (UB); Taraguá, Ig. da Chuva, Uaupés, *Pires & Silva 7970* (IAN); Rio Uneiuxi, 200–300 km above mouth, *Prance et al 15516* (MICH, NY); Rio Negro, between Cocui and mouth of Rio Issana, São Marcelino, Igarapé Uabá, opposite Rio Xié, *Schultes & López 9565* (GH, US). COLOMBIA. Vaupés: Mitú and vic., along Río Vaupés 1 km below Urania, *Zarucchi 2236* (MICH).

Collected in flower from October to May, in fruit from February to June.

2. *Glandonia macrocarpa* Grisebach in Martius, Fl. Bras. 12(1): 24. 1858.

Fig 12d.

Trees to 12 m tall; young vegetative stems glabrous (? or very soon glabrescent), flattened, becoming terete in age. Lamina of the larger leaves 15–26 cm long, 6–10 cm wide, strongly obovate, cuneate or rarely abruptly rounded at the base, flat or slightly revolute at the margin, acuminate at the apex, papyraceous, smooth (not papillose) below, glabrous, eglandular or bearing several small glands below at the base and distally, the lateral veins and reticulum prominent below;

petiole 10–25 mm long, glabrous, eglandular; stipules not seen (over 1 cm long, according to Niedenzu). Inflorescence (13–)17–28 cm long, appressed-tomentose, open, the pairs of cincinni 1–2.5 cm apart, containing 2–5 flowers; bracts and bracteoles ovate or elliptical, concave, abaxially sericeous, the bracts 3.5–6 mm long, the bracteoles 1.5–4 mm long; floriferous peduncle 0–1(–2) mm long, nearly or quite included by the subtending bracteole. Pedicel 10–12 mm long, appressed-tomentose. Sepals 1.5–2 mm long beyond the glands, 2–2.5 mm wide, rounded, abaxially sericeous, adaxially glabrous, the glands 2–3 mm long. Petals white, glabrous, the outermost with the “helmet” 5–5.5 mm long and 5.5 mm in diameter, erose, the claw 5 mm long, the other 3 laterals with the limb 5.5–6.5 mm long, 6 mm wide, orbicular, cordate, \pm flat, eglandular and entire or denticulate, the claw ca 4 mm long, the posterior petal with the limb 5 mm long and wide, orbicular, bearing on each side ca 5–7 large glands on the proximal $\frac{1}{3}$ – $\frac{1}{2}$, distally eglandular and \pm entire, reflexed beyond the glands, the claw 3.5 mm long. Filaments 1.3 mm long, densely hirsute; anthers 4.5–5.5 mm long, bearing a tuft of straight hairs on the connective just above the insertion of the filament. Ovary 1.3 mm high, pyramidal, glabrous; styles ca 5.5 mm long, subequal, glabrous, the terminal 0.5–1 mm in bent. Fruit 20–28 mm long, 15–18 mm in diameter, cylindrical becoming truncate-conoid, bearing many (ca 15–20) unequal, rounded, longitudinal ribs, the larger ribs forming rounded spurs at base.

Type. *Spruce 1090*, in vicinibus Barra [Manaus], Prov. Rio Negro, Amazonas, Brazil, Dec–Mar 1850–51 (holotype GOET? isotypes GH! M, NY!).

Distribution. Known only from the vicinity of Manaus. BRAZIL. Amazonas, Manaus: Igarapé de Santa Maria, *Chagas & Coelho* [INPA 3504] (IAN, US); Cachoeira Alta do Tarumã, *Coelho* [INPA 2934] (NY, US); *Coelho* [INPA 3118] (US); *Coelho & Mello* [INPA 3230] (US); Estrada do Aleixo, silva paludosa non inundabili ad rivulum, *Ducke 63* (MO, NY, US) & 239 (NY); Igarapé do Crespo, ad ripas paludosas, *Ducke 1182* (MO, NY, US); *Ducke* [RB 23646] (US).

Collected in flower in November and February, in fruit in February.

3. *Glandonia prancei* Anderson, sp nov

Fig 11e–i.

A *Glandonia macrocarpa* differt lamina 9–18 cm longa, 3.5–6.5(–8) cm lata, elliptica vel parum obovata, stipulis 18–24 mm longis, inflorescentia 5–11 cm longa, cincinnis congestis usque 1 cm a se distantibus, bracteis 2–4 mm longis, bracteolis 1–3 mm longis, pedunculo florifero 2–3 mm longo, pedicello 6–8 mm longo, antheris 3–3.5 mm longis, et petalo postico basi limbi perpaucis glandulis instructo.

Type. *Prance, Pena & Ramos 3363*, banks of Rio Ipixuna, Mun. Humaitá, Rio Madeira, Amazonas, Brazil, 26 Nov 1966 flr (holotype INPA, isotypes MICH, NY).

Distribution. Southwestern Amazonia. BRAZIL. Amazonas: type, q v; flooded bank of Lago Preto, 3 km N of Lábrea, basin of Rio Purús, Oct flr, *Prance et al 8058* (INPA, MICH, NY); margin of Igapó Açu at crossing with Manaus-Pôrto Velho Road, Mar frt, *Prance et al 20557* (INPA, MICH).

This species is named in honor of Ghilleen Tolmie Prance, in recognition of his stellar contributions to botanical exploration, research, and education in Amazonian Brazil.