

FLACOURTIACEAE

by

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Trees or shrubs, rarely climbing. Leaves alternate, rarely opposite, often distichous, coriaceous or chartaceous, simple. Stipules caducous, rarely foliaceous or persistent. Inflorescence consisting of axillary clusters or terminal or axillary cymes; pedicels usually articulate near the base. Bracts and bracteoles small, scale-like. Flowers generally hermaphrodite, actinomorphic. Sepals 2—15, free, imbricate. Petals wanting or when present imbricate, usually equal in number to the sepals, with or without an opposite basal scale. Receptacle often with appendages (disc). Stamens generally numerous and often in bundles opposite the petals or equal in number to the sepals; filaments filiform; anthers 2-celled, opening with longitudinal dehiscence, often attenuate or with glandular appendages. Ovary superior, 1-celled; style one or as many as the carpels (2—10), free or united; stigma of various form. Ovules numerous on 2—10 parietal, often much intruding placentas. Fruit a berry or a loculicidal (or rarely indehiscent) capsule. Seeds often with an aril. Embryo straight. Endosperm copious.

About 850 species in 84 genera in the tropics and the subtropics.

Key to the genera:

1. Petals present *Prockia*
Petals wanting 2
2. Stamens hypogynous; receptacle without or with glandular appendages;
leaves without pellucid dots *Xylosma*
Stamens perigynous; leaves usually with pellucid dots or short lines;
receptacle without or with scaly or staminodial appendages opposite the
sepals or between the stamens 3
3. Receptacle without appendages; leaves velvety pubescent beneath *Samyda*
Receptacle with appendages; leaves glabrous or mainly so beneath
Casearia

Casearia Jacquin, Enum. 21. 1760

Shrubs or small trees. Leaves alternate, distichous, often with pellucid dots or lines, entire, serrate or crenate. Stipules small, caducous. Inflorescence consisting of lateral clusters or umbels. Flowers hermaphrodite, small. Sepals 4—6 (-9), persistent. Petals wanting. Stamens 6—15 or 20—24, inserted on the margin of the receptacle, alternating with an equal number of staminodes or disc-lobes; filaments free or united amongst themselves and with the staminodes in a ring; anthers elliptic or subglobose, usually provided with a gland towards the apex. Ovary free, 1-celled, ovoid or oblong, tapering into a short style; the latter simple or trifid; stigmas capitate. Ovules numerous, on 3 parietal placentas. Fruit a dry or fleshy capsule, opening by 3 or 4 valves. Seeds ovoid or angled, with a fleshy aril or with hairs. Testa coriaceous.

Over 160 species in the tropics of both hemispheres.

Key to the species:

1. Style 3-fid, with 3 stigmas *C. sylvestris*
Style simple 2
2. Stamens 10 *C. decandra*
Stamens 16—24 *C. tremula*

Casearia tremula (Gris.) Wright

WRIGHT, Ann. Acad. Sci. Habana 5: 201. 1868; WILSON, Torreyana 30: 73. 1930; SLEUMER, Notizbl. Berlin-Dahlem 11: 959. 1934; CHEESMAN in WILLIAMS, Fl. Trinidad & Tobago 1: 423. 1940; ARNOLDO, Zakflora 34, fig. 30. 1954; Zakflora 146, fig. 30. 1964; — *Zuelania tremula* GRISEBACH, Cat. Plant. Cuba 9. 1866; — *Casearia spiralis* JOHNSTON, Proc. Am. Acad. 40: 691. 1905; — *Casearia bonairensis* BOLDINGH, Fl. Ned. W. Ind. Eil. 290. 1913; Fl. D. W. Ind. Isl. 2: 68. 1914.

High shrub or small tree. Leaves coriaceous, petiolate; petiole slender, 1—2.5 cm long; blade ovate-oblong, oblong, obovate-oblong or elliptic, acuminate at the apex, oblique and cuneate, rounded or slightly cordate at the base, 3—10 × 2—5 cm, about twice as long as wide, conspicuously pellucid-dotted, glabrous or pilose along the lower half of the midvein beneath, the margin shallowly toothed or crenate. Stipules subulate, 3—5 mm long. Inflorescence consisting of few-flowered clusters; pedicels slender, 0.5—1.5 cm long. Sepals 7—9, unequal, concave, broadly elliptic to ovate or obovate, rounded at the apex, greenish. Stamens 16—24, alternating with the disc-lobes; filaments 3—4 mm long, more or less pilose; anthers about 1.5 mm long. Disc pilose. Ovary globose to fusiform, glabrous, 2 mm long, tapering into the 1 mm long style; stigma 1, capitate. Fruit globose, fleshy, 3—3.5 cm in diam., opening by 3—4 valves. Seeds numerous, about 0.5 cm long.

Cuba, Curaçao, Aruba, Bonaire, Margarita, Trinidad, S. Mexico, Venezuela, and Colombia.

Vernacular names: palu di Bonaire, geelhout, guayaba baster, palu di veneno (Leeward Group).

ARUBA: slope of Hooiberg, leewardside (Stoffers 2090, st. Feb.; Boldingh 6366, fr. Dec.); top of Hooiberg (Arnoldo 115, fr. Dec.).

BONAIRE: Slagbaai Plantation (Stoffers 747, fl. Nov.); Seroe Largoe (Arnoldo 533, fl. June); Seroe Grita Kabai (Stoffers 856, st. Dec.); slope of Brandaris (Stoffers 966, st. Dec.); Washington (Stoffers 870, fl. & fr. Dec.); Montagne (Stoffers 872, st. Dec.); Columbia (Stoffers 733, fl. Nov.; 737, fl. Nov.); Rincón (Boldingh 7038, st. Feb.).

CURAÇAO: Santa Barbara (Stoffers 404, fl. & fr. Oct.; 411, fl. Oct.); Seroe Christoffel, 200 m (Stoffers 227, fl. Oct.); near salt pans of St. Willebrordus (Stoffers 354, fl. Oct.); Seroe Domi (Arnoldo 1110, fl. Sept.); Seroe Pretoe (Curran & Haman 4, st. Feb.); hills to the east of Westpunt (Boldingh 4942, fr. Nov.; type specimen of *Casearia bonairensis* Bold.); hills near Rif (Boldingh 4696, fl. & fr. Oct.); limestone bench near Willemstad (Britton & Shafer 3055, fl. March).

Casearia decandra Jacq.

JACQUIN, Enum. 21. 1760; URBAN, Symb. Ant. 4: 420. 1910; BOLDINGH, Fl. Ned. W. Ind. Eil. 290. 1913; URBAN, Symb. Ant. 8: 447. 1920; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 595. 1924; CHEESMAN in WILLIAMS, Fl. Trinidad & Tobago 1: 422. 1940; — *Casearia parvifolia* WILLDENOW, Spec. Plant. 2: 628. 1799; GRISEBACH, Fl. Br. W. Ind. Isl. 23. 1859; DUSS, Fl. phan. Ant. franç. 16. 1897; URBAN, Symb. Ant. 4: 420. 1910; Symb. Ant. 8: 477. 1920.

Shrub or small tree, up to about 5 m tall. Leaves deciduous, petiolate; petiole about 3 mm long; blade elliptic-lanceolate to elliptic or oval, long-acuminate at the apex, slightly unequal and cuneate to rounded at the base, 3—9 × 1.5—4.5 cm, about twice as long as wide, not conspicuously pellucid-dotted, glabrous on both sides, or occasionally with tufts of hairs in the axils of the veins beneath, the margin serrulate to somewhat crenate. Stipules filiform, 3—5 mm long. Inflorescence consisting of few- to many-flowered clusters; pedicels about 5 mm long, articulate near the base. Sepals 5, linear-lanceolate, 4—5 × 2 mm. Stamens 10, alternating with the disc-lobes; filaments about 3 mm long, hairy; anthers about 0.5 mm long. Ovary pilose, about 1 mm long, tapering into the entire, 2 mm long style; stigma capitate. Capsule globose, fleshy, red, about 1 cm in diam., opening by 3 valves. Seeds numerous, about 0.4 mm long.

Porto Rico to Trinidad, Margarita, and northern South America.

Vernacular name: crack open (Windward Group).

SABA: Ladder Gut, 0-100 m (Stoffers 2800, fl. Ap.; 2835, fl. Ap.; 2838, fl. Ap.); along roads between The Bottom and Windwardside, 200 m (Boldingh 1345, fr. July); Booby Hill, 400 m (Stoffers 4303, st. Aug.; 4296, fl. Aug.); Castle Hill, seaside, 300-350 m (Stoffers 4171, st. Aug.); Fort Bay Gut, between Promised Land and Thais Hill, 175-200 m (Stoffers 3426, fr. May); gut south of St. John, 150-300 m (Stoffers 3019, fl. Ap.); along road from The Bottom to Crispin, 220-350 m (Stoffers 2991, fl. Ap.).

ST. EUSTATIUS: between Glass Bottle and White Wall, 240 m (Stoffers 4058, st. Aug.); northern slope of The Quill (Stoffers 3976, st. July; 4006, st. July);

4011, st. July; 4012, st. July); Bottom of The Quill, 300 m (Boldingh 892, fr. June); slope of The Quill near Bengalen, 150 m (Boldingh 682, fr. June; 677, st. June); slope of The Quill near Glass Bottle (Boldingh 867, st. June); top of The Quill, 400 m (Boldingh 299, fr. June; 236, st. June; 220, st. June); id., 500 m (Boldingh 496, st. June); id., 380-400 m (Stoffers 3601, fr. July; 3556, st. July); without loc. (v. Groll-Meyer 196, st.; Boldingh s.n., fr.).

ST. MARTIN: Mount Paradise, 200-300 m (Boldingh 3310, st. Sept.); mountain between Mont des Accords and Sentry Hill, 200-300 m (Boldingh 2894, st. Aug.); Marigot Hill to Marigot, 0-200 m (Boldingh 2638, st. Aug.; 2646, st. Aug.); hills along the eastern side of Cul de Sac (Stoffers 2660, fl. Ap.).

Casearia sylvestris Sw.

SWARTZ, Fl. Ind. Occ. 752. 1800; GRISEBACH, Fl. Br. W. Ind. Isl. 23. 1859; BOLDINGH, Fl. D. W. Ind. Isl. 1: 137. 1909; URBAN, Symb. Ant. 4: 422. 1910; BOLDINGH, Fl. Ned. W. Ind. Eil. 290. 1913; FAWCETT & RENDLE, Fl. Jamaica 5: 214. 1926; URBAN, Symb. Ant. 8: 448. 1920; CHEESMAN in WILLIAMS, Fl. Trinidad & Tobago 1: 421. 1940.

Shrub or small tree, up to 8 m tall. Leaves persistent, petiolate; petiole 3–8 (-10) mm long; blade coriaceous, oblong, elliptic or ovate, acute to long-acuminate at the apex, slightly unequal, cuneate or rounded at the base, 3–16 × 1–7 cm, usually 2.5 times as long as wide, glabrous, with numerous pellucid dots and lines, the margin, entire or obscurely serrulate. Stipules cordate-ovate or roundish, 1–1.5 mm long. Inflorescence consisting of axillary, few- to many-flowered clusters; pedicels 3–5 mm long, articulate below the middle, with membranaceous bracts. Receptacle cup-shaped, 0.5 mm long. Sepals ovate, rounded at the apex, 1.5–2 mm long, sparingly puberulous. Stamens 10; filaments free, slightly hairy, about 1 mm long; anthers subglobose, provided with an apical gland. Disc-lobes densely tomentose, about half as long as the filaments. Ovary ovoid, 1 mm long, glabrous; style short, trifold; stigmas capitate. Capsule subglobose or globose, red or orange, glabrous, about 4 mm in diam., opening by 3 valves. Seeds 2 mm long, flattened-ellipsoid, enclosed in red, sticky arils.

West Indies and tropical continental America.

ST. MARTIN: Colombier (Le Gallo 1003, fl. July); Mount Paradise (Le Gallo 932, fl. July); id. 300-400 m (Boldingh 3241, fl. & fr. Sept.); hills along the northern side of Cul de Sac (Stoffers 2644, fl. & fr. March); id. 0-100 m (Boldingh 3005a, fl. Aug.); id. 200-300 m (Boldingh 3011, fl. Aug.).

Samyda Linnaeus, Spec. Plant. 443. 1753

Shrubs. Leaves distichous, with pellucid dots and lines. Stipules minute. Flowers hermaphrodite, solitary or clustered in the leaf-axils, sessile or short-pedicellate. Receptacle campanulate. Sepals 4–6, imbricate, often slightly unequal. Petals wanting. Stamens 6–18; filaments more or less completely united into a tube; anthers 2-celled, opening with longitudinal dehiscence. Ovary superior, 1-celled, narrowing into the slender style; stigma capitate. Ovules numerous, on 3–5

parietal placentas. Fruit subglobose, coriaceous or fleshy, opening by 3—5 valves at the top. Seeds numerous, angular, with a fleshy aril. Embryo straight, small. Endosperm copious, fleshy.

About 10 species in the West Indies and Mexico.

Samyda dodecandra Jacq.

JACQUIN, Enum. 21. 1760; URBAN, Symb. Ant. 4: 418. 1910; BOLDINGH, Fl. Ned. W. Ind. Eil. 289. 1913; Fl. D. W. Ind. Isl. 2: 68. 1914; URBAN, Symb. Ant. 8: 444. 1920; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 594. 1924; CHEESMAN in WILLIAMS, Fl. Trinidad & Tobago 1: 414. 1940; QUESTEL, Fl. Isl. St. Bartholomew 154. 1941; ARNOLDO, Zakflora 82. 1954; Zakflora 146. 1964; — *Samyda serrulata* LINNAEUS, Spec. Plant. ed. 2. 558. 1762; GRISEBACH, Fl. Br. W. Ind. Isl. 25. 1859; DUSS, Fl. phan. Ant. franç. 17. 1897; BOLDINGH, Fl. D. W. Ind. Isl. 1: 136. 1909.

Shrub, up to 6 m tall; branchlets rusty-tomentose. Leaves petiolate; petiole up to 3 mm long; blade elliptic, elliptic-ovate, ovate or somewhat obovate, up to 12 × 6 cm, acute or acuminate at the apex, rounded or subtruncate at the base, velvety-pubescent especially beneath, the margin finely serrulate. Stipules subulate, 2—3 mm long. Flowers solitary or fascicled, white, 1.5—2 cm in diam. Receptacle 6 mm long, rusty-tomentose outside. Sepals 5, elliptic to ovate 4—5 × 3 mm, rusty-tomentose outside. Stamens inserted on the top of the receptacle; the filaments about 3 mm long, the lower two-thirds united into a tube; anthers 1—1.5 mm long. Ovary ellipsoid, hairy, 4 mm long, tapering into the slender, 4 mm long style. Fruit ellipsoid, 2—3 cm long, opening by 3—5 valves; the latter red on the inner side. Seeds 4 mm long, surrounded by a yellow aril.

Greater Antilles and Lesser Antilles from Cuba to St. Vincent, Curaçao, Bonaire, and Trinidad.

Vernacular names: banso, wild guave (Windward Group).

CURAÇAO: Seroe Christoffel, 200 m (Arnoldo 53, st. March); hills near Knip (Stoffers 1123, fr. Dec.; Arnoldo 1106, flb. Sept.); hills to the east of Westpunt (Boldingh 4938, st. Nov.; 4941, flb. Nov.); hills near Rooi Behoenda (Boldingh 5530, st. Nov.).

BONAIRE: Seroe Largoe (Arnoldo 352, st. Jan.).

ST. EUSTATIUS: slope of The Quill at the side of White Wall, 200 m (Boldingh 1169, fr. June); near Mary Glory, 150 m (Boldingh 1146, st. June); Signal Hill, 150 m (Boldingh 1025, st. June); slope of The Quill between Glass Bottle and White Wall, 270 m (Stoffers 4051, st. Aug.); id. 150-240 m (Stoffers 4101, st. Aug.); top of The Quill, 350-400 m (Stoffers 3673, st. July); Little Mountains, 90-120 m (Stoffers 3733, st. July).

ST. MARTIN: Princess Quarter (George s.n. sub Boldingh 2425a, st. Aug.; Boldingh 2458, st. Aug.); from Philipsburg to Guana Bay (Boldingh 2390, st. Aug.; 2372, st. Aug.); Cul de Sac (Boldingh 2605, flb. Aug.); Fort William, 0-50 m (Boldingh 2532a, st. Aug.); Naked Boy Hill, 50-200 m (Boldingh 2687,

flb. Aug.); id. 200-265 m (Boldingh 2723, st. Aug.); Mount Paradise, 100-200 m (Boldingh 3301, st. Sept.); id. 200-400 m (Boldingh 3207, fl. Sept.); 3305, fr. Sept.); lower part of the hills between Mont Chambord and Mont Vernon (Boldingh 2951, fl. Aug.); hills along the northern side of Cul de Sac, 70-100 m (Stoffers 2633, st. March; 2639, st. March); Cole Bay Hill (Stoffers 4508, st. Aug.); without loc. (Boldingh 3614, fr.).

Xylosma G. Forst., Prodr. 72. 1786

Small trees or shrubs, often with axillary spines. Leaves alternate, usually coriaceous, toothed, spinulose-dentate or rarely entire. Stipules wanting. Flowers dioecious or rarely polygamous, small, clustered or shortly racemose in the leaf-axils. Bracts small. Sepals 4—5, slightly united at the base, imbricate, generally ciliate. Petals wanting. Stamens numerous, surrounded by a glandular disc; filaments free, filiform; anthers versatile, elliptic-globose, 2-celled, with longitudinal dehiscence. Ovary superior, often surrounded by a glandular disc, rarely surrounded by staminodes, 1-celled; style simple or cleft, small; stigmas dilated or rarely sessile, flattened and lobed. Ovules few to several on 2—6 parietal placentas. Fruit a berry. Seeds few, obovoid. Embryo large, with broad cotyledons. Endosperm copious.

About 65 species in tropical and subtropical regions, excepted in Africa.

Key to the species:

1. Leaves chartaceous, shining on both sides; sepals 2 mm long *X. arnoldii*
Leaves coriaceous, shining above; sepals 1 mm long *X. buxifolium*

Xylosma arnoldii Monach.

MONACHINO, Car. For. 8: 237. 1947; ARNOLDO, Zakflora 51, fig. 12. 1954; Zakflora 147, fig. 12. 1964.

Shrub, up to 6 m tall; branches brown, lenticellate, usually with spines up to 5 cm long. Leaves petiolate, chartaceous, often on short-shoots; blade obovate, rounded to obtuse at the apex, cuneate at the base, 1—4 × 0.7—2 cm, usually about 1.5 times as long as wide, shining on both surfaces, crenately-serrate on the margins, teeth shallow and bluntly gland-tipped; petioles about 1 mm long. Male inflorescence consisting of few-flowered, loose clusters; pedicels 6—8 mm long; bracts triangular-ovate, 1 mm long, ciliate. Male flowers: sepals 4—5, obovate, truncate at the apex, 2 × 1 mm, toothed and ciliate along the margin, especially near the top, greenish-yellow and sometimes reddish; annular disc consisting of an indefinite number of glands; stamens about 20; filaments 2—3 mm long, anthers subglobose-elliptic, 1/3 mm long. Female inflorescence consisting of few-flowered, loose clusters; pedicels 4—6 mm long; bracts ovate-lanceolate, 1 mm long, ciliate. Female flowers: sepals 4—5, lanceolate, about 2 mm long, acute at the apex, ciliate, otherwise glabrous or with a few scattered bristles especially at the apex; disc annular, lobed; ovary spindle-shaped; style short, nearly 0.5 mm long; stigma 2(-3) partite, flattened and often

irregularly lobed at the apex; berry globose, 4—5 mm in diam.; seeds 2—4, 3 mm long.

Endemic to the island of Curaçao.

Especially in woodlands and deciduous seasonal forest.

CURAÇAO: hills of Knip (Arnoldo 1025, male fl. Jan.); Seroe Christoffel (Arnoldo 5, fem. fl. Nov.); Julianadorp (Arnoldo 1941, fr. Feb.; Stoffers 320, fem. fl. Oct.; 319, male fl. Oct.).

Xylosma buxifolium A. Gray

A. GRAY, Pl. Wright 1: 155. 1860; BOLDINGH, Fl. D. W. Ind. Isl. 1: 136. 1909; URBAN, Symb. Ant. 4: 418. 1910; BOLDINGH, Fl. Ned. W. Ind. Eil. 289. 1913; URBAN, Symb. Ant. 8: 444. 1920; STEHLÉ & QUENTIN, Fl. Guadeloupe 2: 41. 1937; LEON & ALAIN, Fl. Cuba 3: 338, fig. 154. 1953; — *Myroxylon buxifolium* (A. GRAY) KRUG & URBAN, Bot. Jahrb. 15: 300. 1892; DUSS, Fl. phan. Ant. franç. 16. 1897; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 593. 1924.

Shrub or small tree, usually 6 m, but sometimes up to 10 m tall; trunk and branches unarmed or armed with slender, simple or branched, 0.5—3.5 cm long spines. Leaves petiolate, rigid, coriaceous; petiole short, 1—2.5 mm long; blade oblong, ovate, oval or elliptic, 1.5—5.5 × 0.7—4 cm, about 1.5 times as long as wide — those of the sterile shoots sometimes oval-ovate — rounded, acute, emarginate or mucronate at the apex, cuneate at the base, the margin entire or crenate-dentate in the upper half, upper surface lustrous, paler beneath; midvein rather prominent, lateral venation obscure. Flowers arranged in 4—8-flowered fascicles, dioecious. Sepals 4—5, lanceolate, 1 mm long. Disc fleshy, annular. Stamens 8—30; filaments 2—3 mm long. Ovary ovoid; style connate below, free above. Berry ovoid or subglobose, 4 mm or more in diam.

Cuba, Hispaniola, Porto Rico, Virgin Islands, St. Eustatius, and Guadeloupe.

Vernacular name: cockspur (Windward Group).

ST. EUSTATIUS: top of The Quill, 450 m (Boldingh 373, st. June).

No flowering specimen seen.

Prockia P. Brown ex Linnaeus, Syst. ed. 10. 1074. 1759

Shrubs or small trees. Leaves alternate, palmately veined from the base, without dots or lines, provided with small glands near the base at the upper surface, margin serrate with glandular teeth. Inflorescence consisting of few-flowered, terminal racemes or corymbs; pedicels long, articulate near the base. Bracts and bracteoles small. Flowers hermaphrodite. Sepals 3—4, valvate, persistent. Petals as many as the sepals or less, shorter, persistent. Stamens numerous, inserted on the flat receptacle, free; filaments filiform; anthers small, 2-celled, with longitudinal dehiscence. Ovary superior, 3—5-celled; style simple, subulate or filiform; stigma slightly thickened. Ovules numerous on

much intruded placentas. Fruit a berry, indehiscent, 3—5-celled. Seeds small, numerous, angular-ovate. Embryo straight, small. Endosperm copious.

A few species in tropical America.

***Prockia crucis* L.**

LINNAEUS, Syst. ed. 10. 1074. 1759; BOLDINGH, Fl. D. W. Ind. Isl. 1: 136. 1909; URBAN, Symb. Ant. 4: 417. 1910; BOLDINGH, Fl. Ned. W. Ind. Eil. 289. 1913; URBAN, Symb. Ant. 8: 443. 1920; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 590. 1924; STEHLÉ & QUENTIN, Fl. Guadeloupe 2: 41. 1937; LEON & ALAIN, Fl. Cuba 3: 326, fig. 147. 1953; — *Trilix crucis* GRISEBACH, Goett. Abh. 7: 165. 1857; Duss, Fl. phan. Ant. franç. 16. 1897.

Shrub or small tree, sometimes up to 10 m tall; twigs slender, glabrous or pubescent. Leaves membranaceous, broadly ovate or ovate, acuminate at the apex, cordate at the base, 3—12 cm long, glabrous or pubescent; petioles slender, 2 cm long or shorter. Racemes or corymbs as long as the leaves or shorter. Flowers fragrant on 1—3 cm long pedicels. Sepals ovate or ovate-lanceolate, about 5 mm long, puberulent. Petals yellowish. Fruit globose, black, 6—9 mm in diam.

Tropical South America and Greater Antilles.

Cultivated in Saba.