

CELASTRACEAE

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Trees or shrubs, sometimes climbing or twining. Leaves alternate or opposite, simple, deciduous or persistent. Stipules small and caducous or wanting. Inflorescence generally consisting of axillary cymes; pedicels commonly jointed. Flowers hermaphrodite or functionally unisexual, actinomorphic. Sepals 4—5, connate at the base, imbricate, persistent. Petals 4—5 or rarely wanting, free, imbricate, spreading. Stamens 4—5, alternating with the sepals, rarely 8—10, inserted on or near the margin of the disk; filaments free; anthers 2-celled, ovate or oval, versatile or innate, introrse. Disk flat or lobed, often adnate to the ovary. Ovary superior or seemingly inferior by adnation to the disk, 2—5-locular; style short, thick; stigma entire or lobed. Ovules usually 2 in each locule, erect, anatropous, on an axile placenta. Fruit a drupe, capsule, berry or samara. Seeds usually erect, with or without an aril. Embryo large. Endosperm fleshy or sometimes wanting.

Over 1000 species in 80 genera, in tropical and temperate regions.

Key to the genera:

1. Leaves opposite or whorled, rarely some leaves alternate..... 2
Leaves alternate, rarely some leaves opposite..... 3
2. Leaves decussate; flowers unisexual; sepals distinct or nearly so.... *Gyminda*
Leaves opposite or in whorls of 3; flowers hermaphrodite; sepals united near the base..... *Crossopetalum*
3. Leaves alternate; fruit a berry or a drupe..... *Schaefferia*
Leaves distichous; fruit a leathery dehiscent capsule..... *Maytenus*

Crossopetalum P. Browne, Civ. Nat. Hist. Jamaica 145. 1756

Shrubs or low trees. Leaves opposite, alternate or in whorls of 3. Inflorescence consisting of axillary cymes or clusters. Flowers hermaphrodite, reddish or greenish, small; pedicels jointed near the base. Calyx 4—5-lobed. Petals 4 or 5, imbricate, spreading or recurved afterwards. Disk entire or 4—5-lobed. Stamens 4 or 5; filaments small; anthers globose. Ovary partly immersed in the disk, 4-locular; style simple or 4-partite or wan-

ting; stigmas 4. Ovules solitary in each locule, erect. Fruit a drupe: exocarp thin and somewhat fleshy; endocarp bony. Seed without an aril. Endosperm present.

Species 14, chiefly natives of the West Indies, Florida, and northern South America; one species in Madagascar.

Crossopetalum rhacoma Crantz

CRANTZ, *Inst. Rei Hort.* 2: 321. 1766; ADAMS, *Flowering plants of Jamaica* 447. 1972; FOURNET, *Fl. Guadeloupe & Martinique* 1122, fig. 546. 1978; — *Rhacoma crossopetalum* Linnaeus, *Syst. Nat.* ed. 10. 896. 1759; URBAN, *Symb. Ant.* 5: 71. 1904; BOLDINGH, *Fl. D.W. Ind. Isl.* 1: 120. 1909; URBAN, *Symb. Ant.* 4: 364. 1910; BOLDINGH, *Fl. Ned. W. Ind. Eil.* 260. 1913; *Fl. D.W. Ind. Isl.* 2: 59. 1914; URBAN, *Symb. Ant.* 8: 383. 1920; BRITTON & MILLSPAUGH, *Bahama Fl.* 248. 1920; BRITTON & WILSON, *Sci. Surv. Porto Rico & Virgin Isl.* 5: 517. 1924; FAWCETT & RENDLE, *Fl. Jamaica* 5(3): 28, fig. 11. 1926; QUESTEL, *Fl. Isl. St. Bartholomew* 142. 1941; LEON & ALAIN, *Fl. Cuba* 3: 171. 1953; ARNOLDO, *Zakflora* 32. 1954; *Zakflora* 107. 1964; — *Myginda rhacoma* SWARTZ, *Prodr.* 39. 1788; *Fl. Ind. Occ.* 1: 340. 1797; GRISEBACH, *Fl. Br. W. Ind. Isl.* 146. 1859 [‘1864’]; DUSS, *Fl. phan. Ant. franç.* 147. 1897; JOHNSTON, *Proc. Bost. Soc. Nat. Hist.* 34(7): 232. 1909.

Evergreen, unarmed tree or shrub, up to 7 m high; bark smooth grey; branches more or less drooping; twigs glabrous, angular by 4 raised, longitudinal lines. Stipules wanting. Leaves opposite or rarely 3 together; blade variable in shape, narrowly lanceolate, elliptic, obovate, or ovate to roundish, obtuse, rounded or acutish and often emarginate at the apex, cuneate or truncate at the base, 1–4 × 0.5–3 cm, coriaceous, glabrous, margin usually crenate, sometimes minutely toothed or entire; petiole 0.5–4 mm long. Inflorescence consisting of slender-pedunculate, axillary, few-flowered, umbellike cymes; pedicels 1–2.5 mm long. Calyx urceolate, 0.6–0.8 mm long; lobes 4, semi-orbicular, 0.4–0.6 mm long, minutely ciliate along the margin. Petals 4, obovate 1–1.3 × 0.8–1.2 mm, imbricate, reflexed after anthesis. Disk 4-lobed. Stamens 4, inserted between the lobes of the disk; filaments filiform, 1 mm long; anthers very small, about 0.2 mm long. Ovary conic; style stout; stigmas 4. Drupe obliquely obovate or obliquely globular, mucronate by the persistent style, 5–7 mm long, red, 1–2-seeded. Seed obovate or ovate-oblong, brownish.

Florida, West Indies as far south as St. Lucia, Colombia.

In forest and woodlands.

Vernacular name: placa chiquitu (Leeward Group).

ARUBA: Hadikoerari (Stoffers 1356, fl. & fr. Jan.); hills near Fontein (Arnoldo 250, fl. & fr. Dec.); Pova Beach (Stoffers 1411, fl. & fr. Jan.).

BONAIRE: along road from Kralendijk to Rincón (Stoffers 845, fl., Dec.); Colombia Plantation (Stoffers 525, fl. & fr. Nov.); neighbourhood of Rincón (Boldingh 7192, fr. Feb.); Soebi Rincón (Boldingh 7262, st. Feb.); Seroe Largoe (Arnoldo 458, fl. Dec.); Montagne (Stoffers 880, fl. & fr. Dec.).

CURAÇAO: beach near saltpans of St. Willebrordus (Stoffers 363, fl. Nov.); along road to Noordkant Plantation (Stoffers 173, fr. Nov.); Knip Plantation (Stoffers 1122, fl. & fr. Dec.); Ronde Klip (Stoffers 1252, fl. & fr. Dec.); Kleine Berg (Arnoldo 1100, fl. & fr.

Aug.); calcareous hills near Malpais (Boldingh 4887, fl. Jan.); Rif Hill (Boldingh 4661, st. Oct.); calcareous hills near Mahoema (Boldingh 4828, fl. & fr. Oct.); calcareous hills near Hato (Boldingh 5316, fl. & fr. Nov.); calcareous hills near the road to Fontein (Boldingh 5270, fl. Nov.); hofje of Valentijn (Boldingh 5350, fl. & fr. Nov.).

SABA: lower part of The Bottom Mountain, 250 m (Boldingh 1391, st. July); gut between Hellsgate and Mastic Gut, 300—400 m (Boldingh 2029, st. July).

ST. EUSTATIUS: seashore near White Wall (Boldingh 860, fl. June); Signal Hill, 150 m (Boldingh 1028, fl. June); id., 200 m (Boldingh 129, st. May); White Wall (Boldingh 816, st. June); gut near Fort de Windt, 50 m (Boldingh 841, fl. June); deserted plantation near Tumble Down Dick Bay (Boldingh 144, st. May); near White Wall (Stoffers 4745, st. Aug.; 4758, fl. & fr. Aug.); along road from Oranjestad to Fort de Windt (Stoffers 3510, fl. & fr. July); west of Wash Gut (Stoffers 4033, st. July).

ST. MARTIN: Tintamarre (Boldingh 3397, st. Sept.; 3400, st. Sept.); near Mullet Pond (Boldingh 2571, st. Aug.; 2753, fl. & fr. Aug.); Low Lands (Stoffers 2675, fl. & fr. Ap.).

Maytenus Molina, Saggio Chile 177, 349. 1781 ('1782')

Unarmed, evergreen trees or shrubs. Leaves alternate, often distichous. Stipules very small, caducous. Inflorescence consisting of axillary clusters or flowers solitary in the leafaxils; pedicels jointed at the base. Flowers small, hermaphrodite, polygamous or rarely dioecious. Calyx 5(—4)-lobed, small. Petals 5(—4), spreading. Stamens 5(—4), inserted below or on the margin of the disk; the disk orbicular, undulate. Ovary immersed in the disk or confluent with it, 2(—3)-locular; style short or wanting; stigma 2(—3)-lobed. Ovules 1 or 2 per locule, erect. Fruit a small coriaceous capsule, 1—3-locular, at length loculicidally 2—3-valved. Seeds erect, completely or basally surrounded by a fleshy aril. Endosperm fleshy, copious or rarely wanting.

Over 200 species in the tropics and subtropics.

Key to the species:

1. Leafmargin entire (Windward Group)..... *M. elliptica*
Leafmargin wavy-toothed or slightly crenulate, rarely entire (Leeward Group) 2
2. Leaves acuminate at the apex, rounded or obtuse at the base but not contracted into the petiole; lateral veins obscure; capsule globose..... *M. sieberiana*
Leaves rounded and emarginate at the apex, cuneate or rounded at the base and contracted into the petiole; lateral veins prominent beneath; capsule club-shaped
..... *M. versluisii*

Maytenus elliptica (Lam.) Kr. & Urb.

KRUG & URBAN, in DUSS, Fl. phan. Ant. franç. 145. 1897; URBAN, Symb. Ant. 5: 64. 1905; BOLDINGH, Fl. D.W. Ind. Isl. 1: 119. 1909; URBAN, Symb. Ant. 4: 363. 1910; BOLDINGH, Fl. Ned. W. Ind. Eil. 259. 1913; URBAN, Symb. Ant. 8: 382. 1920; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 516. 1924; QUESTEL, Fl. Isl. St. Bartholomew 143. 1941; FOURNET, Fl. Guadeloupe & Martinique 1121, fig. 544. 1978; — *Senecia elliptica* LAMARCK, Tab. Encycl. 2: 96 (n. 2711). 1793; — *Rhamnus laevigatus* VAHL, Symb. 3: 41. 1794; — *Ceanothus laevigatus* DECANDOLLE, Prodr. 2: 30. 1825.

Tree, up to 10 m tall, or shrub, glabrous throughout; bark smooth; twigs angular by longitudinal lines. Stipules short-triangular, 0.5 mm long, caducous. Leaves distichous; blade elliptic to broadly obovate, rounded, obtuse or emarginate at the apex, obtuse or narrowed at the base, 3—7 × 2.5—4.5 cm, twice as long as wide, coriaceous, shining, the lateral venation indistinct, margin more or less recurved; petioles 3—7 mm long. Inflorescence consisting of clusters of flowers or flowers rarely solitary; pedicels 2—6 mm long. Flowers green, 5-merous. Sepals triangular to semi-orbicular, about 0.6—0.9 mm long and wide, margin short-denticulate. Petals ovate, rounded at the apex, 1.5—2 mm long and 1—1.5 mm wide. Stamens with subulate filaments, 0.3—0.8 mm long; anthers triangular-orbicular or subdidymous. Disk broad, annular, margin 5-crenate. Ovary 2-locular; style short or wanting; stigma indistinctly bilobed. Ovules 2 in each locule. Fruit ovoid or obovoid, 1 cm long, terminated by the persistent style. Seeds 1—3, obovate or oval, red-brown to brown-black, 6—9 mm long; aril white.

Puerto Rico, Hispaniola, Virgin Islands, and from St. Martin to Grenada.

In forests.

ST. EUSTATIUS: top of The Quill, 400 m (Boldingh 369, st.); id., 450 m (Boldingh 344, st. June); The Quill (Boldingh 412, st. June); near Signal Hill (Boldingh 952, fl. June); top of The Quill at the side of Glass Bottle, 380-400 m (Stoffers 3574, st. July; 3576, st. July); slope of The Quill between Glass Bottle and White Wall, 270 m (Stoffers 4078, st. Aug.; 4081, st. Aug.); western slope of The Quill, 250-300 m (Stoffers 4711, st. Aug.).

ST. MARTIN: top of Naked Boy Hill (Boldingh 2713, st. Aug.); Mildrum Hill (Boldingh 3152, st. Sept.); Sentry Hill (Stoffers 4536, st. Aug.; 4539, st. Aug.).

Maytenus sieberiana Kr. & Urb.

KRUG & URBAN, *Symb. Ant.* 5: 60. 1904; BOLDINGH, *Fl. Ned. W. Ind. Eil.* 259. 1913; *Fl. D.W. Ind. Isl.* 2: 59. 1914; WILLIAMS, *Fl. Trinidad & Tobago* 1: 174. 1930; ARNOLDO *Zakflora* 41. 1954; *Zakflora* 106. 1964.

Shrub or small tree; bark greyish; branches striate, glabrous, terete; younger twigs not angular, more or less compressed, especially at the nodes. Stipules triangular, suboblique, up to 1 mm long, deciduous. Leaves distichous, petiolate; blade ovate, narrowly ovate, oval or broadly oval, acuminate with obtuse tip at the apex, rounded or obtuse at the base, not contracted into the petiole, 3—9 × 2—5 cm, less than twice as long as wide, coriaceous, shining, lateral veins obscure, margin entire or wavy-toothed, recurved; petiole 5—9 mm long. Inflorescence consisting of axillary clusters; pedicels 4—6 mm long. Flowers 5-merous. Sepals semi-orbicular or shortly triangular, 0.4—0.6 × 0.8—1 mm, the margin minutely toothed, imbricate. Petals small, ovate, rounded at the apex, 0.9—1.2 mm long, margin inconspicuously crenulate. (Stamens not seen). Disk annular, not sulcate. Ovary 2-locular, contracted into the style; style 0.5 mm long; stigma bilobed. Ovules 2 in each locule. Capsule coriaceous, globose, about 1 cm in diam., orange-yellow, 1-seeded. Seeds with an aril.

Bonaire and Trinidad.

Mainly on calcareous plateaus.

BONAIRE: Seroe Montagne near Dos Pos (Arnoldo 444, fr. Feb.); Seroe Largo (Arnoldo 357, fr. Jan.); Soebi Rincón (Boldingh 7271, st. Feb.); calcareous plateau of Montagne (Boldingh 420, st. Feb.); slope of Joewa Hills (Boldingh 7203, fr. Feb.; 7199, fr. Feb. [U, L]).

Maytenus versluysii Bold.

BOLDINGH, Fl. Ned. W. Ind. Eil. 259. 1913; Fl. D.W. Ind. Isl. 2: 58. 1914; ARNOLDO, Zakflora 41, fig. 17. 1954; Zakflora 106, fig. 17. 1964.

Shrub or small tree; branches blackish-grey; twigs angular by decurrent lines. Stipules very small, caducous. Leaves distichous; blade ovate, elliptic or obovate, rounded and emarginate at the apex, cuneate or more or less rounded and contracted into the petiole at the base, 2.5—7 × 2—6 cm, 1—1.5 times as long as wide, coriaceous, shining above, glabrous, margin slightly crenulate near the apex, midvein prominent on both sides, lateral veins prominent beneath, reticulate-anastomosing; petioles stout, 3—6 cm long. Inflorescence consisting of axillary clusters; pedicels 3—7 mm long. Flowers 5-merous. Sepals broadly triangular, rounded or emarginate at the apex, 0.7—1 × 1—1.2 mm, slightly denticulate at the apex. Petals elliptic, rounded at the apex, 1.9—2.1 × 1—1.3 mm. Stamens with subulate filaments, 1 mm long; anthers ovate, cordate at the base, 0.4 mm long. Disk 5-angular. Ovary 2-locular, immersed in the disk; style wanting; stigma thick. Fruit club-shaped, long-attenuate at the base, 1—1.7 × 0.7—1 cm. Seed 1.

Curaçao and Bonaire.

Mainly in the calcareous and the Knip areas.

BONAIRE: calcareous plateau of Klein Bonaire (Boldingh 7491, fl. & fr. Feb.; Type specimen); slope of Lasanne (Boldingh 7232, fl. Feb.).

CURAÇAO: Knip Hills (Stoffers 1101, fl. & fr. Dec.; 1154, fr. Dec.; Arnoldo 1017, fl. Jan.); Seroe Christoffel near Saddle (Stoffers 1296, fl. & fr. Dec.); Seroe Christoffel (Boldingh 4998, fl. & fr. Nov.); id., 200 m (Arnoldo 35, fl. March); hills along the road from Westpunt to Savonet (Boldingh 4949, fl. & fr. Nov.); hills near Rooi Behoenda (Boldingh 5508, fl. Nov.).

Gyminda Sargent, Gard. & Forest. 4: 4. 1891

Unarmed, glabrous trees or shrubs. Leaves coriaceous, opposite, entire or crenulate-serrate. Inflorescence consisting of few-flowered, axillary cymose clusters or flowers solitary. Flowers unisexual, dioecious. Sepals 4, free. Petals 4, recurved in flower. Disk fleshy. Male flowers: stamens 4, inserted between the lobes of the disk; ovary rudimentary. Female flowers: ovary 2-locular; style wanting; stigma 2-lobed. Ovules solitary in each locule, pendulous. Fruit a drupe, 1-seeded. Seed without or with a very small aril. Endosperm present.

Three species in Florida Keys, West Indies, Mexico, and Costa Rica.

***Gyminda latifolia* (Sw.) Urb.**

URBAN, Symb. Ant. 5: 80. 1904; BOLDINGH, Fl. D.W. Ind. Isl. 1: 120. 1909; URBAN, Symb. Ant. 4: 365. 1910; BOLDINGH, Fl. Ned. W. Ind. Eil. 260. 1913; URBAN, Symb. Ant. 8: 384. 1920; BRITTON & MILLSAUGH, Bahama Fl. 249. 1920; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 518. 1924; FAWCETT & RENDLE, Fl. Jamaica 5(3): 29, fig. 12. 1926; WILLIAMS, Fl. Trinidad & Tobago 1: 176. 1930; LEON & ALAIN, Fl. Cuba 3: 174, fig. 63. 1953; ADAMS, Flowering plants of Jamaica 448. 1972; FOURNET, Fl. Guadeloupe & Martinique 1125, fig. 547. 1978; — *Myginda latifolia* SWARTZ, Prodr. 39. 1788; Fl. Ind. Occ. 1: 342. 1797; GRISEBACH, Fl. Br. W. Ind. Isl. 146. 1859 ['1864']; DUSS, Fl. phan. Ant. franç. 148. 1897.

Glabrous tree or shrub, up to about 7 m high; bark reddish-brown; branches terete; younger twigs angled by 4 decurrent lines. Stipules lanceolate-subulate or subulate, 0.5—1 mm long, deciduous. Leaves decussate; blade of various form, obovate-wedge-shaped, with rounded apex, sometimes obovate-oblong, oblong, rhomboid or rhomboid-elliptical with narrowed or obtusely acuminate, often emarginate apex, narrowed at the base, 1.5—6 × 1—3.5 cm, glaucescent on the upper side; petioles 1.5 mm long. Inflorescences consisting of few-flowered cymes; peduncles slender, up to 1.5 cm long; pedicels slender, short, up to 2 mm long. Sepals semi-orbicular, 0.7—1 mm long. Petals elliptic, 2—2.2 × 1—1.2 mm, rounded and slightly cucullate at the apex. Male flowers: stamens inserted between the lobes of the disk; filaments subulate, 1—1.8 mm long; anthers roundish, emarginate at apex and base, 0.4—0.5 mm wide; disk 4-lobed, fleshy; ovary rudimentary. Female flowers: staminodes wanting, ovary ovoid or ovoid-cylindric, 2-locular; style wanting; stigma sessile, 2-lobed. Drupe narrow to roundish ellipsoid, obtuse, 4—8 mm long, 3.5 mm in diam., blackish. Seed oblong-cylindric or short-oval, brownish, foveolate-reticulate.

Florida, West Indies, and Mexico.

In forests and woodland.

ST. MARTIN: Cole Bay (George s.n., sub. Boldingh 2512, fr.; near Simson Bay (Boldingh 3035a. fr. Aug.).

ST. EUSTATIUS: top of The Quill (Boldingh 393, male fl. June); slope of The Quill between Glass Bottle and White Wall, 270 m (Stoffers 4080, male fl. Aug.); without loc. (Boldingh s.n. fl.).

***Schaefferia* Jacquin, Enum Pl. Carib. 10. 1760**

Unarmed shrubs or trees. Stipules small. Leaves alternate or fascicled, coriaceous. Inflorescence consisting of axillary clusters or flowers solitary. Flowers dioecious or monoecious. Sepals 4. Petals 4. Stamens 4. Disk inconspicuous or wanting. Male flowers: stamens 4, hypogynous; filaments filiform; anthers introrse; ovary rudimentary. Female flowers: staminodia wanting; ovary sessile, ovoid, free, 2-locular; style short, stigma large, 2-partite. Ovules 1—2 in each locule, erect. Fruit a small, dry drupe, 2- or 1-locular, sometimes 2-coccos. Seeds one in each locule, erect, aril wanting. Endosperm fleshy.

Species 16 in tropical and subtropical America.

Schaefferia frutescens Jacq.

JACQUIN, Enum. Plant. Carib. 33. 1760; GRISEBACH, Fl. Br. W. Ind. Isl. 146. 1859 ['1864']; DUSS, Fl. phan. Ant. franç. 148. 1897; BOLDINGH, Fl. D.W. Ind. Isl. 1: 121. 1909; URBAN, Symb. Ant. 4: 365. 1910; BOLDINGH, Fl. Ned. W. Ind. Eil. 260. 1913; URBAN, Symb. Ant. 8: 384. 1920; BRITTON & MILLSAUGH, Bahama Fl. 249. 1920; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 518. 1924; FAWCETT & RENDLE, Fl. Jamaica 5(3): 32, fig. 14. 1926; QUESTEL, Fl. Isl. St. Bartholomew 142. 1941; LEON & ALAIN, Fl. Cuba 3: 175, fig. 64. 1953; ADAMS, Flowering plants of Jamaica 447. 1972; FOURNET, Fl. Guadeloupe & Martinique 1126, fig. 548. 1978; — *Schaefferia completa* SWARTZ, Prodr. 38. 1788.

Glabrous shrub or tree, up to 7 m tall; bark grey or brownish; branches terete; young twigs angular striate. Stipules very small, subulate, up to 0.5 mm long. Leaves alternate; blade various in shape, broadly elliptic to lanceolate, obovate, spatulate or oblong, acute, acuminate or rarely obtuse or emarginate at the apex, cuneate at the base, 2.5—6 × 0.5—4 cm, coriaceous, veins prominent; petioles 3—8 mm long. Flowers solitary or few in a cluster, greenish or yellow; peduncles slender, 3—10 mm long; pedicels 1—3 mm long, enlarging in fruit. Male flowers: sepals free, semi-orbicular, 0.7—1 × 0.9—1.3 mm, imbricate margin entire or slightly crenulate. Petals spreading or reflexed, obovate to narrowly obovate, 3—3.5 × 1.5—2 mm, membranaceous. Disk wanting. Stamens 4; filaments 2—2.5 mm; anthers subquadrate or short ovate-rectangular, 0.8—1 mm long; ovary rudimentary. Female flowers: sepals orbicular or short-ovate. Petals elliptic to elliptic-oblong, 3.5—4 × 1.5—2 mm; staminodes wanting; disk minute at the base of the ovary; ovary ovoid, 1-locular; style very short; stigma 2-lobed or 2-partite. Ovules solitary in each locule. Drupe orbicular to short-ovoid, rounded at the apex and contracted into the short persistent style, 2.5—5 mm long, 2.5—4.5 mm wide, 2-seeded. Seeds ovoid or oval, brown. Endosperm copious.

Florida, West Indies as far south as Grenada, Mexico, and Ecuador.

Mainly in open vegetations.

ST. MARTIN: lower parts of the hills between Mont Chambord and Mont Vernon (Boldingh 2964, fr. Aug.); Marigot Hill to Marigot, 0—200 m (Boldingh 2647, st. Aug.); Mountain between Mont des Accords and Sentry Hill, 200—300 m (Boldingh 2859, fr. Aug.); from Philipsburg to Cul de Sac (Boldingh 2610, fr. Aug.); hills along northern side of Cul de Sac, 75—100 m (Stoffers 2634, st. March).

SABA: Fort Gut, 150—200 m (Boldingh 1636, fr. July).

ST. EUSTATIUS: from Little Mountains to Venus Bay (Boldingh 962, fr. June); deserted plantations near Tumble Down Dick Bay (Boldingh 147, fr. May); Little Mountains (Stoffers 3745A, st. July).