

# CAPPARACEAE

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Trees, erect or climbing shrubs or herbs, often with simple or stellate hairs, scales or viscid glands. Leaves alternate, simple or palmately compound. Stipules small, glandular or spinose, or wanting. Flowers solitary in the axils of the leaves or in axillary or terminal racemes, hermaphrodite or rarely polygamous, zygomorphic or actinomorphic, often subtended by bracts; bracteoles wanting. Sepals 4, free or connate at the base, often unequal. Petals usually 4, sometimes wanting. Disk a ring or scale-like. Stamens 4—numerous, often on an androphore. Ovary superior, sessile or usually on a long gynophore, 1- or more locular; style short or filiform; stigma capitate or 2-lobed. Ovules few to many on parietal placentas, campylotropous. Fruit a berry or a bi-valved or indehiscent capsule or rupturing irregularly, many-seeded. Seeds kidney-shaped. Embryo large, various folded. Endosperm wanting.

Perhaps 800 species in 45 genera in the tropics and subtropics.

## Key to the genera:

- |   |                  |
|---|------------------|
| 1. Trees or shrubs . . . . .                                | 2                |
| Herbs . . . . .   | <i>Cleome</i>    |
| 2. Leaves simple . . . . .                                  | 3                |
| Leaves 3-foliate . . . . .                                  | <i>Crateva</i>   |
| 3. Sepals united; petioles thickened at both ends . . . . . | <i>Morisonia</i> |
| Sepals free or the two outer ones united . . . . .          | <i>Capparis</i>  |

## *Crateva* Linnaeus, Spec. Plant. 444. 1753

Glabrous shrubs or trees; twigs with lenticells. Leaves 3-foliate. Inflorescence consisting of corymbose racemes. Flowers large, polygamous, purplish. Sepals 4, deciduous. Petals 4, with a claw nearly as long as the limb, rarely wanting. Androphore short, cylindrical, bearing 8—50 stamens at the top, at the base

with an inverted lobed margin from which the petals and sepals arise. Gynophore long. Ovary 1- or 2-locular; stigma sessile. Ovules in 4 or more rows, attached to 2 placentas. Fruit a globose, 1- or 2-locular berry. Seeds reniform.

About 20 species in tropical regions.

**Crateva tapia L.**

**LINNAEUS**, Spec. Plant. 444. 1753; **GRISEBACH**, Fl. Br. W. Ind. Isl. 17. 1859 ['1864']; **DUSS**, Fl. phan. Ant. franç. 12. 1897; **FAWCETT & RENDLE**, Fl. Jamaica 3(1): 235, fig. 97. 1914; **ARNOLDO**, Zakflora 105, fig. 34. 1964; **GOODING et al.**, Fl. Barbados 169. 1965; **ADAMS**, Flowering plants of Jamaica 306. 1972; **FOURNET**, Fl. Guadeloupe & Martinique 523. 1978; — *Crateva gynandra* **LINNAEUS**, Spec. Plant. ed. 2. 636. 1763; **GRISEBACH**, Fl. Br. W. Ind. Isl. 17. 1859 ['1864']; **JOHNSTON**, Proc. Bost. Soc. Nat. Hist. 34(7): 213. 1909; **BOLDINGH**, Fl. Ned. W. Ind. Eil. 196. 1913; Fl. D.W. Ind. Isl. 2: 32. 1914; **FAWCETT & RENDLE**, Fl. Jamaica 3(1): 236. 1914; **ARNOLDO**, Zakflora 23, fig. 34. 1954.

Tree, up to 7 m tall. Leaves petiolate; petiole up to 13 cm long; leaflets elliptic, oblong or ovate, acute and acuminate at the apex, the terminal one wedge-shaped at the base, the lateral ones unequal sided with oblique base, membranaceous, becoming somewhat thicker, often somewhat leathery,  $5-15 \times 5-9$  cm; petiolules 5—8 mm long. Sepals oblong, more or less contracted at the base, 3—7 mm long, 1.5—2.5 mm broad. Petals with an oblong, elliptic or nearly lanceolate limb; the latter 0.8—2.5 cm long and 1—6 mm broad. Stamens 12—50, up to 6 cm long. Gynophore 2—6 cm long. Berry globose or ovoid, 2—3.5 cm in diam. Seeds 8 mm in diam.

West Indies, Central and tropical South America.

In various vegetation types.

Vernacular names: surun di mondi, ishiri (Leeward Group).

**ARUBA**: Rooi Takki (Arnoldo 245, st. Dec.); without loc. (Boldingh s.n., st.).

**BONAIRE**: Washington Plantation (Stoffers 871, fl. Dec.); Put Bronswinkel (Stoffers 678, fl. Nov.); Labra (Stoffers 586, fr. Nov.); neighbourhood of Rincon (Boldingh 7114, st. Feb.).

**CURAÇAO**: hofje of Barber (Arnoldo 1071, fl. June).

**Capparis Linnaeus**, Spec. Plant. 503. 1753

Trees or shrubs, sometimes with straggling or climbing branches. Leaves alternate, simple, more or less leathery. Stipules when present generally confined to young or base shoots. Inflorescence consisting of pedicellate corymbs. Sepals 4, free or partly united, with a gland at the base. Petals 4.

Stamens numerous or sometimes few; filaments slender, often hairy and united at the base. Gynophore short or long. Ovary 1—4-locular; stigma sessile. Fruit a long-linear, oblong or subglobose berry, indehiscent or rupturing irregularly or splitting into 3 or 4 valves. Seeds numerous to few, embedded in the pulp, globose-reniform. Endosperm wanting. Embryo convolute.

About 350 species in tropical and subtropical regions.

**K e y to the species:**

1. Leaves covered with scales on the lower surface . . . . . 2  
Leaves without scales on the lower surface . . . . . 4
2. Leaves very shiny and darkgreen on the upper surface; sepals more than 5 mm long, valvate . . . . . 3  
Leaves not very shiny nor darkgreen on the upper surface; sepals about 2 mm long, open in the bud. . . . . *C. indica*
3. Flowers white; sepals 8—12 mm long; stamens 2 to 3 times as long as the petals; Windward Group . . . . . *C. cynophallophora*  
Flowers cream-coloured changing to purplish; sepals 5—7 mm long; stamens about as long as the petals; Leeward Group . . . . . *C. odoratissima*
4. Leaves in 2 rows . . . . . 5  
Leaves alternate, not in 2 rows . . . . . 6
5. Tree or shrub with drooping twigs; leaves cordate at the base; petals 3.5—4.5 cm long . . . . . *C. hastata*  
Tree or mostly a shrub with climbing or scrambling twigs; leaves rounded or short-pointed at the base; petals 2—2.5 cm long . . . . . *C. flexuosa*
6. All leaves linear with enrolled margins, dark green and shiny on the upper surface . . . . . *C. linearis*  
Leaves not linear and margins not enrolled . . . . . 7
7. Stamens as long as the petals; inflorescence of corymbs, terminal or at the base of the upper leaves; berry 3—7 cm long; Windward Group *C. frondosa*  
Stamens twice as long as the petals; inflorescence of terminal racemes; berry up to 20 cm long, narrow; Leeward Group . . . . . *C. tenuisiliqua*

***Capparis cynophallophora* L.**

LINNAEUS, Spec. Plant. 504. 1753; Duss, Fl. phan. Ant. franç. 13. 1897; FAWCETT & RENDLE, Fl. Jamaica 3(1): 231. 1914; URBAN, Symb. Ant. 8: 239. 1920; BRITTON & MILSPAUGH, Bahama Fl. 150. 1920; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 333. 1924; QUESTEL, Fl. Isl. St. Bartholomew 110. 1941; LEON & ALAIN, Fl. Cuba 2: 207. 1951; FOURNET, Fl. Guadeloupe & Martinique 530, fig. 256. 1978; — *Capparis jamaicensis* JACQUIN, Enum. Syst. Plant. Carib. 23. 1760; GRISEBACH, Fl. Br. W. Ind. Isl. 19. 1859 ['1864']; Duss, Fl. phan. Ant. franç. 13. 1897; URBAN, Symb. Ant. 4: 252. 1905; BOLDINGH, Fl. D.W. Ind. Isl. 1: 75. 1909; Fl. Ned. W. Ind. Eil. 198. 1913 p.p.

Shrub or small tree, sometimes up to 12 m tall, minutely scaly; branches angular, brownish. Leaves alternate petiolate; petiole 1—3 cm long; blade elliptic, elliptic-oblong or oblong, acute or obtuse at the apex, cuneate at the base, 4—8(—12) × 1—3(—6) cm, leathery, glabrous and shiny on the upper surface, scaly and greyish-brown beneath, nerves usually prominent beneath, the veins obsolete; leaves of the shoots often linear or narrowly linear, up to 20 × 1 cm. Inflorescence consisting of few-flowered racemes. Flowers fragrant, white, becoming purplish; pedicels stout, scaly, up to 3 cm long. Flowerbud 4-angled. Sepals valvate in bud, scaly, more or less ovate, 8—12 mm long, reflexed. Petals broadly ovate, 10—13 mm long, scaly outside, glabrous within. Stamens numerous; filaments about 3 cm long, 2 to 3 times as long as the petals, purplish, hairy at the base; anthers yellow, 3 mm long. Gynophore nearly as long as the stamens; stigma sessile. Fruit a long-linear berry, constricted between the seeds, to 30 cm or more long, 6—8 mm across, terete, scaly, rupturing irregularly; pulp orange-red.

West Indies and continental America from Florida to northern South America.

In dry vegetations at lower altitudes.

**SABA:** Booby Hill, 300 m (Boldingh 1621, st. July; Arnaldo 793, fr. Aug.); St. Giles (Boldingh 1862, st. July); Windwardside (Suringar s.n., fl. Ap. [L]); Wellridge (Suringar s.n., fr. Ap. [L]).

**St. EUSTATIUS:** slope of lower part of Signal Hill (Boldingh 105, st. May); near Mary's Glory, 150 m (Boldingh 1139, st. June); top of The Quill, 400 m (Boldingh 305, st. June); id., 500 m (Boldingh 494, st. June; 488, st. June); between Venus Bay and Little Mountains (Stoffers 4022, fl. & fr. July); near White Wall (Boldingh 1256A, fl. July; Stoffers 4769, st. Aug.); Great Gut (Suringar s.n., st. May [L]); Boven (Suringar s.n., fr. Ap. [L]).

**St. MARTIN:** lower part of hill between Mont Chambord and Mont Vernon (Boldingh 2965, fl. & fr. Aug.; 2960, st. Aug.); Prince Quarter (George s.n. sub Boldingh 2466, fl. Aug.; Boldingh 2480, st. Aug.); from Philipsburg to Guana Bay (Boldingh 2412, st. Aug.; 2382, st. Aug.; 2368, fl. & fr. Aug.; 2417, st. Aug.; Suringar s.n., fr. May [L]); between Belvedere and Oyster Pond (Boldingh 3075, fl. & fr. Aug.; 3078, st. Aug.); Naked Boy Hill, 50—200 m (Boldingh 2712, st. Aug.); Milldrum Hill, 300—400 m (Boldingh 3136, fl. Sept.); near Fort Willem (Boldingh 2797, fl. Aug.); id., 0—50 m (Boldingh 2539, st. Aug.); near Mullet Pond (Boldingh 2771, st. Aug.); Little Bay (Stoffers 2488, fl. March; 2490, fl. & fr. March; 2492, st. March; 2494, st. March); Fort Hill (Stoffers 2535, fl. & fr. March); Guana Bay (Arnaldo 3162, fl. & fr. Dec.); hills along northern side of Cul de Sac, 70—100 m (Stoffers 2615, fr. March; 2632, st. March); Vineyard Hill (Stoffers 4511, fl. Aug.; 4516, fl. Aug.); near the top of Sentry Hill (Stoffers 4525, fl. Aug.; 4526, fl. Aug.; 4540, fl. Aug.); Lemoentuin Juliana (Stoffers 2229, fl. & fr. March; 2242, fl. March; 2233, fl. March); east of Great Bay (Stoffers 2225, fl. March); Oyster Pond (Suringar s.n., fl. & fr. May [L]); John Edny Hill (Suringar s.n., st. May [L]); Sentry Hill (Suringar s.n., fr. May [L]).

**Capparis odoratissima** Jacq.

JACQUIN, Pl. hort. Schoenbr. 1: 57, t. 110. 1797; WILLIAMS, Fl. Trinidad & Tobago 1: 31. 1929; — *Capparis jamaicensis* AUCT. non JACQUIN; BOLDINGH, Fl. Ned. W. Ind. Eil. 198. 1913; Fl. D.W. Ind. Isl. 2: 33. 1914; — *Capparis cynophallophora* AUCT. non L.; ARNOLDO, Zakflora 40, fig. 52. 1954; Zakflora 103, fig. 52. 1964.

Small tree or shrub with scaly branches. Leaves alternate, petiolate; petiole 0.5—1.0 cm long; leaves oblong, elliptic to obovate-elliptic, rounded, obtuse or somewhat emarginate at the apex, rounded or obtuse at the base, 4—11 × 2—6 cm, coriaceous, glabrous, dark green, and shiny above, densely scaly beneath, midrib conspicuously impressed. Inflorescence consisting of terminal and occasionally lateral corymbose panicles, branching repeatedly, several- to many-flowered, somewhat shorter than the subtending leaves; flowers highly fragrant. Bracts minute, caducous. Sepals 4, equal, valvate, oblong-elliptic, acute, 5—7 mm long, coriaceous, densely covered with scales without, usually greenish-white within. Petals 4, imbricate, ovate-elliptic, rounded at the apex, 6—8 mm long, cream-coloured at first, changing to purplish, densely covered with scales. Stamens 20—28, subequal; filaments about as long as the petals, 5—8 mm long, pilosulous at the base, glabrous above; anthers about 1.5 mm long. Pistil oblongoid, shorter than the petals; stigma sessile. Gynophore short and not elongating in fruit, or wanting. Fruit cylindrical, 4—12 cm long and 0.5 cm in diam., swollen and constricted in parts, dehiscing longitudinally, brownish or silvery scaly, warty outside, scarlet within. Pulp scarlet.

Venezuela, Colombia, Panama, and some islands of the Antilles.

Frequent tree in Aruba, Bonaire, and Curaçao.

Vernacular name: oliba (Leeward Islands).

ARUBA: calcareous plateau near Belashi (Boldingh 6425, flb. Jan.); near San Nicolas (Boldingh 6493, fr. Jan.); Seroe Pretoe (Stoffers 1674, st. Dec.); near Belashi (Arnoldo 240, flb. Dec.); Andicouri (Stoffers 1840, st. Jan.); Miralamar (Stoffers 1610, st. Jan.); Rooi Prins (Stoffers 2159, st. flb. Feb.); Rooi Takki (Stoffers 1887, st. Jan.); hills near Ajo (Boldingh 6346, st. Dec.); slope of Canashito (Boldingh 6382, flb. Dec.); vicinity of Kleine Jamanota (Stoffers 2009, flb. Jan.); Canashito (Suringar s.n., st. Feb. [L]); Santa Cruz (Suringar s.n., flb. & fr. Feb. [L]); from Santa Cruz to Rooi Fluit (Suringar, fr. Feb. [L]).

BONAIRE: Angola (Stoffers 836, flb. Nov.; 823, fl. Nov.; 829, fl. Nov.); Coerhoe-boeroe (Stoffers 456, fr. Oct.; 451, flb. Oct.); Rincón (Boldingh 7023, st.); near Porto Spaño (Stoffers 619, fl. & fr. Nov.); Pos Bronswinkel (Stoffers 816, st. Nov.); Washington Plantation (Stoffers 863, st. Dec.; 864, st. Dec.); Labra (Stoffers 591, fl. Jan.); Karpata, near Goto (Stoffers 1082, st. Dec.); Montagne (Stoffers 885, st. Dec.); Hobau (Stoffers 1037, fr. Dec.); Seroe Caracao (Stoffers 1054, flb. Dec.; 1049, st. Dec.); Kibra Montagne (Arnoldo 523, flb. June); Brandaris (Suringar s.n., st. Feb. [L]); from Rincón to Slagbaai (Suringar s.n., st. Feb. [L]); without loc. (Aschenberg s.n., flb.); KLEIN BONAIRE (Suringar s.n., st. [L]).

**CURAÇAO:** Seroe Christoffel (Arnoldo 1077, fl. June); calcareous hills near Hato (Boldingh 5183, st. Nov.); hofje of Valentijn (Boldingh 5351, st. Nov.); hofje of Knip (Boldingh 5474, st. Dec.); Veeris Berg (Boldingh 4738, flb. & fr. Oct.); slope Hieronymus Berg (Boldingh 5071, fr. Nov.); near Ronde Klip (Stoffers 426, fr. Oct.); road from Knip to Westpunt (Boldingh 4947, st. Nov.); calcareous hills near Siberië (Boldingh 5197, flb. & fr. Nov.); Santa Barbara (Stoffers 401, flb. Nov.); hills near Knip (Stoffers 1171, flb. Dec.); seashore near Caracas Baai (Boldingh 5414, fr. Jan.); Zuikertuintje (Suringar s.n., fl. & fr. Feb. [L]); without loc. (Rutten-Pekelharing s.n., flb. Nov.).

**Capparis indica** (L.) Fawc. & Rendle

FAWCETT & RENDLE, Journ. Bot. 52: 143. 1914; Fl. Jamaica 3(1): 232. 1914; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 333. 1924; QUESTEL, Fl. Isl. St. Bartholomew 110. 1941; ARNOLDO, Zakflora 39, fig. 29. 1954; Zakflora 104, fig. 29. 1964; FOURNET, Fl. Guadeloupe & Martinique 529, fig. 255. 1978; — *Breynia indica* LINNAEUS, Spec. Plant. 503. 1753; — *Capparis breynia* LINNAEUS, Syst. Nat. ed. 10. 1071. 1759; DUSS, Fl. phan. Ant. franç. 13. 1897; URBAN, Symb. Ant. 4: 253. 1905; BOLDINGH, Fl. D.W. Ind. Isl. 1: 73. 1909; JOHNSTON, Proc. Bost. Soc. Nat. Hist. 34(7): 212. 1909; BOLDINGH, Fl. Ned. W. Ind. Eil. 197. 1913; Fl. D.W. Ind. Isl. 2: 32. 1914; — *Capparis amygdalina* LAMARCK, Encycl. 1: 608. 1785; GRISEBACH, Fl. Br. W. Ind. Isl. 17. 1859 ['1864'].

A small tree; branchlets densely scaly. Leaves alternate, petiolate; petiole 0.5—1 cm long, scaly; blade obovate, elliptic or narrowly elliptic, acute or obtuse at the apex, acute or obtuse at the base, 4—9 × 1—3 cm, upper surface glabrous, silvery scaly beneath, the lateral veins distinct. Inflorescence consisting of few-flowered racemes near the end of the branches. Flowers white, fragrant; pedicels scaly, 0.5—1.5 cm long. Calyx small, deeply 4-cleft; sepals scaly, about 2 mm long, triangular, open in bud. Petals elliptic or obovate, 10—12 mm long, white, scaly on the outside, tomentose within. Stamens about 16; filaments 2—2.5 cm long, hairy in the lower part; anthers about 2 mm long. Gynophore longer than the stamens. Fruit a long-linear berry, 6—25 cm long and 5—7 mm across, terete, somewhat tortulose, 2-valved; pulp scarlet.

West Indies and tropical continental America.

In various vegetation types.

Vernacular names: yerba di mosterd, oliba machu, palu pretu, raba (Leeward Group); black willow (Windward Group).

**ARUBA:** Rooi Prins (Stoffers 2157, st. Feb.); slope of Jamanota (Boldingh 6302, st. Dec.); hills near Fontein (Boldingh 6463, st. Jan.).

**BONAIRE:** Brandaris (Stoffers 969, fr. Dec.); between Tanki Maraka and Porto Spaño (Arnoldo 512, fl. July); Seroe Caracao (Stoffers 1052, st. Dec.).

**CURAÇAO:** Rooi Beru (Stoffers 218, fl. & fr. Oct.); Seroe Christoffel (Arnoldo 1076, fl. June; Boldingh 4994, fr. Nov.); id., 200 m (Stoffers 221, fl. Nov.);

Mahoema (Boldingh 4898, fr. Oct.); hofje of Klein Piscadera (Boldingh 4837, fr. Oct.); Piscadera Baaï (Britton & Shafer 3133, fr. March); hills near Rooi Behoenda (Boldingh 5519, st.); Santa Barbara (Stoffers 407, fl. Oct.); Veeris Berg (de Wilde 3, fl. May); without loc. (Aschenberg s.n., fl.).

SABA: Windwardside (Boldingh 2319, fr. July); Spring Bay Gut (Boldingh 2120, fr. July); between The Bottom and Mary's Point (Boldingh 1466, fl. & fr. July); road near Hellsgate (Arnoldo 748, fr. Aug.); between The Bottom and Crispine (Stoffers 3022, fl. Ap.); near Sulphur mines (Stoffers 3129, st. May); The Bottom (Stoffers 3293, fl. May); between Windwardside and Hellsgate (Stoffers 3359, fl. May).

ST. EUSTATIUS: Little Mountains (Stoffers 3749, fr. July; 3735, fr. July); from Little Mountains to Venus Bay (Boldingh 995, fr. June); north-western slope of The Quill (Stoffers 4037, fr. Aug.); slope of The Quill on the side of White Wall, 200 m (Boldingh 1178, fr. June); along roads in Oranjestad (Boldingh 1068, fl. June); gut near Fort de Windt, 50 m (Boldingh 832, fr. June); Solitude, 100 m (Stoffers 3708, fr. July); top of The Quill above Glass Bottle, 380—400 m (Stoffers 3571, fr. July); between Glass Bottle and White Wall (Stoffers 4061, fr. Aug.; 4100, fr. Aug.).

ST. MARTIN: Naked Boy Hill, 200—265 m (Boldingh 2731, st. Aug.; 2730, st. Aug.); id. 50—200 m (Boldingh 2695, fr. Aug.); Prince Quarter (George s.n. sub Boldingh 2460, st. Aug.; sub Boldingh 2481, fr. Aug.); gut from Bethlehem to Cul de Sac (Boldingh 3433, st. Sept.); Marigot road near Marigot (Boldingh 2815, fl. & fr. Aug.); mountain between Mont des Accords and Sentry Hill, 200—300 m (Boldingh 2889, fr. Aug.); hills along the western side of Cul de Sac (Stoffers 2583, fl. March); hills along the northern side of Cul de Sac (Stoffers 2641, flb. Ap.); hills along the eastern side of Cul de Sac (Stoffers 2662, flb. Ap.); Middle Region, 100 m (Arnoldo 3401, fl. Jan.; Boldingh 3402, fl. & fr. Jan.).

### Capparis frondosa Jacq.

JACQUIN, Enum. Syst. Plant. Carib. 24. 1760; Sel. Stirp. Amer. Hist. 162, t. 104. 1763; GRISEBACH, Fl. Br. W. Ind. Isl. 19. 1859 ['1864']; Duss, Fl. phan. Ant. franç. 14. 1897; URBAN, Symb. Ant. 4: 253. 1905; BOLDINGH, Fl. D.W. Ind. Isl. 1: 75. 1909; Fl. Ned. W. Ind. Eil. 197. 1913; — *Capparis baducca* LINNAEUS, Spec. Plant. 504. 1753; FAWCETT & RENDLE, Fl. Jamaica 3(1): 233. 1914; URBAN, Symb. Ant. 8: 240. 1920; WILLIAMS, Fl. Trinidad & Tobago 1: 32. 1924; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 334. 1924; QUESTEL, Fl. Isl. St. Bartholomew 111. 1941; LEON & ALAIN, Fl. Cuba 2: 207. 1951; FOURNET, Fl. Guadeloupe & Martinique 528, fig. 254. 1978. (*Capparis baducca* L. applied erroneously to American plants is an Asiatic species).

Shrub or tree, up to 8 m tall; twigs glabrous and without scales. Leaves alternate, petiolate; petiole 0.5—1.5 cm long, round and swollen at both ends; blade leathery, elliptic-oblong or elliptic-ovate, acute, acuminate or sometimes emarginate at the apex, rounded or subcordate at the base, 8—25 × 4—10 cm, without scales and hairs on the lower surface, the veins prominent at both sides. Inflorescence consisting of few- to several-flowered corymbs, terminal or at the base of the upper leaves. Flowers odourless. Calyx 4-lobed, about 2 mm long,

the lobes imbricate, roundish, glands small. Petals greenish, white or purple, obovate, about  $10 \times 7$  mm. Stamens numerous, white, pink at the base, as long as the petals. Berry narrowly oblong, 3—7 cm long, and 1 cm in diam., purplish-brown, irregularly constricted and swollen, the gynophore about 1 cm long.

West Indies, Florida, Central- and South America.

In vegetations at lower altitudes.

Vernacular name: church blossom (Windward Group).

**SABA:** Bottom Mountain, 300 m (Boldingh 1443, st. July); between The Bottom and Windwardside (Boldingh 1334, fr. July); Ladder Gut, 200 m (Boldingh 2007, fr. July); id., 100—200 m (Stoffers 3188, fr. May); between The Bottom and Mary's Point (Arnoldo 840, st. Aug.); between The Bottom and Crispine (Stoffers 2957, fl. Ap.); Crispine to Rendez-Vous, 400 m (Suringar s.n., fl. Ap. [L]); Fort Bay Gut (Stoffers 3319, fr. May); gut near Mary's Point (Suringar s.n., fr. Ap. [L]); Peperpot (Suringar s.n., fib. Ap. [L]).

**ST. EUSTATIUS:** bottom of The Quill (Boldingh 445, fr. June); deserted plantation near Tumble Down Dick Bay (Boldingh 140, fr. May); hills near Concordia (Boldingh 967, st. June); slope of The Quill near Bengalen (Boldingh 655, fr. June; Stoffers 3766, st. July); Quill (Suringar s.n., fr. Ap. [L]); Little Mountains (Stoffers 3729, st. July); Signal Hill (Suringar s.n., st. Ap. [L]); Cultuurvlakte (Suringar s.n., fr. Ap. [L]); Red Cliff (Suringar s.n., fr. Ap. [L]); without loc. (v. Croll-Meyer 189, st.).

**ST. MARTIN:** lower parts of the hills between Mont Chambord and Mont Vernon (Boldingh 2961, st. Aug.); from Belvedere to Oyster Pond (Boldingh 3058, st. Aug.); Prince Quarter (George s.n. sub Boldingh 2482, st.); from Philipsburg to Guana Bay (Boldingh 2383, st. Aug. [L, U]); hills along western side of Cul de Sac (Boldingh 2587, fr. March); Sentry Hill (Suringar s.n., fr. May [L]); John Redney Hill (Suringar s.n., fr. May [L]).

#### **Capparis linearis Jacq.**

JACQUIN, Enum. Syst. Plant. Carib. 24. 1760; Select. Stirp. Amer. Hist. 161, tab. 102. 1763; JOHNSTON, Proc. Bost. Soc. Nat. Hist. 34(7): 212. 1909; BOLDINGH, Fl. Ned. W. Ind. Eil. 198. 1913; Fl. D.W. Ind. Isl. 2: 33. 1914; ARNOLDO, Zakflora 33. 1954; Zakflora 104. 1964.

Small tree; branchlets tomentose, sometimes somewhat scaly. Leaves alternate, petiolate; petiole c. 0.5 cm long, tomentose and sometimes scaly; blade coriaceous, linear, obtuse or emarginate and often mucronate at the apex, rounded and subcordate at the base,  $8-12 \times 0.5-1$  cm, the upper surface dark green, glabrous and shiny, the midrib very prominent beneath, the margins enrolled. In the axils of the leaves a sessile gland. Inflorescence consisting of a many-flowered raceme near the top of the branches. Flowers white; pedicels up to 2

cm long. Sepals 4, concave, suborbicular, glabrous, the inner ones  $4 \times 4$  mm, the outer ones smaller,  $3 \times 3$  mm. Petals broadly obovate, often emarginate, about 7 mm long. Stamens many; filaments 1—1.5 cm long; anthers about 1.5 mm long. Gynophore short, 1 mm long. Fruit torulose,  $3 \times 1$  cm, opening by 2 valves; pulp orange-yellow.

Aruba, Curaçao, Margarita, and northern South America.

Not common; mainly in the western part of Curaçao and the hilly region of Aruba.

Vernacular name: kedebehéshi.

**ARUBA:** calcareous hills and plateau near Belashi (Boldingh 6426, st. Jan.); Rooi Takki (Arnoldo 227, fr. Dec.); N.E. of Jamanota (Stoffers 1643, fl. Jan.).

**CURAÇAO:** hills between Westpunt and Savonet (Boldingh 4946, st. Nov.); Seroe Christoffel (Arnoldo 1070, fl. June; Rutten-Pekelharing s.n., st. June; Suringar s.n., st. Jan. [L.]); from Anthony Berg to the northern coast (Boldingh 5117, fr. Nov.); slope of Hieronymus Berg (Boldingh 5072, fl. June); Ronde Klip (Stoffers 425, fr. Oct.).

### **Capparis flexuosa (L.) L.**

LINNAEUS, Spec. Plant. ed. 2. 722. 1762; FAWCETT & RENDLE, Fl. Jamaica 3(1): 234. 1914; URBAN, Symb. Ant. 8: 240. 1920; BRITTON & MILLSPAUGH, Bahama Fl. 150. 1920; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 334. 1924; WILLIAMS, Fl. Trinidad & Tobago 1: 32. 1929; QUESTEL, Fl. Isl. St. Bartholomew 111. 1941; LEON & ALAIN, Fl. Cuba 2: 207. 1951; ARNOLDO, Zakflora 39. 1954; Zakflora 103. 1964; GOODING et al., Fl. Barbados 167. 1965; ADAMS, Flowering plants of Jamaica 305. 1972; FOURNET, Fl. Guadeloupe & Martinique 525, fig. 252. 1978; — *Morisonia flexuosa* LINNAEUS, Amoen. 5: 398. 1760; — *Capparis cynophallophora* LINNAEUS, Syst. Nat. ed. 10. 1071. 1759 non L. 1753; Spec. Plant. ed. 2. 721. 1762 p.p. non L. 1753; Duss, Fl. phan. Ant. franç. 13. 1897; URBAN, Symb. Ant. 4: 254. 1905; BOLDINGH, Fl. D.W. Ind. Isl. 1: 74. 1909; Fl. Ned. W. Ind. Eil. 197. 1913; — *Capparis cynophallophora* L. var. *latifolia* GRISEBACH, Fl. Br. W. Ind. Isl. 18. 1859 ['1864'] p.p.; BOLDINGH, Fl. D.W. Ind. Isl. 2: 32. 1914; — *Capparis coccobifolia* auct. non MARTIUS; BOLDINGH, Fl. D.W. Ind. Isl. 1: 74. 1909 p.p.

A usually climbing or scrambling shrub or small tree, glabrous, without scales; bark silvery-grey; twigs slightly zig-zag, provided with lenticels. Stipules minute. Leaves alternate, in 2 rows, with an oblong, axillary gland, petiolate; petiole stout, up to 1 cm long; blade narrowly oblong to elliptic, on shoots or juvenile plants lanceolate to linear, obtuse or emarginate, rarely acute at the apex, rounded, cuneate or subcordate at the base,  $3-12 \times 1-6$  cm, leathery, dullgreen on the upper and dull light green on the lower surface, glabrous, nerves prominent on both sides. Inflorescence consisting of few-flowered, terminal corymbs. Flowers fragrant, nearly 5 cm across; pedicels about 1 cm long. Calyx 4-partite; sepals imbricate, roundish, outer ones about 5 mm long, inner ones up to 1 cm long. Petals white or rose, obovate,  $2-2.5$  cm long.

Stamens very numerous; filaments white, 4—5(—7) cm long; anthers about 3 mm long, linear. Fruit long-linear, 10—20(—30) cm long and 1.5 cm in diam. on an up to 5 cm long gynophore, rusty brown, smooth and glabrous, slightly constricted and swollen in parts, rupturing longitudinally by 2 valves; pulp scarlet.

Southern Florida, Bahamas, West Indies to Barbados and Trinidad, continental America from Mexico to Brazil, Argentine and Peru.

Rather common shrub in dry vegetations.

Vernacular names: stokki, hurihuri, yerba di mosterd, rabe (Leeward Group). mustard tree, man of war bush (Windward Group).

**ARUBA:** Fontein (Arnoldo 251, st. Dec.); calcareous soil near Savaneta? (Boldingh 6544, st. Jan.); without loc. (Boldingh s.n., st.; Suringar s.n., st. Feb. [L]).

**BONAIRE:** calcareous plateau near Tolo (Boldingh 7285, fr. Feb.); Montagne (Boldingh 7404, fr. Feb.; Stoffers 886, flb. Dec.); Seroe Largo (Arnoldo 532, fl. July); Slagbaai Plantation (Stoffers 746, fl. Dec.; Suringar s.n., st. Feb. [L]); Labra (Stoffers 585, fl. Nov.; 590, fl. Nov.); Karpata, near Goto (Stoffers 1168, fl. Dec.); Angola (Stoffers 520, fl. Nov.); Colombia (Stoffers 528, fl. Nov.; 530, fr. Nov.); neighbourhood of Rincón (Boldingh 7284, fl. Jan.); slope of Joewa Hills (Boldingh 7219, fr. Feb.); Fontein (Suringar s.n., fl. Feb. [L]); from Fontein to Slagbaai (Suringar s.n., st. Feb. [L]).

**CURAÇAO:** between Jeremi Baai and Knip Baai (Arnoldo 1172, flb. Sept.); hills near Santa Cruz (Boldingh 5593, st. Nov.); hofje of Klein Piscadera (Boldingh 4838, st. Oct.); calcareous hills near Siberië (Boldingh 5259, flb. Nov.); Fuik (Suringar s.n., st. Feb. [L]); without loc. (Aschenberg s.n., st.).

**SABA:** along road from The Bottom to Windwardside, 200 m (Boldingh 1305, fr. July; 1714, st. July); The Bottom (Boldingh 1882, st. July); between The Bottom and Crispine (Stoffers 3021, fl. Ap.); St. Giles (Boldingh 1859, st. July); slope of The Mountain near St. John's (Boldingh 1736, st. July); Windwardside (Boldingh 2310, fl. July); between Hellsgate and Mastic gut, 300—400 m (Boldingh 2059, flb. July); near Sulphur mines (Stoffers 3129, st. May); Great Hill (Suringar s.n., flb. Ap. [L]).

**ST. EUSTATIUS:** seashore near Oranjestad (Boldingh 27, fl. May); along roads in Oranjestad (Boldingh 925, fr. Jan.); along road from Oranjestad to Fort de Windt (Stoffers 3521, fr. July); between Glass Bottle and White Wall (Stoffers 4052, st. Aug.); northern slope of The Quill (Stoffers 3994, st. July); lower part of The Quill near Bengalen (Boldingh 734B, st. Jan.); id. 250 m (Boldingh 695, st. June); Bengalen (Boldingh 749, st. July); lower part of Signal Hill (Boldingh 118, st. May); Mary's Glory (Boldingh 1158, fr. June); deserted plantations near Tumble Down Dick Bay (Boldingh 145, st. May); north-western slope of The Quill (Stoffers 4040, st. Aug.).

**ST. MARTIN:** Milldrum Hill, 300—400 m (Boldingh 3147, st. Sept.); road near Cole Bay (Stoffers 2360, fl. March); hills along eastern side of Cul de Sac (Boldingh 8436, fr. Sept.); near Mullet Pond (Boldingh 2772, st. Aug.); Prince Quarter (coll. George sub Boldingh 2478, st. Aug.; Arnoldo 3421, fl. & fr. Jan.); mountain between Mont des Accords and Sentry Hill (Boldingh 2874, fr. Aug.).

**Capparis hastata** Jacq.

JACQUIN, Enum. Syst. Plant. Car. 23. 1760; FOURNET, Fl. Guadeloupe & Martinique 527, fig. 253. 1978; — *Capparis cynophallophora* L. var. *latifolia* GRISEBACH, Fl. Br. W. Ind. Isl. 18. 1859 ['1864'] p.p.; BOLDINGH, Fl. D.W. Ind. Isl. 2: 32. 1914 p.p.; — *Capparis coccobifolia* MARTIUS ex EICHLER, in MARTIUS, Fl. Bras. 13(1): 284. 1865; JOHNSTON, Proc. Bost. Soc. Nat. Hist. 34(7): 212. 1909; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 335. 1924; WILLIAMS, Fl. Trinidad & Tobago 1: 33. 1929; ARNOLDO, Zakflora 103. 1964.

Small to medium-sized tree or shrub; bark smooth, greyish or brown; twigs drooping, stout, green, becoming light green or brown with many lenticels. Leaves alternate in 2 rows, petiolate; petioles stout, brownish, 0.5—1.5 cm long, minutely hairy; blades often stiff, elliptic to roundish, emarginate, rounded or obtuse at the apex, rounded to cordate at the base, 4—12 cm long and 3—6.5 cm wide, thick and leathery, glabrous, upper surface dull-green or slightly shiny, lower surface dull light green, the sides slightly turned up at midrib. Inflorescence consisting of terminal corymbs or racemes with few to several flowers; pedicels stout, green, 1.5—2.5 cm long. Flowers white, 5 cm in diam. Calyx cup-shaped, greenish, 1.5 cm long, with 4 rounded, yellow lobes. Corolla of 4 oblong, concave, 3.5—4.5 cm long petals, white tinged with green. Stamens numerous; filaments thread-like, white, up to 8 cm long or even more, spreading; anthers linear. Gynophore up to 7 cm long. Fruit an oblong, slightly flattened berry, up to 20(—25) cm long and 2.5 mm wide, hanging beyond the flower; pulp red.

West Indies from Hispaniola to Grenada and Trinidad; Bonaire; Venezuela and Colombia.

In Bonaire rather common.

Vernacular names: palu di lora, palu di tambu (Leeward Group).

BONAIRE: near Porto Spaño (Stoffers 616, flb. Nov.); Seroe Largo (Arnoldo 525, fl. & fr. July); neighbourhood of Rincón (Boldingh 7021, fl. & fr. Feb.); Joeva hills (Boldingh 7218, defl. Feb.); hill near Pos di San Dominico (Arnoldo 475, fl. & fr. March); Rood Grandi (Suringar s.n., fl. Feb. [L]); Boca Grandi (Suringar s.n., fl. Feb. [L]); along road from Fontein to Slagbaai (Suringar s.n., st. Feb. [L]).

ST. MARTIN: Guana Bay (Suringar s.n., st. May [L]); Fort Amsterdam (Suringar s.n., fl. Ap. [L]); Sentry Hill (Suringar s.n., defl. May [L]).

All collections from Bonaire annotated 'forma *coccobifolia* (Mart.) Iltis & Dugant comb. nov. ined.'

**Capparis tenuisiliqua** Jacq.

JACQUIN, Enum. Syst. Plant. Carib. 24. 1760; JOHNSTON, Proc. Bost. Soc. Nat. Hist. 34(7): 213. 1909; BOLDINGH, Fl. Ned. W. Ind. Eil. 198. 1913; Fl. D.W. Ind. Isl. 2: 33. 1914; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 335. 1924; WILLIAMS, Fl. Trinidad & Tobago 1: 31. 1929; ARNOLDO, Zakflora 39, 73. 1954; Zakflora 104. 1964.

Small tree or shrub. Leaves alternate, petiolate; petiole stout, up to 3 cm long, sometimes thickened at both ends, densely pubescent; blade broad-elliptic to ovate, obtuse, acuminate or emarginate at the apex, cordate or rounded at the base,  $5-15 \times 3-9$  cm, minutely pubescent on both sides when young. Inflorescence consisting of terminal racemes; common axis and peduncles brown, densely pubescent, the latter about 1 cm long. Flowers white. Calyx 4-partite; sepals triangular, about 2 mm long, pubescent. Petals oblong, about  $7 \times 4$  mm. Stamens numerous; filaments nearly 1.5 cm long; anthers linear, about 1.5 mm long. Gynophore up to 3 cm long. Fruit long, up to 20 cm long and 2-4 mm in diam., constricted between the seeds.

Northern South America and adjacent islands.

Rather common on Seroe Christoffel and its surroundings.

CURAÇAO: Seroe Christoffel (Arnoldo 1075, fl. June; Boldingh 5001, fr. Nov.; 5014, fr. Nov.; 4999, st. Nov.); without loc. (Boldingh s.n., fr.).

**Morisonia Linnaeus, Spec. Plant. 503. 1753**

Trees or shrubs. Leaves petiolate, simple, leathery. Inflorescence consisting of terminal and axillary corymbose racemes. Calyx irregularly rupturing into 2 valves or 2-4-cleft. Sepals 4. Petals 4. Stamens 6-20, shorter than the petals; filaments subulate, inserted on the disc; anthers oblong. Ovary on a short or long gynophore, 1-locular or falsely 4-8-locular by uniting of the 4 parietal placentas in the centre; stigma sessile, discoid. Ovules numerous. Fruit a subglobose berry. Seeds numerous.

Five species in tropical America.

**Morisonia americana L.**

LINNAEUS, Spec. Plant. 503. 1753; GRISEBACH, Fl. Br. W. Ind. Isl. 19. 1859 ['1864']; DUSS, Fl. phan. Ant. franç. 14. 1897; BOLDINGH, Fl. D.W. Ind. Isl. 1: 76. 1909; JOHNSTON, Proc. Bost. Soc. Nat. Hist. 34(7): 213. 1909; BOLDINGH, Fl. Ned. W. Ind. Eil. 198. 1913; Fl. D.W. Ind. Isl. 2: 33. 1914; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 336. 1924; WILLIAMS, Fl. Trinidad & Tobago 1: 35. 1929; ARNOLDO, Zakflora 40. 1954; Zakflora 105. 1964; FOURNET, Fl. Guadeloupe & Martinique 523, fig. 251. 1978.

A small tree or shrub; the twigs and leaves scaly when young, becoming glabrous. Leaves alternate, coriaceous, oblong to oblong-elliptic, rounded, obtuse or rarely acuminate at the apex, rounded or subcordate at the base, 7-25 cm long and 2-9 cm wide, upper surface shiny green, dull light green beneath, lateral veins few, curved; petiole up to 5 cm long, thickened and enlarged at both ends. Corymbs shortly pedunculate; peduncle and pedicels scaly. Calyx rupturing into two unequal parts, about 0.5 cm long. Petals white, obovate, exceeding the stamens in length, scaly on the back and more or less downy within,  $1-1.2 \times 0.5-0.6$  cm. Stamens 12-20. Ovary longitudinally striate. Fruit subglobose, 3.5-5 cm in diam. Seeds 7-10 mm in diam.

From Cuba to Trinidad, northern South America, and Aruba.

### In dry vegetation types.

**ARUBA:** hills near Fontein (Boldsingh 6441, fr. Jan. [L, U]); calcareous hills near Savaneta (Boldsingh 6522, st. Jan.); Canashito (Suringar s.n., st. Feb. [L]); Rooi Frances (Suringar s.n., st. Feb. [L]).

**SABA:** Fort Bay Gut, 100—200 m (Stoffers 3318, fl. May); between The Bottom and Middle Island (Stoffers 3476, fr. June); without loc. (Suringar s.n., fr. Ap. [L]).

St. EUSTATIUS: from Little Mountains to Venus Bay (Boldningh 965, fl. June [L, U]; Stoffers 4020, fib. July; 4021, st. July); lower part of Signal Hill (Boldningh 114, st. May); Solitude, 100 m (Stoffers 3706, st. July); Boven (Suringar s.n., fr. Ap. [L]); Little Mountains (Suringar s.n., st. Ap. [L]).

**ST. MARTIN:** Prince Quarter (George s.n., sub Boldingh 2483, fl. Aug.); from Philipsburg to Belvedere (Boldingh 2568, fr. Aug.); hills along northern side of Cul de Sac, 70—100 m (Stoffers 2637, st. March); hills along eastern side of Cul de Sac (Stoffers 2654, st. Ap.); near the top of Sentry Hill (Stoffers 4524, st. Aug.); Cole Bay Hill (Suringar s.n., fr. May [L]).

**Cleome** Linnaeus, Spec. Plant. 671. 1753

Glabrous or glandular herbs or low shrubs. Leaves usually palmately 3—7-foliolate or simple. Flowers regular, in often leafy-bracted racemes or solitary in the axils of the leaves. Sepals 4, spreading, free or basally united. Petals 4, entire, equal, more or less clawed. Androphore long, short, or wanting. Stamens 4 to numerous, usually 6. Gynophore short or elongate. Ovary 1-locular; style long or wanting. Ovules numerous on 2 parietal placentas. Capsule elongate, many-seeded. Seeds with a rugose, ridged or tuberculate testa.

About 225 species in tropical and subtropical America, Asia, and Africa, also in the United States and the Mediterranean region.

#### Key to the species:



### **Cleome stenophylla** Klotzsch

KLOTZSCH in URBAN, Symb. Ant. 4: 251. 1905; BOLDINGH, Fl. Ned. W. Ind. Eil. 195. 1913; Fl. D.W. Ind. Isl. 2: 31. 1914; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 332. 1924; QUESTEL, Fl. Isl. St. Bartholomew 110. 1941; ARNOLDO, Zakflora 148. 1954; Zakflora 105. 1964; FOURNET, Fl. Guadeloupe & Martinique 532. 1978.

Erect, glabrous, branching annual herb, 8—40 cm high. Leaves petiolate; blade linear, acute at the apex, obtuse at the base, jointed with the petiole, margins more or less revolute, 1.5—5 cm long and 1—4 mm wide; petiole 5—7 mm long. Flowers in few-flowered racemes or solitary in the leaf-axils; pedicels 2 mm long, lengthening in fruit up to 5 mm. Sepals oblong, acute at the apex, about 3 mm long. Petals yellow, elliptic-oblong, about 4.5 mm long. Stamens 6; filaments filiform, about 4 mm long; anthers elliptic. Capsule sessile, cylindric, 2—3 cm long and 2 mm in diam., longitudinally striate. Seeds about 1.2 mm in diam., tuberculate.

Guyana, Puerto Rico, St. Bartholomew, Aruba, Bonaire and Curaçao.

In open vegetations on diabase and limestone.

ARUBA: Companashi (Arnoldo 58, fl. & fr. Dec.); without loc. (Koolwijk s.n., sub Suringar s.n., fl. & fr. Jan. [L]).

BONAIRE: near Jatoe Bacoe (Stoffers 629, fl. Nov.); Soebi Blancae (Arnoldo 379, fl. & fr. Jan.); garden in Rincón (Boldingh 7158, fr. Feb.).

CURAÇAO: Seroe Christoffel, near Savonet (Stoffers 1286, fl. & fr. Nov.); hills of Knip Plantation (Stoffers 1108, fl. Nov.); between Wacao and Playa Grandi (Britton & Shafer 3046, fr. March); hofje of Knip (Boldingh 5489, fl. & fr. Nov.); hofje of Barber (Boldingh 5224, fl. & fr. Nov.); top of Hieronymus Berg (Boldingh 5319A, fl. Oct.); road near Anthony Berg (Boldingh 5164, fl. & fr. Nov.); Savonet Plantation (Suringar s.n., fr. Jan. [L]); near Plantersrust (Suringar s.n., fl. & fr. Jan. [L]); Bonam (Arnoldo 72, fl. & fr. Feb.); Ronde Klip (Stoffers 1262, fl. & fr. Nov.); without loc. (Boldingh 4800, fr.).

#### **Cleome viscosa L.**

LINNAEUS, Spec. Plant. 672. 1753; GRISEBACH, Fl. Br. W. Ind. Isl. 16. 1859 ['1864']; DUSS, Fl. phan. Ant. franç. 12. 1897; GOODING *et al.*, Fl. Barbados 169. 1965; ADAMS, Flowering plants of Jamaica 303. 1972; FOURNET, Fl. Guadeloupe & Martinique 532. 1978; — *Polanisia viscosa* (L.) DeCANDOLLE, Prodr. 1: 242. 1824; BOLDINGH, Fl. D.W. Ind. Isl. 1: 73. 1909; Fl. Ned. W. Ind. Eil. 196. 1913; FAWCETT & RENDLE, Fl. Jamaica 3(1): 228, fig. 94. 1914; URBAN, Symb. Ant. 8: 228. 1920; LEON & ALAIN, Fl. Cuba 2: 206. 1951; ARNOLDO, Zakflora 105, fig. 129. 1954; Zakflora 106, fig. 129. 1964; — *Cleome icosaandra* LINNAEUS, Spec. Plant. 672. 1753; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 332. 1924; QUESTEL, Fl. Isl. St. Bartholomew 110. 1941.

Erect, viscid-glandular annual herb, up to 70 cm high. Leaves digitately 3—5-foliolate; petiole of the lower leaves up to 8 cm long, the upper leaves subsessile or short-petiolate; leaflets obovate, oblanceolate or elliptic, obtuse or acute at the apex, often inequilateral at the base, 1—6 × 0.5—2.5 cm. Flowers solitary in the axils of the upper leaves; pedicels up to 2.5 cm long. Sepals narrowly oblong or lanceolate, deciduous, 5—7 mm long. Petals yellow, obovate, 12 mm long. Stamens 12—20; filaments about 9 mm long. Capsule cylindric, narrowed at the apex, opening by 2 valves, striate, viscid-glandular, up to 10 cm long and

3 mm in diam., provided with a 5 mm long persistent style. Seeds roundish, flattened, transversely ridged, nearly 2 mm in diam.

A native of the Old World tropics; introduced into America.

Weed, also along roadsides.

Vernacular name: wild massamby (Windward Group).

CURAÇAO: Klein Santa Marta (Arnoldo 1864, fl. & fr. Jan.; Stoffers 98, fl. & fr. Sept.); Pareira (Stoffers 446, fl. & fr. Oct.); Schottegat (Burgers 114, fl. & fr. Jan.).

SABA: lower part of the Bottom Mountain (Boldingh 1393, fl. & fr. July).

ST. EUSTATIUS: northern slope of The Quill (Stoffers 3995, fl. & fr. July); Oranjestad (Stoffers 3885, fl. & fr. July; Boldingh 535, fl. & fr. May); without loc. (v. Groll-Meyer 32, fl. & fr.).

ST. MARTIN: Simson Bay (Stoffers 1276, fl. & fr. Sept.); from Philipsburg to Belvedere (Boldingh 2558, st. Aug.); from Philipsburg to Guana Bay (Boldingh 2401, fl. & fr. Aug.); Experimental garden, Cul de Sac (Stoffers 2353, fl. & fr. March); Philipsburg (Stoffers 2298, fl. & fr. March); near Cole Bay Hill (Suringar s.n., fl. & fr. May [L]).

#### Cleome gynandra L.

LINNAEUS, Spec. Plant. 671. 1753; BRITTON & MILLSPAUGH, Bahama Fl. 149. 1920; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 331. 1924; QUESTEL, Fl. Isl. St. Bartholomew 110. 1941; ADAMS, Flowering plants of Jamaica 304. 1972; — *Gynandropsis gynandra* (L.) BRIQUET, Ann. Cons. Jard. Bot. Genève 17: 382. 1914; URBAN, Symb. Ant. 8: 238. 1920; WILLIAMS, Fl. Trinidad & Tobago 1: 30. 1929; LEON & ALAIN, Fl. Cuba 2: 202, fig. 85. 1951; ARNOLDO, Zakflora 105. 1954; Zakflora 105. 1964; GOODING *et al.*, Fl. Barbados 170. 1965; FOURNET, Fl. Guadeloupe & Martinique 533, fig. 258. 1978; — *Cleome pentaphylla* LINNAEUS, Spec. Plant. ed. 2. 938. 1763; GRISEBACH, Fl. Br. W. Ind. Isl. 15. 1859 ['1864']; DUSS, Fl. phan. Ant. franç. 11. 1897; — *Gynandropsis pentaphylla* (L.) DeCANDOLLE, Prodr. 1: 238. 1824; URBAN, Symb. Ant. 4: 252. 1905; BOLDINGH, Fl. D.W. Ind. Isl. 1: 73. 1909; JOHNSTON, Proc. Bost. Soc. Nat. Hist. 34(7): 213. 1909; Fl. Ned. W. Ind. Eil. 196. 1913; Fl. D.W. Ind. Isl. 2: 31. 1914; FAWCETT & RENDLE, Fl. Jamaica 3(1): 229, fig. 95. 1914.

Erect, glandular-pubescent herb, up to 1 m high. Leaves digitately 3—5-foliolate; petiole up to 7.5 cm long; leaflets obovate or elliptic, entire or minutely denticulate, acuminate, acute or obtuse at the apex, cuneate at the base, 2—7 × 1—2 cm. Racemes up to 30 cm long. Bracts 3-foliolate. Pedicels about 1.5 cm long, slightly lengthening in fruit, glandular pubescent. Sepals lanceolate, about 5 mm long. Petals 1.5—2 cm long, white or pink, obovate, with a long claw. Androphore up to 2 cm long. Stamens 6; filaments filiform, 2.5 cm long. Ovary on a 1 cm long gynophore; stigma nearly sessile. Capsule blackish-brown, rugose-muriculate, 1.5—2 mm in diam.

A native of tropical Africa and Asia; introduced into tropical America.

Roadside weed.

Vernacular names: yerba di caya (Leeward Group).  
massamby (Windward Group).

ARUBA: Playa (Arnoldo 206, fl. & fr. Dec.).

BONAIRE: near saltpans in southern Bonaire (Boldingh 7505, fl. & fr. Feb.).

CURAÇAO: Siberië (Went 1352, fl. & fr. Jan.; Boldingh 4959, fl. & fr. Nov.); Savonet (Stoffers 1230, fl. & fr. Feb.; Suringar s.n., fl. & fr. Jan. [L]); Brievenget (Suringar s.n., fl. & fr. Feb. [L]).

SABA: The Bottom (Boldingh 1841, fl. & fr. July; Arnoldo 916, fl. & fr. Aug.; 729, fl. & fr. Aug.; Suringar s.n., fl. & fr. Ap. [L]).

ST. EUSTATIUS: Oranjestad (Boldingh 933, fl. June; 547, st. June); Cultuurvlakte (Suringar s.n., st. Ap. [L]); without loc. (Suringar s.n., fl. & fr. May [L]; v. Groll-Meyer 33, fl.).

ST. MARTIN: Philipsburg (Stoffers 2323, fl. & fr. March); Prince Quarter (Suringar s.n., fl. & fr. May [L]); Cole Bay Hill (Suringar s.n., fl. & fr. [L]).