

SAPOTACEAE

by

A. L. STOFFERS

(Instituut voor Systematische Plantkunde, Utrecht)

Trees or shrubs, with or without milky sap. Leaves alternate or rarely opposite, simple, entire or rarely dentate, coriaceous. Stipules caducous or wanting. Inflorescence consisting usually of axillary clusters or flowers solitary. Flowers hermaphrodite, actinomorphic, bracteolate. Sepals 4—12, biseriate or spirally arranged, imbricate, free or more or less connate at the base. Corolla with a minute or well-developed tube; lobes usually as many as the sepals, with or without dorsal or lateral lobes or appendages, usually imbricate. Stamens epipetalous, typically in 2 or 3 whorls, but usually only the inner whorl fertile; filaments free; anthers 2-celled, with longitudinal dehiscence. Staminodes present or wanting, variously shaped. Disk often present. Ovary superior, 4—5 (or 1—14)-locular; style 1, often lobed at the apex. Ovules solitary in each loculus on an axile or almost basal or apical placenta, anatropous, with inferior micropyle. Fruit woody and indehiscent or a berry. Seeds various. Endosperm present or wanting.

About 800 species in 40(—125) genera in the tropics and partly also in the subtropics.

Key to the genera:

1. Sepals in 2 distinct series, those of the outer series rusty-pubescent, of the inner series light green *Manilkara*
Sepals imbricate or spiral, not in 2 distinct series, excepted sometimes in *Pouteria* decussate (2 + 2) 2
2. Staminodes wanting *Chrysophyllum*
Staminodes present 3
3. Corolla with lateral appendages 4
Corolla without lateral appendages 5

4. Leaves oblanceolate to broadly obovate or suborbicular, 1—3.5 cm long; plant often armed with spines *Bumelia*
Leaves narrowly elliptic to elliptic-lanceolate or elliptic-oblanceolate, 5—12 cm long; plant without spines *Dipholis*
5. Inflorescence of many-flowered, axillary clusters; sepals about 2 mm long; leaves commonly 9—15 × 3.5—6 cm *Mastichodendron*
Inflorescence of few-flowered, axillary clusters (or flowers sometimes solitary); sepals 6—7 mm long; leaves commonly 8—30(—40) × 2.5—15 cm *Pouteria*

Bumelia Swartz, Prodr. 49. 1788

Shrubs or trees, with or without milky sap; branches often spiny. Leaves alternate, rarely opposite or fasciculate, pinninerved, deciduous or persistent, usually coriaceous. Inflorescence consisting of many-flowered clusters from the leaf-axils or from leaf-scars of the previous year; pedicels rather short. Bracts scarious. Flowers small. Sepals 5 or 4—6, free. Corolla with a short tube; lobes 5, each with a pair of lateral appendages. Stamens 5, epipetalous and equalling the corolla-lobes in length. Staminodes 5, alternating with the stamens, petaloid, entire to erose or laciniate. Ovary 5-locular, hirsute or rarely glabrous, gradually or abruptly contracted at the apex; style filiform; stigma small. Ovules anatropous, basilaterally attached. Fruit a berry, oblong-ellipsoid or subglobose, often tipped by the persistent style, usually 1-seeded. Seed with crustaceous, smooth shining, brownish testa. Endosperm wanting. Embryo large with thick and fleshy cotyledons.

About 25 species in continental America from Central United States to northern Argentina; West Indies.

Bumelia obovata (Lam.) DC.

DECADOLLE, Prodr. 8: 191. 1844; BOLDINGH, Fl. D.W. Ind. Isl. 1: 153. 1909; URBAN, Symb. Ant. 4: 482. 1910; BOLDINGH, Fl. Ned. W. Ind. Eil. 316. 1913; Fl. D.W. Ind. Isl. 2: 84. 1914; URBAN, Symb. Ant. 8: 528. 1921; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 6: 71. 1925; QUESTEL, Fl. Isl. St. Bartholomew 165. 1941; ARNOLDO, Zakflora 22, fig. 2. 1954; Zakflora 192, fig. 2. 1964; FOURNET, Fl. Guadeloupe & Martinique 1447, fig. 686. 1978; — *Sideroxylon obovatum* LAMARCK, Tabl. Encycl. 2: 42. 1793; — *Bumelia cuneata* SWARTZ, Fl. Ind. Occ. 1: 496. 1797; GRISEBACH, Fl. Br. W. Ind. Isl. 401. 1861 ['1864']; DUSS, Fl. phan. Ant. franç. 613. 1897; JOHNSTON, Proc. Bost. Soc. Nat. Hist. 34(7): 246. 1909.

Tree, up to 8 m tall, or shrubs with dense foliage; branches with or without spines or stemspines; young twigs sericeous-strigose with rufous hairs, generally soon glabrate. Leaves petiolate; blades oblanceolate to broadly obovate or suborbicular, rounded, obtuse or emarginate and sometimes obscurely wavy at the apex, cuneate or obtuse at the base, 1—3.5 × 0.5—3 cm, coriaceous, venation delicate, surface having a peculiar texture largely due to the fine

slightly raised irregularly reticulate striations trending parallel to the primary lateral veins, lower surface rufous-strigose when young, sooner or later subglabrate; petioles 2—5 mm long. Inflorescence consisting of few-flowered fascicles or flowers solitary; pedicels very short or up to 1 cm long, rufous-strigose to glabrous. Sepals unequal, ovate to broadly oblong or suborbicular, 1—2 × 0.8—1.8 mm. Corolla white, 2.5—4 mm long; tube 0.6—1.2 mm long; lobes ovate to broadly ovate, 1.5—2 × 1—1.5 mm, lateral appendages small, more or less triangular. Stamens 5; filaments partly united with the corolla, the free part stout, cylindrical; anthers slightly sagittate at the base, versatile, 0.8—1.2 mm long. Staminodes 2 mm long. Ovary hairy or subglabrous, gradually tapering into the style; the latter stout, 2—4.5 mm long, stigmatic at the apex. Fruit subglobose or rarely ellipsoid-cylindric, 5—12 mm long, black. Seed small, erect.

West Indies; rare in northern Venezuela.

var. obovata

Pedicels 2—10 mm long, sparsely hairy or glabrous, sepals and ovary sparsely hairy; style often over 3 mm long.

Distribution as the species.

Common tree, especially in the limestone area.

Vernacular names: placa chiquitu, palu di lechi, palu di pluta, rambeshi (Leeward Group).

ARUBA: calcareous rocks near Fontein (Arnoldo 215, fl. Dec.); Rooi Prins (Stoffers 2155, fl. Feb.); calcareous soil near San Nicolas (Boldingh 6494, fl. Jan.); sandy seashore near Manchebo (Boldingh 6289, st. Dec.); Hadikurari (Stoffers 1771, fl. Jan.); Pova Beach (Stoffers 1409, st. Jan.).

BONAIRE: Seroe Largoe (Arnoldo 530, fl. & fr. July); Karpata (Arnoldo 10, fl. Nov.; Stoffers 1967, fl. & fr. Dec.); calcareous plateau Montagne (Boldingh 7422, fl. Feb.; 7425, fl. Feb.); calcareous hills near Rooi Samboe (Boldingh 7431, fl. Feb.; 7432, fl. Feb.); Montagne (Stoffers 875, fl. Dec.; 872, fl. & fr. Dec.); near Lac (Stoffers 931, st. Dec.); calcareous hills and seashore near Lima Plantation (Boldingh 7235, fl. Feb. [L, U]); west of Lac near Lima Plantation (Stoffers 477, st. Nov.).

CURAÇAO: hills near Shalome (Boldingh 5419, fl. Nov.); Knip hills (Arnoldo 1074, fl. June); Groot Santa Marta (Stoffers 120, fl. Sept.); Seroe Christoffel, 150 m (Arnoldo 1825, fl. Jan.; Boldingh 5017, fl. Nov.; de Wilde 106A, fl. Feb. [L]; Suringar s.n., fr. Jan. [L]); calcareous hills near Hato (Boldingh 5132, fr. Nov.; 5312, fl. Nov.; 5310, st. Nov.); rocky soil at Hato (Britton & Shafer 3109, fl. March); calcareous hills to the north of the road from Westpunt to Savonet (Boldingh 4951, st. Nov.); Ronde Klip (Boldingh 5455, fl. Nov.; 5453, fl. Nov.); hills near Malpais (Boldingh 4854, st. Oct.); near Beekenburg (Suringar s.n., fl. & fr. [L]); Fuik (Suringar s.n., fl. Feb. [L]); Spaanse Water (Fijnje sub Suringar s.n., fl. & fr. Jan. [L]); Hato (Suringar s.n., fl. & fr. Jan. [L]).

SABA: between The Bottom and Mary's Point, 100—200 m (Boldingh 1535, st. July [L, U]).

ST. EUSTATIUS: from Little Mountains to Venus Bay (Boldingh 985, st. July [L, U]); without loc. (v. Groll-Meyer 338, fl.).

ST. MARTIN: seashore at Simson Bay (Boldingh 3035, st. Aug.); Lowlands, near Mullet Pond (Boldingh 2765, fl. Aug.); hills along the northern side of Cul de Sac, 70—100 m (Stoffers 2606, st. March); Cole Bay Hill (Suringar s.n., fl. May [L]).

Dipholis DeCandolle, Prodr. 8: 188. 1844

Evergreen, unarmed trees or shrubs. Leaves alternate. Stipules wanting. Inflorescence consisting of axillary or lateral clusters. Sepals usually 5 (or 4—9). Corolla 5(—6)-lobed and each lobe provided with a pair of lateral lobes or appendages near its base. Stamens born on the corolla-tube opposite the lobes; filaments filiform, exerted; anthers extrorse. Staminodes present and alternating with the stamens, petaloid, more or less erose, fimbriate or lacinate. Ovary 5-locular, glabrous or rarely shortly appressed-hairy; style slender; stigma small. Ovules solitary in each locule, basilateral attached, ascending. Fruit an ovoid, subglobose or oblong berry, generally tapering abruptly to the short persistent style. Seed 1, with the scar nearly basal, rarely evidently basilateral; testa coriaceous. Endosperm fleshy.

About 75 species in tropical and subtropical Central and North America, especially in the West Indian region.

Dipholis salicifolia (L.) DC.

DECADOLLE, Prodr. 8: 188. 1844; GRISEBACH, Fl. Br. W. Ind. Isl. 401. 1861 [1864]; DUSS, Fl. phan. Ant. franç. 388. 1897; BOLDINGH, Fl. D.W. Ind. Isl. 1: 153. 1909; URBAN, Symb. Ant. 4: 481. 1910; BOLDINGH, Fl. Ned. W. Ind. Eil. 316. 1913; BRITTON & MILLSPAUGH, Bahama Fl. 322. 1920; URBAN, Symb. Ant. 8: 527. 1921; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 6: 70. 1925; LEON & ALAIN, Fl. Cuba 4: 126, fig. 51. 1957; GOODING *et al.*, Fl. Barbados 323. 1965; FOURNET, Fl. Guadeloupe & Martinique 1447, fig. 687. 1978; — *Achras salicifolia* LINNAEUS, Spec. Plant. ed. 2. 470. 1762; — *Bumelia salicifolia* SWARTZ, Nov. Gen. & Spec. 50: 1788; Adams, Flowering plants of Jamaica 573. 1972.

Slender tree, up to 15 m tall, or a large shrub; bark scaly; young twigs slender, appressed-pubescent. Leaves petiolate; petioles slender, up to 1.5 cm long; blade narrowly elliptic to elliptic-lanceolate or elliptic-oblanceolate, acute or acuminate at the apex, cuneate at the base, 5—12 × 1.5—4 cm, dark-green above, somewhat silky-pubescent when young but soon glabrate and dull-green beneath; mid-vein prominent beneath; margin thickened and more or less wavy when dry. Inflorescence consisting of many-flowered clusters at defoliated nodes and sometimes in the leaf-axils; pedicels 1—4 mm long, finely sericeous. Sepals

5, ovate or oblong, 1.5—2.5 × 2 mm, imbricate, silky-pubescent. Corolla-tube 2 mm long; its lobes about as long as the tube, elliptic, rounded at the apex, narrowed at the base above the lateral lobes or appendages, greenish; the lateral appendages lanceolate or ovate, acute, or acuminate, more or less erose-laciniate. Stamens 5; filaments firm and stout except for the short apical part, 1.5—2.5 mm long; anthers linear, 1—1.5 mm long, versatile. Staminodes ovate to broadly elliptic, petaloid, 1.5—2 mm long, more or less erose-laciniate. Ovary 5-locular, glabrous or rarely slightly hairy; style 1.5—2.5 mm long; stigma terminal, small. Berry subglobose or ellipsoid, 6—10 mm long, black. Seeds 1 or sometimes 2—3, with basal scar; testa light to dark brown.

Mexico, Guatemala, Honduras, Florida, and West Indies south to Barbados.

In moist and dry districts at lower altitudes.

ST. EUSTATIUS: slope of The Quill on the side of White Wall, 200 m (Boldingh 1168, fl. June [L, U]).

Chrysophyllum Linnaeus, Spec. Plant. 192. 1753

Unarmed, evergreen trees or shrubs containing a milky juice. Leaves alternate, simple, coriaceous. Stipules wanting. Inflorescence consisting of axillary clusters or clusters above the leaf-scars. Flowers hermaphrodite or rarely polygamous. Sepals 5, nearly equal. Corolla-tube short or long, its 5 lobes unappendaged, imbricate. Stamens as many as the corolla-lobes, with various insertion, epipetalous. Staminodes wanting. Ovary pubescent, 5—11-locular; style short; stigma capitate. Ovules solitary in each locule, laterally attached to the axile placenta. Fruit variable. Seeds compressed; testa smooth with a long, linear scar. Embryo flat. Endosperm fleshy.

Chrysophyllum argenteum Jacq.

JACQUIN, Enum. Syst. Plant. Carib. 15. 1760; DUSS, Fl. phan. Ant. franç. 385. 1897; BOLDINGH, Fl. D.W. Ind. Isl. 1: 153. 1909; URBAN, Symb. Ant. 4: 483. 1910; BOLDINGH, Fl. Ned. W. Ind. Eil. 316. 1913; URBAN, Symb. Ant. 8: 529. 1921; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 6: 69. 1925; HILL & SANDWICH, in Fl. Trinidad & Tobago 2: 130. 1947; LEON & ALAIN, Fl. Cuba 4: 135. 1957; GOODING *et al.*, Fl. Barbados 324. 1965; ADAMS, Flowering plants of Jamaica 572. 1972; FOURNET, Fl. Guadeloupe & Martinique 1445, fig. 685. 1978; — *Chrysophyllum glabrum* JACQUIN, Enum. Syst. Plant. Carib. 15. 1760; GRISEBACH, Fl. Br. W. Ind. Isl. 398. 1861 [1864]; DUSS, Fl. phan. Ant. franç. 385. 1897.

Tree or shrub, up to 20 m tall; twigs sericeous with white hairs, becoming glabrate. Leaves elliptic to oblong-elliptic or occasionally ovate, rounded to acute or abruptly acuminate at the apex, obtuse, rounded or cuneate at the base, 5—14 × 2—5 cm, glabrous above, thinly sericeous with white hairs beneath, becoming glabrate; midvein prominent beneath, primary lateral veins usually

arcuate towards the margin, secondary veins about parallel to the primary ones; petioles slender, 8—12 mm long. Clusters few- to several-flowered in the leaf axils or on recently defoliated nodes; pedicels 4—12 mm long. Sepals roundish, 1.5—2.5 × 1.5—2.5 mm, sericeous with pale or somewhat reddish hairs. Corolla white to greenish or yellow, 4—6 mm long, sericeous to near the base with fine white or somewhat yellowish hairs; lobes broadly ovate, with smooth tip and margins. Stamens 5; filaments inserted at the level of the sinuses, 1 mm long; anthers oblong, 0.4—0.8 mm long, cordate at the base. Ovary globose to ellipsoid; style stout, 1—1.5 mm long; stigma obscurely 5—9-lobed. Berry ellipsoid or subglobose, dark red, purple to blue or nearly black, 1.5—2 cm long. Seed one, scar basilateral, commonly extending to the middle.

West Indies from Cuba to Trinidad.

In evergreen seasonal forest and dry evergreen forest.

Vernacular name: basterd red wood (Windward Group).

SABA: gut near Devilshand (Boldingh 2115, fl.).

ST. EUSTATIUS: Bottom of The Quill (Stoffers 3653, st. July; 3657, st. July).

ST. MARTIN: road to Marigot (Arnoldo 853, flb. Aug.).

Mastichodendron Cronquist, *Lloydia* 9: 245. 1946

Trees. Leaves alternate or subopposite; midvein more or less canaliculate, the channel often terminating in a pouch at the base of the blade, the primary lateral veins curved, not numerous, the secondary forming an evident fairly open reticulum, the surface not closely areolate. Stipules wanting. Inflorescence consisting of axillary clusters. Sepals 5. Corolla subtrotate; tube short; lobes 5. Stamens 5; filaments attached at or a little above the level of the sinuses. Staminodes 5, not petaloid. Ovary glabrous, usually 5-locular. Ovules attached basilaterally. Fruit more or less fleshy, usually 1-seeded. Seed with basilateral, lanceolate to circular scar and not extending to the middle of the seed. Endosperm present. Embryo erect.

Five species in Central America and the West Indies.

Mastichodendron foetidissimum (Jacq.) Cronq.

CRONQUIST, *Lloydia* 9: 246. 1946; LEON & ALAIN, *Fl. Cuba* 4: 125, fig. 50. 1957; ADAMS, *Flowering plants of Jamaica* 575. 1972; FOURNET, *Fl. Guadeloupe & Martinique* 1450, fig. 688. 1978; — *Sideroxylon foetidissimum* JACQUIN, *Enum. Syst. Plant. Carib.* 15. 1760; BOLDINGH, *Fl. D.W. Ind. Isl.* 1: 152. 1909; URBAN, *Symb. Ant.* 4: 481. 1910; BOLDINGH, *Fl. Ned. W. Ind. Eil.* 315. 1913; BRITTON & MILLSAUGH, *Bahama Fl.* 321. 1920; URBAN, *Symb. Ant.* 8: 526. 1921; BRITTON & WILSON, *Sci. Surv. Porto Rico &*

Virgin Isl. 6: 66. 1925; — *Sideroxylon mastichodendron* JACQUIN, Coll. Bot. 2: 253, t. 17, fig. 95. 1788; GRISEBACH, Fl. Br. W. Ind. Isl. 399. 1861 ['1864']; Duss, Fl. phan. Ant. franç. 386. 1897.

Tree, up to about 15 m tall; bark usually splitting into scale-like plates; twigs slender, glabrous. Leaves variable, petiolate; petioles 1—7 cm long; blades usually broadly elliptic or oblong-ovate to elliptic-lanceolate, rounded, acute or acuminate at the apex, rounded or cuneate at the base, commonly 9—15 cm long and 3.5—6 cm wide; marginal veins becoming more or less raised and wing-edged at the base of the blade and sometimes jointed to form a small pocket or pouch. Inflorescence consisting of many-flowered clusters in the axils of the leaves or the leaf-scars; pedicels 4—10 mm long. Sepals nearly orbicular, glabrous or nearly so, occasionally finely ciliolate, 2 mm long. Corolla nearly rotate, 3.5—5.0 mm long, yellow or yellowish-green; lobes oblong to elliptic-ovate with thin and scarious margins, often slightly auriculate and obtuse at the base. Stamens 5; filaments cylindric, 2—3 mm long; anthers versatile, sagittate at the base, 1.3—2.0 mm long, included or the tips a little exerted. Staminodes lanceolate or ovate to deltoid, usually acuminate, 1 mm long. Ovary ovoid, tapering into the 1—1.5 mm long, thick style. Berry drupe-like, yellow, 1.5—3 cm long, ovoid and commonly somewhat compressed. Seed broadly elliptic-oblong to ovate or obovate, 12—20 × 9—15 mm; scar variable.

Honduras, Yucatan, Florida, and West Indies.

ssp. foetidissimum

Fruit 1.5—2.5 cm long. Seed commonly with a thickened, longitudinal bipartite plate on the vertical side near the scar. Seedscar mostly less than 4 mm long, commonly broadly elliptic to suborbicular.

Florida and West Indies.

In secondary rainforest.

Vernacular names: mastic tree (Windward Group).

SABA: Hellsgate (Boldingh 2049, fl. July); Jenkins Gut (Suringar s.n., st. Ap. [L]); Mastic Gut (Suringar s.n., st. Ap. [L]).

Pouteria Aublet, Hist. Plant. Guiane 86, pl. 33. 1775

Trees. Leaves alternate or rarely opposite; primarily lateral veins strongly curved, at least near the margin, and scarcely crowded. Stipules wanting. Inflorescence consisting of axillary fascicles or the fascicles above the leaf-scars. Flowers hermaphrodite, rarely polygamous, white to yellow or green. Sepals

free, 4—12, paired when 4 and then the inner thinner and paler and included in the bud. Corolla subtrotate to cylindrical; lobes 4—6, entire, imbricate or rarely valvate. Stamens as many as corolla-lobes with insertion varying from near the base to near the level of the sinuses, rarely abortive. Staminodes as many as and alternating with the corolla-lobes or sometimes partly or completely lacking, subulate, ovate, triangular or scale-like. Ovary 1—10-locular, more or less hairy; style short or elongate. Ovules laterally attached. Fruit variable as regards shape, consistency, and number of seeds. Seeds usually not much compressed, with long or often broad lateral scar or sometimes nearly the whole surface more or less grown to the pericarp. Endosperm wanting.

Over 40 species, mostly in tropical America.

Pouteria multiflora (DC.) Eyma

EYMA, Rec. Trav. Bot. Néerl. 33: 164. 1936; HILL & SANDWICH, in Fl. Trinidad & Tobago 2: 126. 1947; LEON & ALAIN, Fl. Cuba 4: 132. 1957; ADAMS, Flowering plants of Jamaica 575. 1972; FOURNET, Fl. Guadeloupe & Martinique 1455. 1978; — *Lucuma multiflora* DECANOLLE, Prodr. 8: 168. 1844; GRISEBACH, Fl. Br. W. Ind. Isl. 402. 1861 ['1864']; BOLDINGH, Fl. D.W. Ind. Isl. 1: 152. 1909; URBAN, Symb. Ant. 4: 479. 1910; BOLDINGH, Fl. Ned. W. Ind. Eil. 315. 1913; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 6: 67. 1925.

Tree, often becoming up to 30 m tall; young twigs pubescent. Leaves alternate to subopposite; petioles 1—4 cm long; blades lanceolate, oblong, elliptic-obovate or obovate, obtuse, acute or acuminate at the apex, narrowed or cuneate at the base, 8—30(—45) × 2.5—15 cm, chartaceous or subcoreaceous, glabrous when mature; primary lateral veins 9—16 pairs, conspicuous; secondary veins less prominent, often more or less perpendicular to the primary veins. Inflorescence consisting of few-flowered axillary clusters; pedicels 1—2 cm long. Sepals 4—5, unequal; the inner ones orbicular to reniform-orbicular, slightly auriculate, 6—7 mm long, glabrous or nearly so; the outer ovate, more or less acutish, not auriculate, somewhat shorter than the inner, finely appressed pubescent to puberulent. Corolla 6—10 mm long, white, usually 6-lobed; tube equalling or slightly shorter than the lobes; lobes obovate to spatulate, rounded at the apex, papillose. Stamens with filaments 1—2.5 mm long, attached at or a little below the level of the sinuses; anthers 2—2.5 mm long, apiculate. Staminodes lanceolate-subulate, 2.5—3 mm long. Ovary 4- or 3—6-locular; style 4 mm long or more, glabrous, persistent on the fruit. Fruit globose, ovoid or obovoid, 2—6 cm long, yellow. Seeds 1—3, subglobose when solitary, otherwise with 1 or 2 flattened sides, 1—4 cm long; scar generally elliptic, often somewhat irregular; testa smooth and shining, brown.

Bermuda and West Indies.

Woodlands.

SABA: Windwardside (Boldingh 2313, st. July).

Manilkara Adanson, *Fam. Plant.* 2: 166. 1763

Laticiferous trees. Leaves alternate, coriaceous; midrib impressed or crested above, prominent below, secondary and tertiary nerves parallel, the tertiary slender, descending from the margin, often stretchedly and minutely reticulate. Stipules caducous. Inflorescence consisting of axillary, many-flowered clusters. Flowers hermaphrodite, pedicellate; pedicel often incrassate when fruiting. Calyx with 2 whorls of 3 lobes each. Corolla with 6 lobes, each of them with 2 dorsal or lateral segments which are sometimes reduced or wanting. Stamens 6, epipetalous, inserted in the row of the staminodes; anthers dehiscent extrorsely. Staminodes 6, petaloid, alternating with the petals, ovate, acuminate, usually dentate or lobed. Ovary 6—14-locular. Ovules one in each locule with axile placentation, anatropous to camyotropous. Fruit a dryish, 1—6-seeded berry. Seeds compressed to terete, pear-shaped to oblong-ellipsoid, scar basiventral or almost basal, large to small, wide to narrow, oblong to linear, with the hilum at the apical and the micropyle at the basal end. Endosperm copious. Cotyledons foliaceous, thin, ovate.

About 85 species in the tropics.

Manilkara zapota (L.) P. van Royen

P. VAN ROYEN, *Blumea* 7: 410. 1953; GOODING *et al.*, *Fl. Barbados* 324. 1965; ADAMS, *Flowering plants of Jamaica* 572. 1972; — *Achras zapota* LINNAEUS, *Spec. Plant.* 1190. 1753 p.p.; BOLDINGH, *Fl. D.W. Ind. Isl.* 1: 152. 1909; URBAN, *Symb. Ant.* 4: 479. 1910; JOHNSTON, *Proc. Bost. Soc. Nat. Hist.* 34(7): 245. 1909; BOLDINGH, *Fl. Ned. W. Ind. Eil.* 315. 1909; *Fl. D.W. Ind. Isl.* 2: 84. 1914; URBAN, *Symb. Ant.* 8: 524. 1921; BRITTON & WILSON, *Sci. Surv. Porto Rico & Virgin Isl.* 6: 67. 1925; QUESTEL, *Fl. Isl. St. Bartholomew* 165. 1941; HILL & SANDWICH, *Fl. Trinidad & Tobago* 2: 132. 1947; ARNOLDO, *Gekw. en nutt. pl. Ned. Ant.* 11, fig. 27. 1954; *Gekw. en nutt. pl. Ned. Ant.* 233, fig. 27. 1971; FOURNET, *Fl. Guadeloupe & Martinique* 1444. 1978; — *Sapota achras* MILLER, *Gard. Dict.* ed. 8. 1768; GRISEBACH, *Fl. Br. W. Ind. Isl.* 399. 1861 [1864]; Duss, *Fl. phan. Ant. franç.* 385. 1897; BRITTON & MILLSAUGH, *Bahama Fl.* 324. 1920.

Evergreen tree of variable size; branchlets and petiole often brownish-tomentose. Leaves alternate, often crowded at the top of the branchlets; petioles 1.5—2.5 cm long; blades lanceolate-oblong to oblong-elliptic, acute, obtuse, emarginate or slightly acuminate at the apex, acute at the base, 5—15 × 2.5—5 cm, usually three times as long as wide, leathery, glabrous, but sometimes a brownish puberulous-tomentose line along the midrib at the lower surface; midrib immersed above, lateral veins inconspicuous. Flowers usually solitary in the leaf-axils; pedicels up to 4 cm long, thickened upward. Sepals 6, in 2 rows, ovate, acute at the apex, up to 10 mm long, the exterior puberulous-tomentose and ferruginous, the inner ones narrower, greenish but greyish when dry. Corolla white to ivory-coloured, cylindric, up to 10 mm long, with 6 erect, oblong lobes almost as long as the tube, entire, slightly lobed or emarginate. Stamens as many as the corolla-lobes; filaments short, curved. Staminodes

oblong, often bi-fid. Ovary 10—12-locular; style exserted; stigma small. Fruit globose to ellipsoidal, 5—8 cm in diam., sandy-coloured to pale brown, mottled or spotted, crowned by the reflexed sepals and the persistent style; mesocarp fleshy; exocarp thin, leathery. Seeds 1—5 (very variable in number), black, flattened, shiny.

Tropical continental America and West Indies; often cultivated in the tropics of both worlds; fruit edible.

Cultivated in all islands of our region.

Vernacular names: mispel, mispoe (Leeward Group).

misle, sapodille (Windward Group).

ARUBA: Rancho (Arnoldo 208, fl. Dec.).

BONAIRE: Put Bronswinkel (Stoffers 818, fl. Nov.).

CURAÇAO. Groot Piscadera (Burgers 535, st. Ap.; 536, st. Ap.); Caracas Baai (Burgers 540, fl. May).

SABA: The Bottom (Boldingh 2267, st. July).

ST. EUSTATIUS: garden in Oranjestad (Boldingh 1127, fl. June); slope of lower part of Signal Hill (Boldingh 115, st. May); without loc. (v. Groll-Meyer s.n., fl.).