BOMBACACEAE

by

A. L. STOFFERS

(Instituut voor Systematische Plantkunde, Utrecht)

Trees, often with very thick trunks, all parts covered by stellate hairs or squamae. Leaves alternate, simple, or digitately compound. Stipules deciduous. Flowers mostly solitary, often very large. Flowers hermaphrodite, 5-merous. Calyx valvate. Epicalyx present or wanting. Petals contorted. Stamens many, or rarely 5 or 10; filaments often somewhat connate at the base or free; anthers mono-, di- or polythecal, sometimes spirally twisted. Ovary 2—5-locular. Ovules 2—many in each locule. Capsule loculicidal, often woolly on the inner side or the inner layer of the fruitwall becoming pulpy. Seeds with few or without endosperm; sometimes a fleshy aril present. Embryo large; cotyledons folded.

Nearly 30 genera with 150 species in the tropics, mainly in America.

Key to the genera:

Quararibea Aublet, Hist. Plant. Guian. Franç. 691. 1775

Unarmed trees. Leaves simple, petiolate; blade entire, pinnately- or palmately-veined. Inflorescence consisting of axillary, oppositifolious or rarely cauliflorous clusters or flowers solitary. Flowers actinomorphic, hermaphrodite. Bracteoles deciduous or persistent. Calyx tubular or campanulate, irregularly lobed or dentate, coriaceous, lepidote or stellate-pubescent outside. Petals 5, fleshy, adnate to the base of the staminal column. Stamens numerous; filaments united into an elongated column, often 5-dentate or -lobed at the top; anthers sessile near the top of the column or on the lobes; thecae paired or not, free or sometimes more or less confluent at the apex, extrorse, with longitudinal dehiscence. Ovary subinferior, 2—5-locular; style simple; stigma disk-shaped, sulcate or lobulate. Capsule drupaceous, indehiscent; mesocarp coriaceous or fleshypulpy, 1—5-locular. Seeds 1—2 in each locule. Embryo large. Endosperm scanty.

About 75 species in the Neotropics.

Quararibea turbinata (Sw.) Poir.

Poiret, in Lamarck, Encycl. Suppl. 4: 636. 1816; Boldingh, Fl. D.W. Ind. Isl. 1: 131. 1909; Urban, Symb. Ant. 4: 403. 1910; Boldingh, Fl. Ned. W. Ind. Eil. 281. 1913; Urban, Symb. Ant. 8: 428. 1920; Britton & Wilson, Sci. Surv. Porto Rico & Virgin Isl. 5: 569. 1924; Williams, in Fl. Trinidad & Tobago 1: 490. 1947; Fournet, Fl. Guadeloupe & Martinique 1520, fig. 715. 1978; — Myrodia turbinata Swartz, Prodr. 102. 1788.

Evergreen tree, up to 10 m tall; branches spreading horizontally, in whorls of 4—5, the whorls about 50-70 cm apart; bark grey-brown, smoothish and finely warted; twigs brown with faint rings where the leaves are born. Leaves alternate, petiolate; blades elliptic to oblong, acute, acuminate or blunt at the apex, cuneate or sometimes rounded to subcordate at the base, up to 25 × 10 cm, glabrous, dark green and slightly shiny above, dull and yellowish-green below, margin entire, somewhat thickened and often somewhat wavy; petioles 0.5-1.5 cm long, tomentose. Stipules caducous, leaving a ring-scar, narrowly triangular, 4 mm long, greyish tomentose. Flowers usually solitary or in few-flowered short inflorescences; pedicels 4-6 mm long with scattered brown, stellate hairs. Bracteoles triangular, acuminate, 2 mm long and 1 mm wide at the base, covered by stellate hairs. Calyx yellowish or green, its tube narrow, 8-12 mm long, irregularly 2- or 3-lobed. Petals whitish, about twice as long as the calyx, spreading. Staminal column c. 1.3 mm long; thecae crowded at the end of the lobes. Ovary 2-3-locular; style slender; stigma capitate, enlarged. Ovules 2 in each locule. Fruit subglobose, 1-2 cm in diam., striate, unilocular, indehiscent, leathery, the basal part enveloped by the persistent calyx. Seeds 1—2, large.

Hispaniola, Puerto Rico and Lesser Antilles south to Tobago; know from Mexico and Suriname.

In rain- and secondary rainforests.

Vernacular name: miller wood (Windward Group).

St. Eustatius: slope of The Quill, 380 m (Stoffers 3637, st. July); Bottom of The Quill (Boldingh 424, st. June; van Groll 217, st.).

Ceiba P. Miller, Gard. Dict. Abr. ed. 4. 1754

Tall tree (in our region) or shrubs. Leaves alternate, digitately compound, petiolate. Stipules deciduous. Inflorescence consisting of axillary, large flowers or flowers smaller and then fasciculate. Calyx leathery, truncate or irregularly 5-lobed. Petals twice or many times as long as the calyx. Stamens 5; filaments connate at the base; anthers 1—2-celled. Ovary 5-locular but the septa vanishing later. Ovules 2—many in each locule. Fruit a capsule; numerous hairs developed by the inner fruitwall. Seeds many, embedded in wool.

About 20 species in tropical America.

Ceiba pentandra (L.) Gaertn.

GAERTNER, Fruct. & Sem. Pl. 2: 244, t. 133. 1791; BOLDINGH, Fl. D.W. Ind. Isl. 1: 131. 1909; URBAN, Symb. Ant. 4: 403. 1910; BOLDINGH, Fl. Ned. W. Ind. Eil. 280. 1913; Fl. D.W. Ind. Isl. 2: 66. 1914; URBAN, Symb. Ant. 8: 428. 1920; BRITTON & MILLSPAUGH, Bahama Fl. 274. 1920; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 569. 1924; FAWCETT & RENDLE, Fl. Jamaica 5(3): 150. 1926; WILLIAMS, Fl. Trinidad & Tobago 1: 94. 1929; QUESTEL, Fl. Isl. St. Bartholomew 152. 1941; LEON & ALAIN, Fl. Cuba 3: 277. 1953; ARNOLDO, Gekw. en nutt. pl. Ned. Ant. 40, figs 59, 60. 1954; Gekw. en nutt. pl. Ned. Ant. 111, fig. 59. 1971; GOODING et al., Fl. Barbados 288. 1965; ADAMS, Flowering plants of Jamaica 479. 1972; — Bombax pentandrum Linnaeus, Spec. Plant. 511. 1753; — Eriodendron anfractuosum DeCandolle, Prodr. 1: 479. 1824; GRISEBACH, Fl. Br. W. Ind. Isl. 88. 1859 ['1864']; Duss, Fl. phan. Ant. franç. 80. 1897.

Deciduous tree, up to 50 m tall or even more, with stout conical spines on trunk and branches when young, the older parts spineless; trunk up to 3 m in diam. above the very large narrow buttresses; buttresses 15-30 cm thick and up to 3 m high; twigs stout, green at the top, becoming grey; crown very broad and often flat by the horizontal branches. Leaves alternate, digitately compound; leaflets 5—7 (—9) hanging down on short, 3-10 mm long petiolules, lanceolate to oblanceolate, short-acuminate at the apex, cuneate at the base, $8-16 \times 3-4$ cm, membraneous, entire but often finely serrulate near the apex, glabrous, bright green to darkgreen above, dullgreen beneath; petioles slender, up to 15 cm long. Inflorescence consisting of many-flowered, lateral clusters near the ends of the twigs, usually flowering when the tree is leafless. Flowers on 3-6 cm long pedicels. Calyx cup- to bell-shaped, 1—1.5 cm long and wide, the margin irregularly 4-6-lobed or -toothed. Petals white to pink or creamy, 2-4 cm long, densely brownsilky-villous without. Stamens 5; filaments longer than the petals, united into a column near the base; anthers spirally twisted, with longitudinal dehiscence. Ovary 2-5-locular; style somewhat longer than the stamens; stigma thickened. Capsule oblong, woody, 10-30 cm long, splitting open along 5 lines. Seeds many, subglobose, 4-6 mm in diam., embedded in a dense mass of grey-woolly hairs.

From Mexico to Ecuador, Brazil, and Guianas; West Indies; cultivated and probably naturalised in tropical Africa and Asia.

In evergreen and deciduous forest types.

Vernacular names: katoen boom, katunbom (Leeward Group) silkcottontree (Windward Group).

In Aruba, Bonaire and Curação cultivated and planted.

St. Eustatius: top of The Quill, 400 m (Boldingh 224, st. June).

St. Martin: Cul de Sac (Boldingh 2619, st. Sept.).