

OLACACEAE

by

A. L. STOFFERS

(Instituut voor Systematische Plantkunde, Utrecht)

Trees or erect or climbing shrubs, mostly glabrous. Leaves alternate, simple and mostly entire. Stipules wanting. Flowers small, actinomorphic, usually hermaphrodite, arranged in various inflorescences. Calyx minute, rarely obsolete, often accrescent, 4—6, usually 5-lobed, imbricate or open in bud. Petals (4—) 5 (—6), free or united, valvate. Stamens 4—12 in one row and then epipetalous or in 2 or 3 rows; filaments free or rarely connate, often united with the petals, some occasionally without anthers; anthers 2-celled, opening longitudinally or by pore-like slits. Disk present and then often annular or wanting. Ovary superior, sometimes inferior, completely or only at the base 2—5-locular; style 1; stigma simple or 2—5-lobed. Ovules on a central, filiform placenta, solitary in each cell, pendulous, anatropous or atropous, with 2—0 integuments. Fruit a berry or a drupe, 1-seeded. Seeds with copious endosperm and a small embryo.

About 250 species in 26 genera in the tropics.

Key to the species:

1. Stamens free, about twice as many as the petals; petals free, recurving at anthesis, densely hairy within; disk wanting *Ximenia*
Stamens epipetalous, as many as the corolla-lobes, adnate to the base of the campanulate, glabrous corolla-tube; disk present and partly enclosing the fruit *Schoepfia*

Ximenia Linnaeus, Spec. Plant. 1193. 1753

Thorny shrubs or trees. Leaves alternate, entire, coriaceous or membranaceous, glabrous or pubescent. Flowers in simple or compound umbels. Calyx minute, 4-dentate. Petals 4, densely villous within. Stamens 8; filaments filiform; anthers oblong or linear, opening by longitudinal slits. Ovary 4-locular; style filiform; stigma simple. Ovules pendulous, anatropous, with 1 integument. Fruit a 1-seeded drupe.

Ten or more closely allied species in the tropics.

Ximenia americana L.

LINNAEUS, Spec. Plant. 1193. 1753; GRISEBACH, Fl. Br. W. Ind. Isl. 310. 1860 [1864]; DUSS, Fl. phan. Ant. franç. 326. 1897; JOHNSTON, Proc. Bost. Soc. Nat. Hist. 34(7): 204. 1909; FAWCETT & RENDLE, Fl. Jamaica 3(1): 86, fig. 23. 1914; URBAN, Symb. Ant. 8: 182. 1920; BRITTON & MILLSPAUGH, Bahama Fl. 112. 1920; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 254. 1924; WILLIAMS, Fl. Trinidad & Tobago 1: 165. 1930; LEON & ALAIN, Fl. Cuba 2: 72. 1951; ARNOLDO, Zakflora 22. 1954; Gekw. en nutt. planten Ned. Ant. 138. 1954; Zakflora 172. 1964; Gekw. en nutt. planten Ned. Ant. 205. 1971; ADAMS, Flowering plants of Jamaica 239. 1972; FOURNET, Fl. Guadeloupe & Martinique 938, fig. 453. 1978.

A strongly branched shrub or small tree armed with straight sharp spines or stemspines up to 3 cm long; branches spreading; twigs reddish-brown or greyish-white. Leaves petiolate; petiole up to 1.3 cm long; blade oblong or elliptic, obtuse, rounded or emarginate and often mucronate at the apex, acute, cuneate or obtuse at the base, subcoriaceous to fleshy, glabrous, 2—6 × 2—4 cm. Inflorescence consisting of axillary short racemose cymes, up to 8-flowered. Flowers fragrant, yellowish-white. Calyx minute, 4-toothed. Petals 4, lanceolate, about 1 cm long, densely villous inside, at first united, afterwards free and recurved. Stamens 8; anthers linear, nearly as long as the filaments. Ovary oblong-conoid, 8-lobed, 1-locular but 4-locular at the base; style slender, slightly longer than the ovary; stigma simple. Drupe ovoid to globose, yellow, 2—3 cm long, with thin, slightly sweet or sour pulp. Seed 1, large, yellow. Fruit edible.

Tropics.

Mainly on calcareous soil; also in coastal vegetations.

BONAIRE: Terra bara (Arnoldo 528, fl. July); Seroe Largoe (Arnoldo 350, fl. Jan.).

Schoepfia Schreber, Gen. 129. 1789

Glabrous shrubs or small trees. Leaves alternate, simple, entire, coriaceous. Stipules wanting. Flowers small, usually heterostylous, in axillary clusters. Calyx small, cup-shaped, 4-toothed. Petals 3—6, united below into a bell-shaped corolla. Stamens 3—6, epipetalous; anthers opening by longitudinal slits. Ovary half-immersed in the disk, 2—3-locular at the base, 1-locular at the top; style filiform; stigma capitate or 3-lobed. Disk cup-shaped around the base of the ovary, increasing in fruit and almost enveloping the ovary. Ovules pendulous, atropous, without integuments. Drupe almost entirely enveloped by the disk, the top of which forms a ring almost at the apex of the drupe. Seeds one.

Perhaps 40 species in tropics of both worlds.

Schoepfia schreberi J. F. Gmel.

J. F. GMELIN, Syst. 2: 376. 1791; BOLDINGH, Fl. D.W. Ind. Isl. 1: 52. 1909; Fl. Ned. W. Ind. Eil. 171. 1913; Fl. D.W. Ind. Isl. 2: 21. 1914; BRITTON & WILSON, Sci. Surv. Porto

Rico & Virgin Isl. 5: 253. 1924; WILLIAMS, Fl. Trinidad & Tobago 1: 166. 1930; QUESTEL, Fl. Isl. St. Bartholomew 97. 1941; ARNOLDO, Zakflora 40. 1954; Zakflora 172. 1964; GOODING *et al.*, Fl. Barbados 128. 1965.

Evergreen shrub or small tree, up to 6 m tall; bark deeply furrowed; twigs slender. Leaves alternate, petiolate; petioles 3—5 mm long; blade ovate to lanceolate-ovate, acuminate at the apex, rounded and tapering into the petiole, 4—10 × 2—4 cm, thickened and with few, indistinct veins, frequently folded and curved upwards from the midvein. Flowers sessile, to 3 together on a peduncle; peduncles 1 or few together in the leaf-axils, 1—5 mm long. Calyx minute, 4-toothed or reduced to a narrow scarcely lobed ring; a 3-dentate calycula present. Corolla tubular-campanulate to bell-shaped, somewhat angular near the base, yellow with 4 reddish lobes; tube about 3 mm long, the lobes triangular-ovate, reflexed, 1.5 mm long, pubescent within. Stamens 4, epipetalous; filaments united with the petals; anthers sessile, subquadratus, about 1 × 1 mm. Disk perigynous, fleshy. Style cylindric, thick, 1—1.5 mm long; stigma 3-lobed. Drupe obovoid or ellipsoid, 6—10 mm long, dark reddish-purple to black.

Virgin Islands, Lesser Antilles from St. Bartholomew and Saba to Grenada, Barbados, Trinidad and Tobago; also from Mexico and Honduras to Colombia and Venezuela; Aruba, Bonaire, Curaçao.

Mainly on limestone in the Leeward Group, up to 450 m in Saba and St. Eustatius.

ARUBA: slope of Miralamar (Boldingh 6446, fl. Jan.).

BONAIRE: calcareous hills near Rincón (Boldingh 7069, fl. Feb.; 7072, fl. Feb.).

CURAÇAO: hills near Knip (Arnoldo 2029, fl. Ap.; Stoffers 1135, fl. Dec.); Malpais (Boldingh s.n., st. Oct.); St. Hieronymus Berg (Arnoldo 16, fl. Dec.); road from Siberië to San Pedro (Boldingh 5277, st. Nov.); hills near Mahoema (Boldingh 4853, st. Oct.); hills near Barber (Boldingh 5181, st. Nov.); limestone hills near Rif (Britton & Shafer 3086, fr. March); Seroe Christoffel, near the saddle (Stoffers 1303, fl. & fr. Dec.).

SABA: Spring Bay Gut (Boldingh 2125, st. July; 2085, st. July); The Bottom, 200 m (Boldingh 1447, st. July); without loc. (Arnoldo 601, fl.).

ST. EUSTATIUS: top of The Quill, 450 m (Boldingh 375, st. June); *id.*, 400 m (Boldingh 364, st. June; 201, st. June; 377, st. June); inner slope of The Quill (Boldingh 1226, st. June); north-western slope of The Quill (Stoffers 4039, st. Aug.).