

NIB

CELASTRACEAE

*Cassine melanocarpa*

1. **CELASTRUS**, Linn.

Flowers polygamous. Calyx 5-cleft. Petals 5, spreading. Disk broad, concave. Stamens 5, inserted on the margin of the disk; filaments subulate, flattened at the base; anthers ovoid or oblong. Ovary not immersed in the disk, 2- to 4-celled; style usually short, the stigma lobed, spreading; ovules 2, collateral, erect, the funicle cup-shaped. Capsule globular oblong or ob-ovoid, coriaceous, 2- to 4-celled, opening loculicidally. Seeds 1 or 2 in each cell, usually enveloped partially or wholly in a fleshy arillus, sometimes connecting the seeds in a mass, sometimes nearly or quite wanting; testa membranous or almost crustaceous; albumen fleshy; cotyledons leafy.—Trees or shrubs, often climbing, unarmed. Leaves alternate, petiolate, entire, or serrate. Stipules minute and deciduous, or none. Flowers small, in terminal or axillary oblong panicles or racemes. Pedicels articulate. Bracts very small.

The genus extends chiefly over tropical and eastern extratropical Asia, with 1 Mascarene and a few N. American species. The Australian species are all endemic, although one is nearly allied to a common Indian one.

Tall climber. Panicles terminal. Ovary 3-celled . . . . . 1. *C. australis*.  
Trees or tall shrubs. Racemes or pedicels lateral or axillary. Ovary  
2-celled.

Leaves ovate or elliptical.

Leaves quite entire, much narrowed into a long petiole.

Flowers 5-merous . . . . . 2. *C. Muellerei*.

Flowers 4-merous . . . . . 3. *C. dispermus*.

Leaves entire or toothed, petiole short. Flowers 5-merous . . . . . 4. *C. bilocularis*.

Leaves linear or narrow-lanceolate, entire . . . . . 5. *C. Cunninghamii*.

2. **C. Muelleri**, *Benth.* Probably a tree, quite glabrous, flowering before the leaves are fully out. Branches apparently weak and slender. Leaves in our specimens still young, elliptical or broadly lanceolate, acutely acuminate, quite entire, narrowed into a rather long petiole. Flowers small, white, in simple lateral racemes of about  $\frac{1}{2}$  in., occasionally growing out into leafy branches. Pedicels 1 to 2 lines long, articulate about the middle, thickened under the flower. Calyx-lobes 5, ovate, half as long as the petals. Petals 5, oblong, about  $1\frac{1}{2}$  lines long. Disk broad, adnate to the calyx at the base only. Ovary 2-celled, tapering into a very short style, with 2 scarcely prominent stigmatic lobes. Adult leaves and fruits not seen.

**N. Australia.** Near Macadam Range, *F. Mueller*. I had at first thought that this might have been the flowering state of *C. dispermus*, but the flowers are constantly 5-merous.

### 3. DENHAMIA, Meisn.

(Leucocarpon, A. Rich.)

CELASTRACEAE

Calyx 5-cleft. Petals 5. Stamens 5, inserted on the margin of the disk; filaments subulate; anthers ovate. Disk broadly cupular, rather thick. Ovary 1-celled, with 3, or rarely 4 or 5 parietal placentas, or completely divided into as many cells; style short, with as many stigmatic lobes as cells or placentas. Ovules 3 to 8 to each cell or placenta. Capsule ovoid or globular, opening in thick woody or bony valves, bearing the placentas or dissepiments in their centre. Seeds enclosed in a fleshy arillus; albumen fleshy; cotyledons flat. —Shrubs or small trees, glabrous and more or less glaucous. Leaves alternate, rigid, entire, or toothed. Flowers small, in few-flowered cymes or racemes.

The genus is exclusively Australian, and, on account of the parietal placentation of two species, has been by some referred to *Bixineæ*; but the disk, stamens, general habit, etc., are those peculiarly characteristic of *Celastrineæ*.

Ovary 1-celled; placentas (4- to 8-ovulate) not meeting in the axis.

Veins of the leaves not very prominent.

Flowers racemose. Style distinct . . . . . 1. *D. oleaster*.

Flowers in cymes or narrow panicles. Style very short, branched . . . . . 2. *D. obscura*.

Ovary 3-celled, placentas (3- or 4-ovulate) united in the axis. Leaves prominently veined . . . . . 3. *D. pittosporoides*.

2. **D. obscura**, Meisn. in Walp. Rep. i. 203. A tall shrub or small tree, the young branches generally pendulous. Leaves mostly oblong-lanceolate, acuminate, 2 to 3 in. long, entire, with often wavy margins, narrowed into a rather long petiole, coriaceous, finely but not prominently veined; on barren branches the leaves are sometimes broadly ovate and bordered by coarse prickly teeth like those of a Holly. Flowers in small pedunculate cymes in the upper axils, or forming a short oblong terminal panicle. Calyx-segments ovate. Petals rather broad,  $1\frac{1}{2}$  lines long. Ovary 1-celled, with 3 to 5 placentas; style very short, with 3 to 5 oblong-linear stigmatic branches. Ovules 4 to 8 to each placenta. Capsule ovoid or globular, attaining about 1 in., of a pale-whitish hue when dry, the thick valves bearing slightly projecting placentas along their centre.—*Leucocarpon obscurum*, A. Rich. Sert. Astrol. 46, t. 18; *Denhamia xanthosperma*, F. Muell. Trans. Phil. Inst. iii. 28, and *D. heterophylla*, F. Muell. l. c. 29.

**N. Australia.** York Sound, N.W. coast, A. Cunningham; Melville Island (not Moreton Bay), Fraser; Victoria river and Arnhem's Land, F. Mueller; Port Essington, Armstrong.

**Queensland**, Mitchell; Broad Sound, E. Brown; Newcastle range, between Gilbert and Burdekin rivers, F. Mueller.

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CELASTRACEAE

*Maytenus cunninghamii*

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maytenus muelleri