

Flora of the Darwin Region

VOLUME 1

P.S. Short & I.D. Cowie (eds)



CABOMBACEAE

I.D. Cowie

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Territory**

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CABOMBACEAE

I.D. Cowie

Perennial aquatic *herbs*, rooted on substrate. *Stems* elongate, leafy. *Leaves* dimorphic, alternate, opposite or whorled, floating or submerged; floating leaves alternate, peltate, circular or rhombic to elliptic; submerged leaves, when present, opposite or whorled, deeply dissected, initially at least trichotomously then dichotomously. *Flowers* bisexual, axillary, solitary, hypogynous. *Perianth segments* 6–8; petals 3 or 4, white, yellow or dark maroon. *Stamens* 3–6 or 12–18; anthers tetrasporangiate and dithecal; staminodes absent. *Gynoecium* of 1–18 free carpels; ovules 1–3, anatropous; style short, stigmas terminal or decurrent. *Fruit* of coriaceous, indehiscent follicles.

A family of two genera and about eight species, found in tropical to warm temperate areas. One naturalised species is found in the N.T.

Sometimes recognised as a member of the Nymphaeaceae but differs in free carpels and has distinctive vessels. Yoo *et al.* (2005) discussed relationships and the phylogeny of the family.

Taxonomic reference: Yoo *et al.* (2005).

CABOMBA Aubl.

Submerged attached perennials. *Submerged leaves* opposite or whorled, dissected, sessile or shortly petiolate. *Floating leaves* few or absent, blade rhombic to elliptic, entire, peltate. *Flowers* floating, solitary, axillary. *Perianth* 6-lobed, free, in 2 whorls. *Stamens* 3–6. *Carpels* often 2–4.

A genus of about seven species native to the Americas.

**C. caroliniana* A. Gray

Herb, stems to *c.* 1.5 m long, red. *Submerged leaves* on rachis 6–11 mm long, orbicular in outline, *c.* 50 mm diam, deeply dissected, initially divided palmately into *c.* 5 rays, each ray subsequently with 3–7 dichotomous divisions, ultimate segments terete; *floating leaves* 3–4 at apex of each stem, on petioles 7–26 mm long; blades narrowly rhombic, 17–30 mm long. *Tepals* oblong-obovate, 8–11 mm long; outer tepals white, green at base; inner tepals shortly clawed, white, bright yellow and cordate-auriculate at base. *Stamens* 6, *c.* 2.5 mm long; anthers *c.* 1.7 mm long. *Carpels* 2 or 3; usually 3-ovulate; stigmas capitate. *Fruiting peduncles* curved. *Flowering*. Mar.–May. *Fruiting*: not recorded.

Fig. 1 (Cowie 7459); Pl. 1 (unvouchered).

Native to America, naturalised in parts of Qld, N.S.W. and the N.T. Recorded from Marlow's Lagoon near Palmerston and Darwin River. The species is used as an aquarium plant and it is reported to be a serious weed in other parts of the world.

Cabomba caroliniana

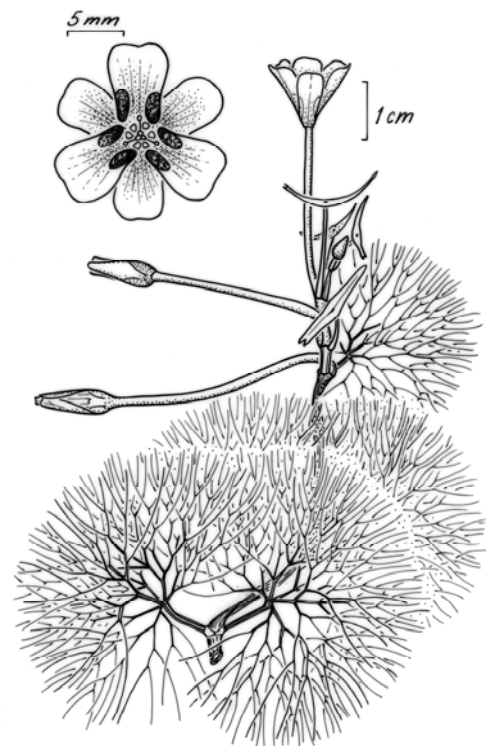


Fig. 1

REFERENCES

Yoo, M.-J., Bell, C.D., Soltis, P.S. & Soltis, D.E. (2005). Divergence times and historical biogeography of Nymphaeales. *Systematic Botany* 30: 693–704.



Pl. 1 *Cabomba caroliniana* (Photo: C.G. Wilson)