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# MANGROVES OF THE NORTHERN TERRITORY, AUSTRALIA:

## *IDENTIFICATION and TRADITIONAL USE*

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**EXTRACT: *Osbornia* (pp. 117–119)**

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DARWIN 2006

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## *Osbornia*

## MYRTACEAE

**DERIVATION:** *Osbornia* in honour of John W. Osborne, a chemist who investigated Myrtaceous oils for renowned botanist Baron Ferdinand von Mueller.

A monotypic genus, *Osbornia* has recently been transferred from subfamily Leptospermoideae to Myrtoideae, though it may not belong in either traditional subfamily (Johnson and Briggs 1983).

### *Osbornia octodonta* F.Muell.

### Myrtle Mangrove

**DERIVATION:** The Latin 'octo' means eight, and 'donta' means tooth, a reference to the eight-lobed calyx of this species.

**DESCRIPTION:** Shrub, columnar or multi-stemmed to 6 m; bark fibrous, stringy, grey or brown, twigs white-grey, smooth. Leaves opposite, simple, entire or crenulate; lamina obovate, 3.1–5.2 x 1.4–2.1 cm, marked by small translucent oil glands, apex rounded or emarginate, base cuneate; petiole swollen, 2 mm long. Inflorescence 1–3-flowered, axillary, subtended by 2 caducous, elliptic, 6 mm long bracteoles; peduncle 5 mm long. Flowers sessile, subtended by 2 deltoid, pubescent, 3 mm long bracts. Calyx and hypanthium sericeous, tube turbinate, 3–4 mm long; lobes 8, obovate, 2–3 mm long. Corolla lacking. Stamens numerous; filaments 4–5 mm long; anthers versatile, broadly elliptic 0.5 mm long. Ovary inferior, unilocular, ovules numerous, placentation basal peltate; style robust, 5–6 mm long, pilose at base; stigma scarcely differentiated. Fruit indehiscent, enclosed by calyx tube, calyx lobes and style persistent. Seeds 1–2, obovate, 7 x 5 mm, flat.

**HABITAT:** *Osbornia octodonta* occurs toward the rear of mangrove communities or fringing tidal waterways. Associates include *Avicennia marina*, *Aegiceras corniculatum* and *Ceriops australis*. *Osbornia octodonta* appears to be non-specific to substrate and is found on soft mud, rock, sand and calcareous dune formations, however, it is absent from areas frequently flooded by fresh water.

**DISTRIBUTION:** *Osbornia octodonta* is widespread around the entire NT coastline, though it is less common on the west coast south of Darwin Harbour. Also found in Western Australia and Queensland. Extra-Australian distribution includes Indonesia, New Guinea, Solomon Islands and the Philippines.

**DISTINCTIVE FEATURES:** Leaves densely gland-dotted and distinctly aromatic when crushed.

**ETHNOBOTANY:** Aboriginal people at Yirrkala use a small piece of inner bark as a cure for toothache, by firmly tamping it into the cavity and leaving it in place for about one hour (Aboriginal Communities of the NT 1993).

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Tiwi people recognise the strongly odorous nature of the leaves, but there is no specific use (Puruntatameri et al. 2001). Similarly Rirratjingu recognise the odorous leaves but have no specific use (Yunupingu et al. 1995).

Iwaidja speakers use the crushed leaves medicinally; the leaves are crushed and the strong odour inhaled to clear congestion in the throat and nose (Blake et al. 1998).

The leaves are used when cooking turtles at Elcho Island (Dunlop et al. 1976) and are used by Djambarrpuyngu speakers when cooking turtles and dugong (Galpagalpa et al. 1984).

**Recorded Aboriginal language names**

Mijinga (Tiwi)

Wulhamarr (Iwaidja)

Manyarr (Rirratjingu)

Durrurirgitj (Yolngu matha)

Bitjininy (Djambarrpuyngu)

Jones (1971) notes fishermen using the crushed leaves as insect repellent. Inhalation of smoke from a fire of old wood has been used as method of contraception, it is reported to be permanent (Aboriginal Communities of the NT 1993).

**NOTES:** Larger plants of *O. octodonta* have distinctly fluted stems. Leaves and petioles of some plants are tinged red. West Australian populations have crenulate leaf margins, NT specimens portray entire and crenulate leaf margins.

Buds and flowers are produced from October to March, and peak in November. Fruit occur in February and March. The indehiscent fruit of *O. octodonta* is suited to water dispersal by its close tomentum (which traps air) and its buoyancy. The small, aromatic, flowers, with silvery indumentum and exerted stamens are insect pollinated (Tomlinson 1986).

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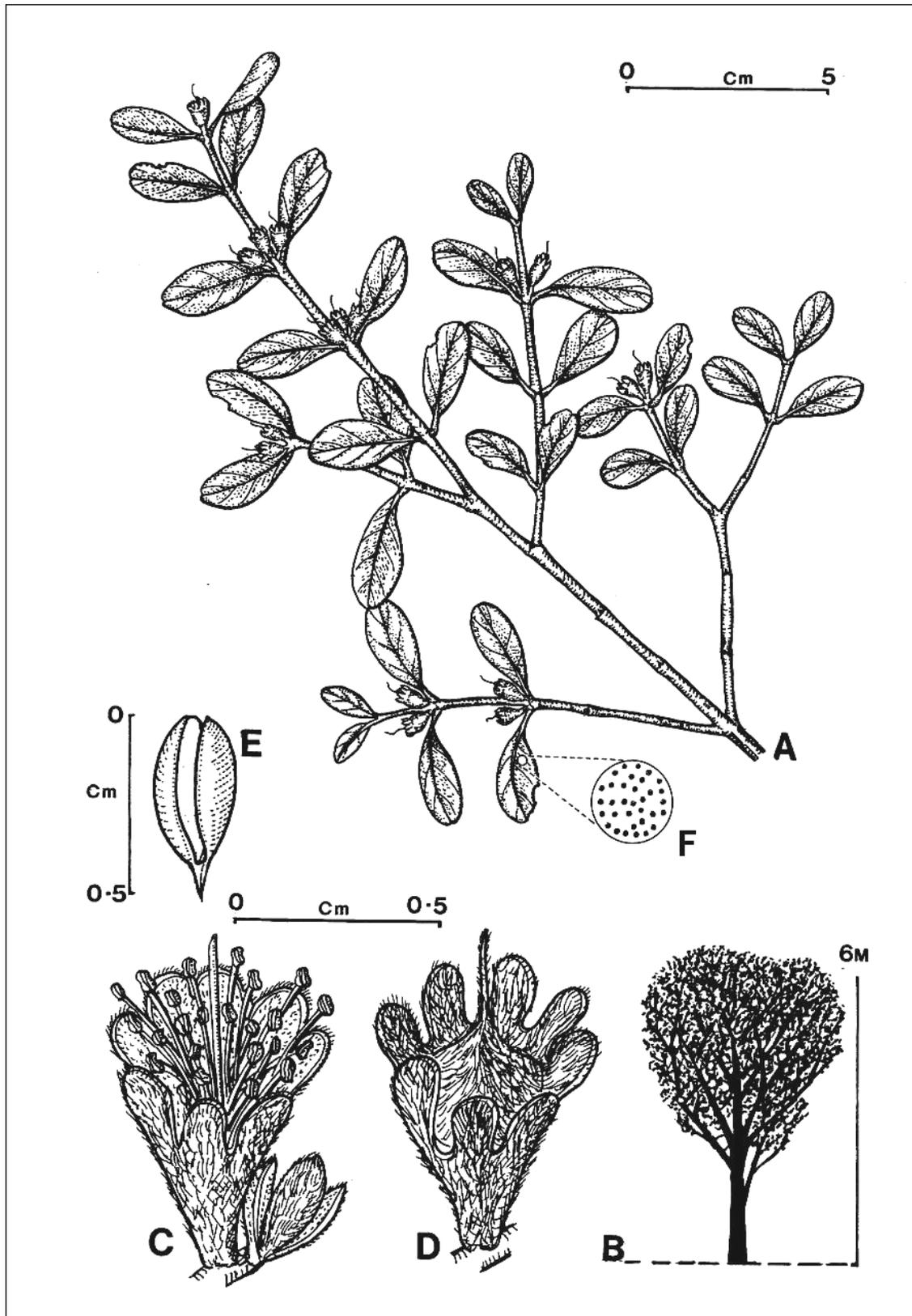


Figure 33. *Osbornia octodonta*. A, flowering branch; B, habit; C, flower; D, fruit; E, seed; F, leaf gland dots magnified (A–F, G. Wightman 968, DNA).