
MANGROVES OF THE NORTHERN TERRITORY, AUSTRALIA:

IDENTIFICATION and TRADITIONAL USE

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EXTRACT: *Pemphis* (pp. 120–122)

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DARWIN 2006

Pemphis

LYTHRACEAE

DERIVATION: The Greek 'pemphis' means swelling, and refers to the fruit, which become swollen when mature and ripe.

A genus of two species, one endemic to Madagascar, the other, *P. acidula*, widespread in the old world tropics, including tidal areas of the NT.

Pemphis acidula J.R.Forst. et G.Forst.

Pemphis

DERIVATION: The Latin 'acidula' means a little sour, the application of this name is uncertain, but may refer to the taste of the fruit.

DESCRIPTION: Shrub or small tree to 4 m, often spreading and diffuse to 1 m; bark light grey, fissured in older specimens. Leaves decussate, simple, entire; leaf blade ovate to obovate, occasionally fleshy and suborbicular, 9–20 x 4–8 mm, apex acute, base cuneate, both surfaces with short tomentum; petiole 1–2 mm long. Flowers solitary, axillary, bisexual, 6-merous; pedicel 5–10 mm long, erect. Calyx base tubular, tomentose, 12-angled, 6–8 mm long, sepals persistent, triangular, 1 mm long, with subulate accessory lobes alternating in sinuses. Petals crumpled, obovate, 6 x 5 mm, white, inserted at apex of hypanthium alternating with sepals. Stamens 12, in 2 series; filament 2–4 mm long; anthers dorsifixed, 1 mm long. Ovary superior, globular 2.0 mm diameter, unilocular, ovules numerous; style simple, persistent; stigma capitate. Capsule spherical 4–5 mm diameter, enveloped by persistent calyx; dehiscence circumscissile. Seeds 10–20, circular, flattened, margin corky.

HABITAT: *Pemphis acidula* occurs at the landward margin of tidal vegetation, at or slightly above the high tide limit, substrates include sand, laterite, limestone and gravel. Often rock outcrops above normal tidal influences are colonised.

DISTRIBUTION: *Pemphis acidula* is common on the northern and eastern NT coast but is unknown from the coast west of Darwin Harbour. Also found in Western Australia and Queensland. Extra-Australian localities include Africa, south-east Asia and Polynesia.

DISTINCTIVE FEATURES: Small tree or shrub, leaves less than 3 cm long, hairy.

ETHNOBOTANY: Anindilyakwa people make digging sticks from the strong, hard wood of the branches, they are particularly effective for yam digging. A twig or small piece of root is heated in sand and applied to aching teeth to stop the pain, while the timber is also used to make the peg of a woomera (spear-thrower). These small trees are also valued as shade trees in coastal areas, where there is often little other shade (Levitt 1981). Turner (1960) also reports the sap forms a sugar-like substance on the bark, which can be eaten.

Iwaidja speakers use the very hard, heavy timber to make clap sticks, spear tips, digging sticks and nose pegs. The stick that is used to kill saltwater turtles after they are caught is also made from this plant (Blake et al. 1998)

Rirratjingu people use the timber to make yam digging sticks, woomera hooks and picks to extract oyster flesh from their shells. The timber is valued for its strength and durability. It is noted that timber from plants growing close to sea-water is paler in colour than trees from drier areas, which is pink in colour (Yunupingu et al. 1995).

Alawa and Mara people use the wood to make harpoons for spearing dugong and to make digging-sticks for yams (Sharpe 2001).

Recorded Aboriginal language names

Dakul (Rirratjingu)	Mijamera (Anindilyakwa)
Dargul (Yolngu Matha)	Miyamura (Anindilyakwa)
Mirin (Yolngu Matha)	Miumerra (Anindilyakwa)
Mirin (Djambarrpuyngu)	Mijinga (Tiwi)
Arndiny (Iwaidja)	Jiwal (Alawa, Mara)

The hard timber is used to make wooden nails for boat building and the twigs are used to treat broken bones in Sumba, Indonesia (Astuti et al. 2001).

NOTES: Flowers and fruits are produced year round, though peak fertility occurs from May to October. Native bees visit and appear to pollinate flowers (pers. obs.). The corky margin of the seed aids buoyancy and hence water dispersal.

Pemphis acidula shows a marked degree of variation depending upon habitat. Habit varies from low, spreading shrubs to tall, almost columnar trees, leaves vary from sub-orbicular, small and fleshy to larger, obovate and non fleshy. Timber colour varies from pale beige in areas close to salt water, to pinkish brown when found in areas more distant from salt water.

Two morphologically different flowers are produced by *Pemphis acidula* (Tomlinson 1986). They are traditionally referred to as 'pin' and 'thrum'. An examination of Northern Territory material shows that thrum (short styled, i.e. 1 mm long, where the stamens enclose the stigma) flowers are far more common than pin (long styled, i.e. 3–4 mm long, where the stamens are shorter than the stigma) flowers. Tomlinson (1986) and Lewis & Rao (1971) both provide accounts of this phenomenon.

There is a shady population of *P. acidula* at the popular picnic area near the Nightcliff jetty in greater Darwin.

Reference: Lewis & Rao 1971.

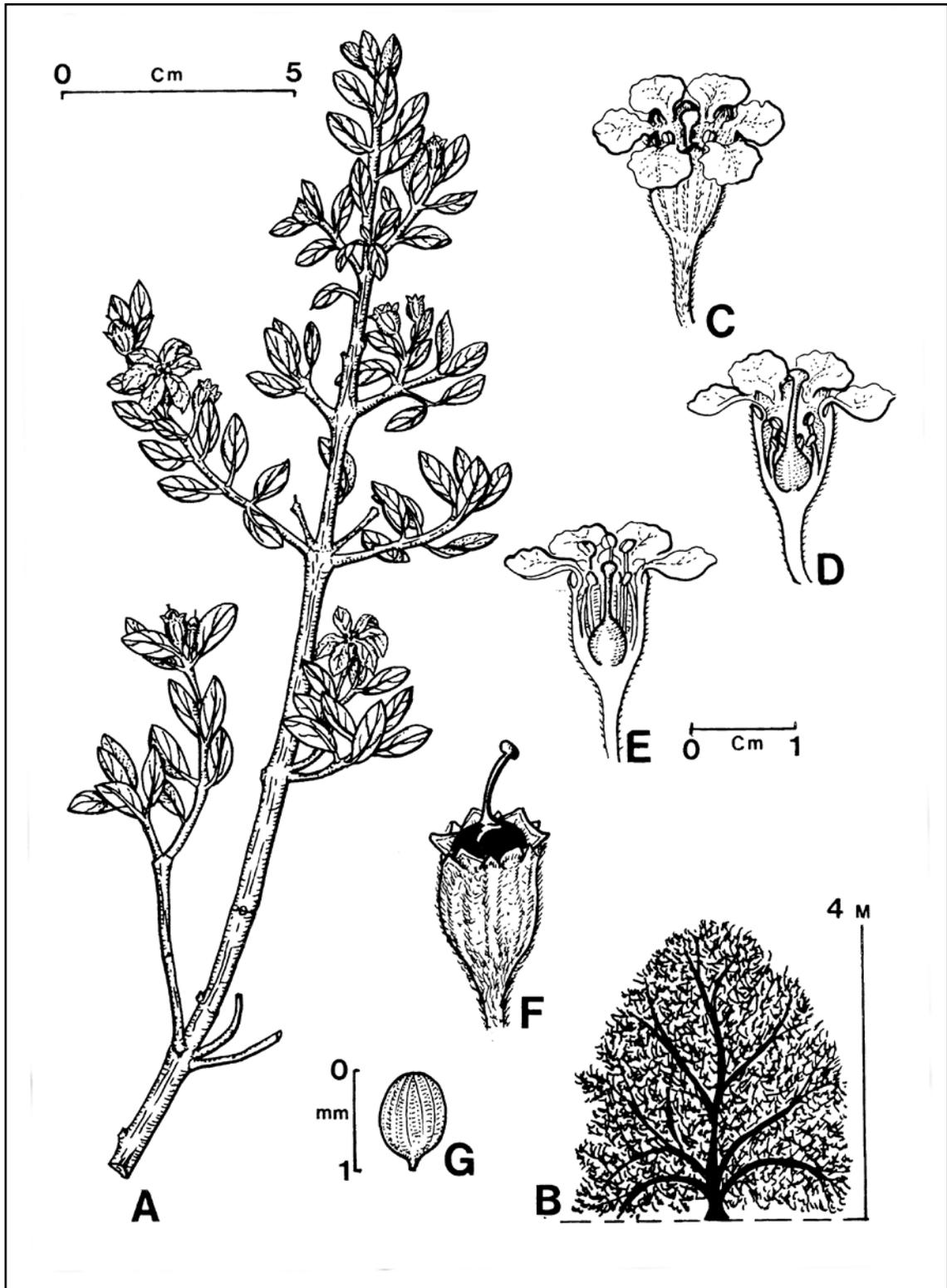


Figure 34. *Pemphis acidula*. A, flowering and fruiting branch; B, habit; C, flower; D, dissected pin flower; E, dissected thrum flower; F, fruit; G, seed (A–D, N. Byrnes 2360, DNA; E–G, C. Dunlop 5187, DNA).