MANGROVES OF THE NORTHERN TERRITORY, AUSTRALIA:

IDENTIFICATION and TRADITIONAL USE

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DEPARTMENT OF NATURAL RESOURCES, ENVIRONMENT & THE ARTS
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DARWIN 2006

Amyema LORANTHACEAE

DERIVATION: The Greek ‘amyema’ refers to a genus previously not known.

A genus of about 100 species; of the 36 Australian species 32 are endemic. Two of the NT native species are host specific to mangrove trees.

DESCRIPTION: Aerial stem parasites, erect or spreading. Leaves opposite. Inflorescence an axillary pedunculate umbel of triads, central flower sessile, lateral flowers pedicellate, each flower subtended by a bract. Calyx entire. Corolla lobes free. Stamens epipetalous; anthers basifixed. Ovary inferior, locules obscure, sporogenous tissue massive; style slender; stigma small, simple. Fruit baccate, calyx persistent. Seed 1.

KEY TO SPECIES:

1. Corolla 5-merous; rays 3–4; leaves elliptic .....*A. mackayensis*
1. Corolla 4-merous; rays 2; leaves orbicular-obovate ..... *A. thalassia*

Amyema mackayensis (Blakely) Danser **Mangrove Mistletoe**

DERIVATION: The Latin ‘mackayensis’ refers to Mackay, Queensland, where the type specimen of this species was collected.

DESCRIPTION: Leaf lamina 30–60 x 22–45 mm, apex rounded, base contracted to terete petiole. Peduncle deflexed, 6–15 mm long; rays 5–10 mm long; pedicels of lateral flowers 2–5 mm long; bracts 1 mm long, acute, apex with short bristles. Calyx 0.5–1 mm long. Corolla 15–18 mm long, red to yellow-green. Stamens 5; filaments 15–18 mm long, 5 mm free; anthers 2 mm long. Fruit ellipsoidal, 6 mm long.

HABITAT: *Amyema mackayensis* has been recorded from the following hosts in the NT: *Rhizophora stylosa*, *Avicennia marina*, *Camptostemon schultzii* and *Aegiceras corniculatum*. Outside the NT it has also been recorded from *Lumnitzera*, *Excoecaria*, *Thespesia*, *Ceriops tagal, Rhizophora mucronata* and several non-mangrove plants.

DISTRIBUTION: *Amyema mackayensis* occurs sporadically around the NT coast. This species also occurs in Western Australia, Queensland and New Guinea.

DISTINCTIVE FEATURES: Aerial stem parasite (mistletoe); leaves elliptic, somewhat fleshy; flowers with 5 petals; fruit elliptic.

Amyema thalassia Barlow **Mangrove Mistletoe**

DERIVATION: The Greek ‘thalassia’ refers to a seaside habitat.

DESCRIPTION: Leaf lamina 25–45 x 25–40 mm, apex blunt, base obtuse, petiole winged, 3–6 mm long. Peduncle 2–8 mm long; rays 5–10 mm long, angular or winged; pedicels of lateral flowers 4–8 mm long, angular or winged; bracts 1.5 mm long, concave. Calyx 0.7 mm long. Corolla strongly 4-winged, 18–20 mm long, base red, apex green. Stamens 4; filaments 18–20 mm long, 3 mm free; anther 3 mm long. Fruit funnel-shaped, 12 mm long.

HABITAT: The only recorded host in the Northern Territory is *Avicennia marina*. However, Barlow (1984) also recorded *Excoecaria* and *Bruguiera* as hosts, while Downey (1998) recorded *Camptostemon schultzii*, *Excoecaria agallocha* and *Avicennia marina* as hosts.

DISTRIBUTION: *Amyema thalassia* occurs in the western portion of the NT, it has not been recorded east of the East Alligator River. *Amyema thalassia* also occurs in Western Australia and is an Australian endemic.

DISTINCTIVE FEATURES: Aerial stem parasite (mistletoe); leaves rounded, somewhat fleshy; flowers with 4 petals; fruit funnel-shaped.

GENUS NOTES: All material of *A. mackayensis* examined from NT populations is referable to subspecies *cycnei-sinus* (Blakely) Barlow.

Amyema mackayensis produces flowers and fruit throughout the year. The less common and probably under-collected, *A. thalassia* has fertile records from January, February, May and September.

The connection between the dispersal of mistletoes and the mistletoe bird (*Dicaeum hirundinaceum*), is well documented (Keast 1981, Liddy 1983). Suffice to say, mistletoebirds are the primary distributors of these species. The seeds are voided within 25 minutes of being eaten, and the sticky seeds adhere to the branches of prospective hosts. They then germinate and grow on the host. The partially red petals of both species attract birds as pollinators.

For names previously used for these taxa refer to Barlow (1984).

References: Barlow 1966, 1984.

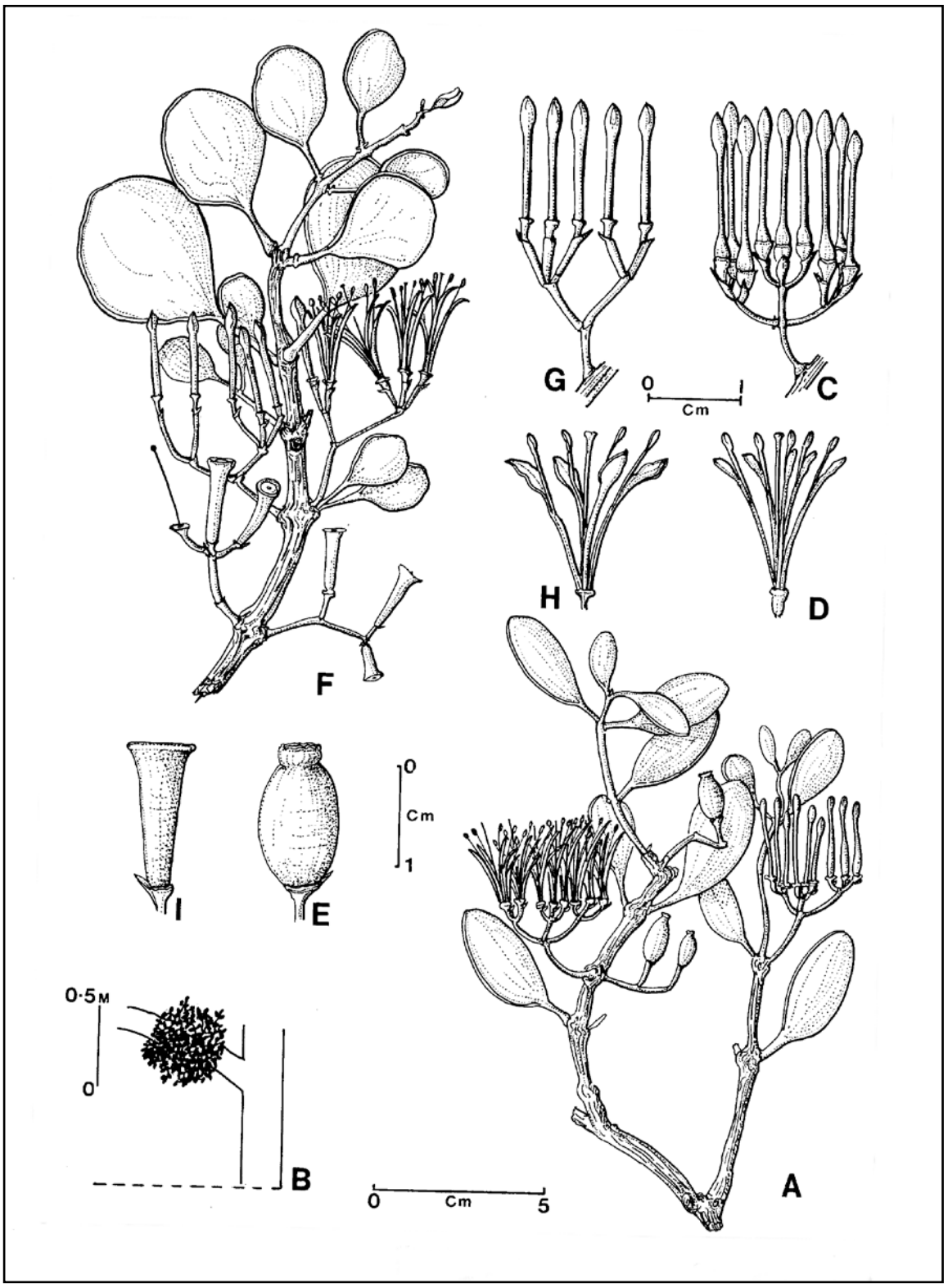

Figure 13. ***Amyema***. A–E, ***A. mackayensis***. A, flowering and fruiting branch; B, habit; C, inflorescence; D, flower; E, fruit (A–E, G. Wightman 713 & M. Parker 1818, DNA). F–I, ***A. thalassia***. F, flowering and fruiting branch; G, inflorescence; H, flower; I, fruit (F–I, G. Wightman 1815 & M. Parker 319, DNA).