

A family of c. 65 genera and 950 species, widely distributed in tropical regions. Represented in Australia by 12 genera; 5 occur in the NT and 4 in the DR. The Loranthaceae are commonly known as Mistletoes. [Barlow, 1984a]

1.	Inflorescence capitate, subtended by 2 enlarged foliaceous bracts which are connate at margins, enclosing buds.....	Diplatia
1.	Inflorescence not subtended by enlarged foliaceous bracts.....	2
2.	Petals united to middle or higher	Dendrophthoe
2.	Petals free to base or almost so	3
3.	Petals united for 0.5-3 mm from base, the corolla shed as a single unit; inflorescence a raceme of triads.....	Decaisnina
3.	Petals free to base, shed separately; inflorescence a pedunculate umbel of triads or variously reduced	Amyema

AMYEMA Tieghem

Pendulous or erect; glabrous or with an indumentum of stellate or branched hairs. Leaves usually opposite or displaced-opposite, rarely alternate or whorled. Inflorescence axillary, basically a pedunculate umbel of triads but variously reduced; rays of umbel 2 to several. Petals 4-6, free. Anthers basifixed, 2- or 4-locular. Style fluted.

A genus of c. 100 species; 36 in Australia and 19 in the NT, of which 9 occur in the DR. [Barlow, 1992]

1.	Leaves sessile and stem-clasping	8
1.	Leaves petiolate.....	2
2.	Inflorescence a simple umbel; flowers mostly 6-merous.....	A. sanguinea
2.	Inflorescence an umbel of diads, triads or tetrads; flowers 4-5-merous	3
3.	Inflorescence an umbel of diads	A. bifurcata
3.	Inflorescence an umbel of triads or tetrads	4
4.	Ovary tomentose; rays 2, <5 mm long	5
4.	Ovary glabrous; rays 2 or more, usually >5 mm long	6
5.	Corolla tomentose; petioles >4 mm long	A. villiflora
5.	Corolla glabrous; petioles <2 mm long	A. conspicua

Simple and compound umbels of Amyema (Barlow, 1966)

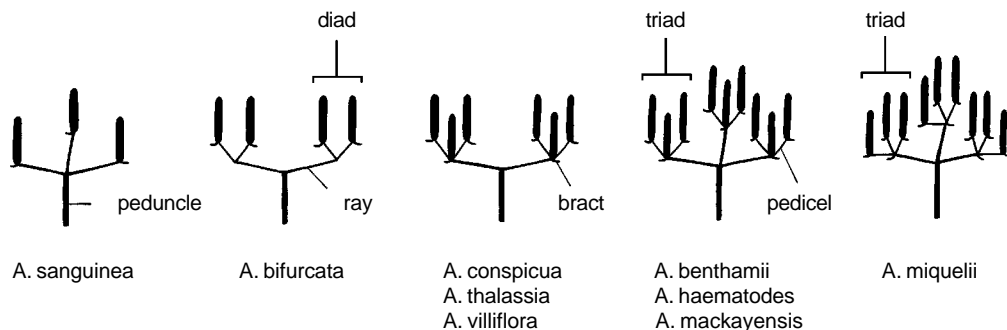


Fig. 64

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|----|--|-----------------------|
| 6. | Leaves linear-lanceolate, lanceolate or rarely ovate, not succulent,
L/B mostly >3; petiole 9-45 mm long; hosts <i>Eucalyptus</i> | <i>A. miquelii</i> |
| 6. | Leaves elliptic, ± orbicular to obovate, succulent, L/B <3;
petiole <8 mm long; hosts mangroves | 7 |
| 7. | Flowers 4-merous; corolla strongly 4-angled; calyx flared | <i>A. thalassia</i> |
| 7. | Flowers 5-merous; corolla not angled; calyx erect | <i>A. mackayensis</i> |
| 8. | Rays of umbel 2, rarely 3; corolla glabrous | <i>A. benthamii</i> |
| 8. | Rays of umbel 3; corolla hairy | <i>A. haematodes</i> |

A. benthamii (Blakely) Danser

Glabrous except lower part of ovary white-tomentose. Leaves opposite, sessile, cordate, elliptic to almost orbicular, 25-85 mm long, 16-40 mm wide, L/B 1.25-4. Inflorescence an umbel of triads, 2-4 per axil, the central flower sessile, the laterals pedicellate; peduncle 10-18 mm long; rays of umbel 2(3), 2-6 mm long; pedicels 0-3 mm long; bracts 1.5-2.5 mm long. Calyx ± entire, minutely fimbriate or weakly toothed, c. 0.7 mm long. Corolla 5-6-merous, green (outside DR recorded as red below, green above), 20-30 mm long, clavate. Anthers c. 3 mm long. Fruit orange-red, ellipsoid, 8-14 mm long, white tomentose except at apex. Flowering: June - Feb; fruiting: June - Oct. Fig. 65

Occurs from the Eastern Goldfields of WA to Arnhem Land; known only from Litchfield NP in the DR. Recorded on a wide variety of hosts in Eucalypt savanna.

A. bifurcata (Benth.) Tieghem var. *bifurcata*

Indumentum of young shoots, flowers, axes of inflorescence and fruits a rusty tomentum of stellate hairs or scales, sometimes various parts glabrous. Petioles 10-40 mm long. Leaf blades linear-lanceolate, often falcate, 70-260 mm long, 7-19 mm wide, L/B 8-30. Inflorescence an umbel of diads, 1-3 per leaf axil; peduncle 15-40 mm long; rays of umbel mostly 2, 6-20 mm long, strongly divergent; pedicels (0)3-11 mm long; central bract at apex of each ray triangular, c. 1 mm long; lateral bracts orbicular, c. 3 mm long, concave, enlarging in fruit. Calyx entire, c. 0.7 mm long. Corolla 5-6-merous, orange-red, 22-30 mm long, clavate. Anthers 3.5-5 mm long. Fruit ellipsoid, 8-12 mm long, with a prominent nipple at apex and persistent style base. Flowering and fruiting: all year. Fig. 65

Widespread in northern and central Australia, as far south as NSW; rare in the DR. In Eucalypt savanna; parasitic on *Eucalyptus*.

A. conspicua (Bailey) Danser subsp. *obscurinervis* Barlow

Young shoots, peduncle, upper surface of rays, base of ovary tomentose with whitish branched hairs, otherwise glabrous. Petioles 1-2 mm long. Leaf blades elliptic, ovate to obovate, rounded, 30-57 mm long, 6-27 mm wide, L/B 1.7-5.3. Inflorescence an umbel of triads, 1-2 per leaf axil, the central flower sessile, the laterals pedicellate; peduncle 4-11 mm long; rays of umbel 2, 1-2 mm long, not strongly divergent; pedicels 0.5-0.7 mm long; bracts of central flower arising from peduncle, longer than and partly enclosing ray; lateral bracts fimbriate, elliptic, 2-2.5 mm long. Calyx fimbriate, entire or shallowly lobed, 0.5-1 mm long. Corolla 5-merous, greenish, 13-20 mm long, slightly clavate. Anthers 1.5-2.5 mm long. Fruit globose, c. 7 mm long, with a distinct neck. Flowering: Nov - Feb; fruits not seen. Fig. 65

The subspecies is uncommon in the Top End and recorded only from the Katherine area, Mainoru, Douglas-Daly and Arnhem Land. In Eucalypt savanna; parasitic on *Gardenia*, *Terminalia* and *Erythroxylum*.

A. haematodes (Schwarz) Danser

Young shoots, inflorescence and fruit whitish tomentose, otherwise glabrous. Leaves opposite, sessile, stem-clasping and bases of the leaf pair overlapping; ovate, lanceolate or deltoid, 41-95 mm long, 21-47 mm wide, L/B 1.3-3. Inflorescence an umbel of triads, 1-3 per leaf axil, the central flower sessile, the laterals pedicellate; peduncle 7-15 mm long; rays of umbel 3, 2-3 mm long; pedicels 1-1.5 mm long; bracts 1.2-2 mm long. Calyx entire, c. 0.5 mm long. Corolla 5-6-merous, greenish to yellow, 21-28 mm long, clavate. Anthers 2.5-4 mm long. Immature fruit ellipsoid, to 12 mm long with a distinct neck. Flowering: July - Jan; fruits not seen. Fig. 65

An NT endemic; in the DR from Tiwi Islands, near Darwin, the Howard R. and Litchfield NP. Mostly in coastal vine thicket; parasitic on *Mallotus*, *Ficus* and *Barringtonia*

A. mackayensis (Blakely) Danser
subsp. *cycnei-sinus* (Blakely) Barlow

Glabrous. Leaves fleshy; petioles 2-7 mm long; blades elliptic to obovate, 20-58 mm long, 10-41 mm wide, L/B 1.4-2.9. Inflorescence an umbel of triads, the central flower sessile, the laterals pedicellate; peduncle 4-11 mm long; rays of umbel 2-4, 4-8 mm long, strongly divergent; pedicels 2-4 mm long; bracts fimbriate, c. 1 mm long. Calyx entire, c. 0.5 mm long. Corolla 5-merous, base red, upper part green, 11-20 mm long, clavate. Anthers 1-2.5 mm long. Fruit ellipsoid, 6-12 mm long, crowned with calyx. Flowering: Jan - Aug; fruiting: Apr - Oct. Fig. 65

In northern Australia from the Kimberley to Torres Strait including southern New Guinea; common in the DR. Occurs in mangroves on a number of genera. [Wightman, 1979]

A. miquelii (Lehm. ex Miq.) Tieghem

Glabrous or sparsely scurfy on calyx and ovary. Petioles 9-45 mm long. Leaf blades linear-lanceolate, lanceolate or rarely ovate, straight or falcate, 40-180 mm long, 8-27 mm wide, L/B 2-16. Inflorescence an umbel of triads, rarely tetrads or diads; all flowers pedicellate or if tetrads then one flower sessile; peduncle 9-40 mm long; rays of umbel 3-4, 7.5-15 mm long, strongly divergent; pedicels 3.5-8 mm long; bracts 0.7-1.5(3) mm long. Calyx shallowly lobed or entire, 0.3-0.6 mm long. Corolla red, 15-25 mm long, clavate. Anthers 2-5 mm long. Fruit glaucous, ± globular, 9-14 mm long. Flowering and fruiting: Feb - Nov. Fig. 65

Widespread throughout mainland Australia in Eucalypt savanna. Rare in the DR where recorded from Gunn Point and Litchfield NP. Parasitic on many species of Eucalyptus.

A. sanguinea (F.Muell.) Danser var. *sanguinea*

Foliage pendulous but with flowers erect and borne on previous and current years wood; glabrous. Leaves whorled, opposite or alternate; petioles 5-20 mm long; blades narrowly to broadly elliptic, oblanceolate or oblong, frequently falcate, 50-135(200) mm long, 8-52 mm wide, L/B 2-19. Inflorescence an umbel of 3-5 flowers; peduncle 4-15 mm long; pedicels 4-7 mm long; bracts 1-4 mm long. Calyx shallowly lobed or entire, c. 1 mm long. Corolla mostly 6-merous, red, deep pink or yellow-orange, 27-56 mm long, clavate. Anthers 3-12 mm long. Stigma large, capitate, black. Fruit funnel-shaped, 12-18 mm long. Flowering: Oct - Jan; fruiting: Feb - May. Fig. 65

Scattered throughout northern Australia and extending into the arid zone of WA, NT and SA.

Relatively common in the DR on a number of species of Eucalyptus. Barlow (1984a) has recognised two varieties (the typical and var. *pulchra* (Ewart) Barlow) which he distinguishes on leaf shape, leaf dimensions and corolla length. The variety *pulchra*, which is centred in the Katherine region and extends to Darwin can be distinguished by the following key.

1. Flowering stems mostly 10 mm or more diam.; leaves >30 mm wide var. *pulchra*
1. Flowering stems mostly less than 6 mm diam.; leaves <30 mm wide var. *sanguinea*

A. thalassia Barlow

Glabrous. Leaves fleshy; petioles 4-8 mm long; blades orbicular to obovate, 20-45 mm long, 12-30 mm wide, L/B 1-1.8. Inflorescence an umbel of triads, central flower sessile, the laterals pedicellate; peduncle 5-11 mm long; rays of umbel 2-3, 8-10 mm long; pedicels 3-6 mm long; bracts 0.5-1.7 mm long. Calyx entire to shallowly 4-lobed, c. 1 mm long, flared. Corolla 4-merous, red or red at base and green above, 10-20 mm long, clavate, strongly 4-angled. Anthers c. 2.5 mm long. Fruit obconic to ellipsoid, c. 10 mm long. Flowering: Jan - Feb; fruiting: May - June. Fig. 65

An Australian endemic occurring from the Kimberley to Qld. Confined to mangroves; common in the DR on *Avicennia* (Wightman, 1979).

A. villiflora (Domin) Barlow

Young stems, inflorescence, calyx, corolla, ovary and fruit with dense whitish or rusty close tomentum. Petioles 4-10 mm long. Leaf blades ± orbicular, elliptic to oblanceolate, 26-92 mm long, 8-42 mm wide, L/B 1.3-4. Inflorescence an umbel of triads, 1-2 per axil, central flower sessile, laterals pedicellate; peduncle 5-19 mm long; rays of umbel 2, 1.5-5 mm long, not strongly divergent; pedicels 0-2 mm long; bracts 1-2.5 mm long. Calyx c. 1 mm long. Corolla 5-merous, yellow or orange to red at base, greenish at tips, 17-30 mm long, clavate. Anthers 1.5-3 mm long. Fruit orange to red, ellipsoid, 8-12 mm long, with neck. Flowering: Nov - June; fruiting: Jan - Sept. Fig. 65

Across northern Australia. Common in the DR in coastal vine thickets, predominantly on *Terminalia* and *Pouteria* but also recorded on a variety of other hosts.

Barlow (1984a) recognises 2 subspecies, the typical and subsp. *tomentilla* (Blakely) Barlow; both being recorded from the DR. They are not readily distinguishable in the DR and so not recognised here.

DECAISNINA Tieghem

A genus of c. 30 species distributed from the Philippines, Tahiti to northern Australia; c. 6 species in Australia with 3 recorded in the NT. Only *D. signata* is recognised for the DR.

D. signata (F.Muell. ex Benth.) Tieghem

Glabrous. Leaves sessile or shortly petiolate; blades lanceolate to broadly lanceolate or elliptic, straight or falcate, 40-175 mm long, 15-65 mm wide, L/B 1-5, truncate or cordate at base, apex acute to rounded. Inflorescence axis 30-65 mm long, bearing 2-7 pairs of triads on peduncles 1.5-7.5 mm long; all flowers sessile; bracts c. 2 mm long. Calyx entire or shallowly lobed, 0.5-1.3 mm long. Corolla 6-merous, red below, usually green or cream above, 18-34 mm long; petals united at base. Fruit orange, often with pale longitudinal stripes, ellipsoid, 7-10 mm long. Flowering and fruiting: most months. Fig. 66, front cover.

From the Kimberley to Arnhem Land. Common in the DR in monsoon forest and woodland. Host trees are genera associated with monsoon forest. In Darwin it is common on many ornamental species.

D. signata is part of a complex within which Barlow (1984a) recognises 3 species, each with two subspecies. The two subspecies under *D. signata* differ by subsp. *cardiophylla* (Domin) Barlow having sessile leaves with a cordate base while the typical subspecies has shortly petiolate leaves with a truncate base. The other two closely related species, *D. brittenii* (Blakely) Barlow and *D. petiolata* (Barlow) Barlow, differ from *D. signata* and each other only on leaf shape. *D. brittenii* has linear to narrowly lanceolate leaves and is found typically on Melaleuca or Barringtonia in swamps or coastal floodplains. Within the DR it is known only from the Wildman/Mary River area. *D. petiolata* has broader, more elliptic leaves. It is also rare in the DR with collections only from the Tiwi Islands. An examination of NT material shows a continuum of variation in leaf shape between all these taxa. Consequently they are not recognised here.

DENDROPHTHOE Mart.

Leaves displaced opposite (in NT). Inflorescence an axillary raceme. Petals 5, united to middle or higher into a curved tube, corolla in bud abruptly narrowing in apical third. Anthers basifixed, 4-locular.

A genus of c. 30 species distributed from tropical Africa to Australia. Three species in the NT; 2 occur in the DR.

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|---|-----------------------|
| 1. Inflorescence glabrous or ovary with sparse white indumentum | <i>D. glabrescens</i> |
| 1. Inflorescence and ovary with whitish tomentum | <i>D. odontocalyx</i> |

D. glabrescens (Blakely) Barlow

Glabrous or ovary sparsely hairy. Petioles 5-12 mm long. Leaf blades lanceolate to elliptic, 40-135 mm long, 15-50 mm wide, L/B 1.8-4.9. Inflorescence axis 8-35 mm long, flowers 3-9; pedicels 2-6 mm long; bracts c. 2 mm long. Calyx entire or weakly toothed, 1-1.5 mm long. Corolla orange, 26-40 mm long. Fruit red, ellipsoid, 7-12 mm long. Flowering: Feb - Oct; fruiting: Jan - July. Fig. 66

Widespread from WA to NSW. In the DR known only from Wangi Station. Mostly in savanna on Eucalyptus, Melaleuca, Erythrophleum and other genera.

D. odontocalyx (F.Muell. ex Benth.) Tieghem

Young shoots, inflorescence, calyx, corolla and ovary white tomentose. Petioles 4-10 mm long. Leaf blades almost linear to elliptic or lanceolate, 43-140 mm long, 5-47 mm wide, L/B 2.3-16. Inflorescence axis 5-20 mm long, with 3-6 flowers; pedicels 2-4 mm long; bracts 1.5-2.5 mm long. Calyx c. 1 mm long, prominently toothed. Corolla orange to red, 15-40 mm long. Fruit ellipsoid to ovoid, 12-13 mm long. Flowering: most months; fruiting: July - Nov. Fig. 66

From WA to Qld; common in the DR in Eucalypt savanna. Found on a wide variety of hosts.

Amyema

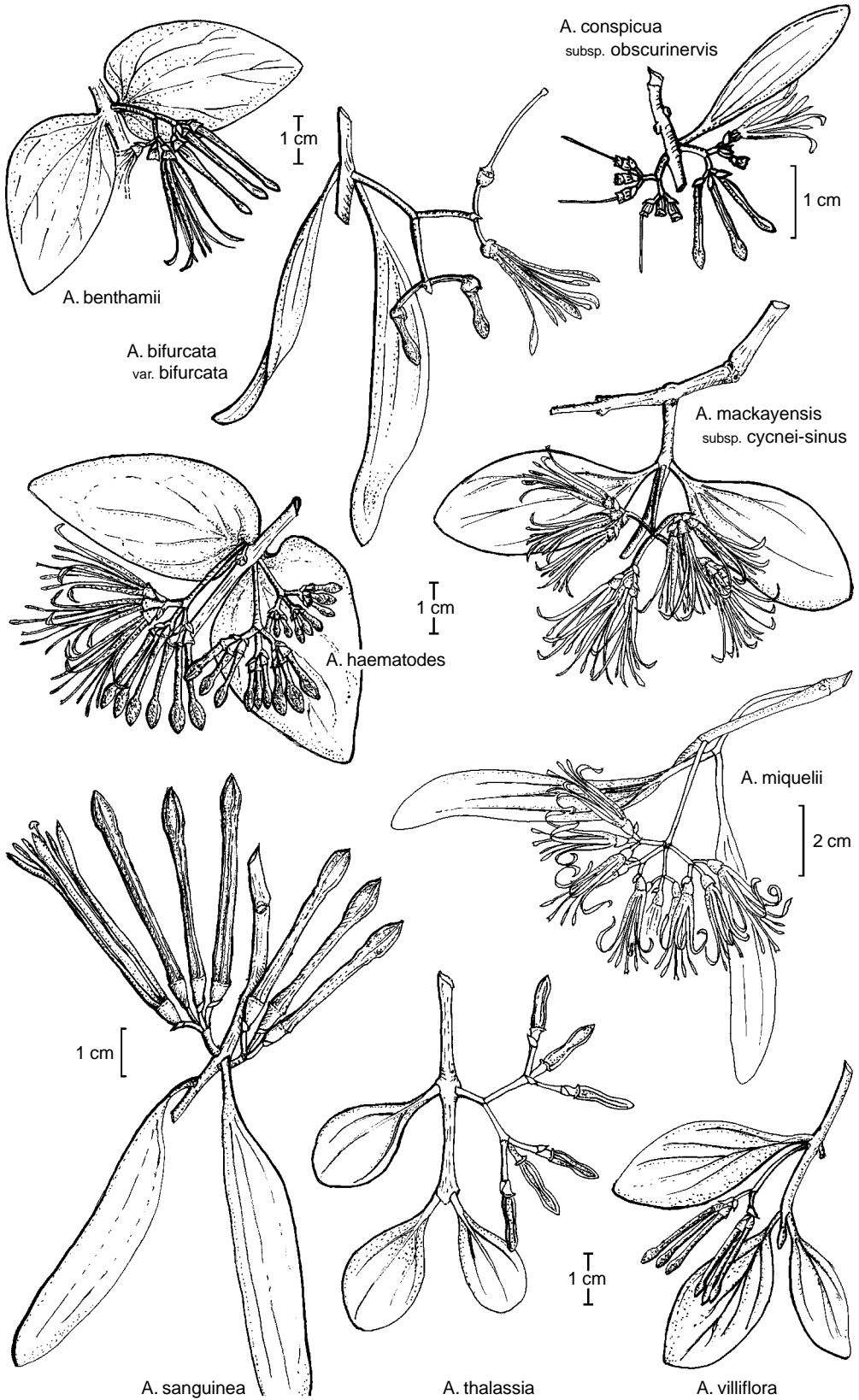


Fig. 65

Decaisnina

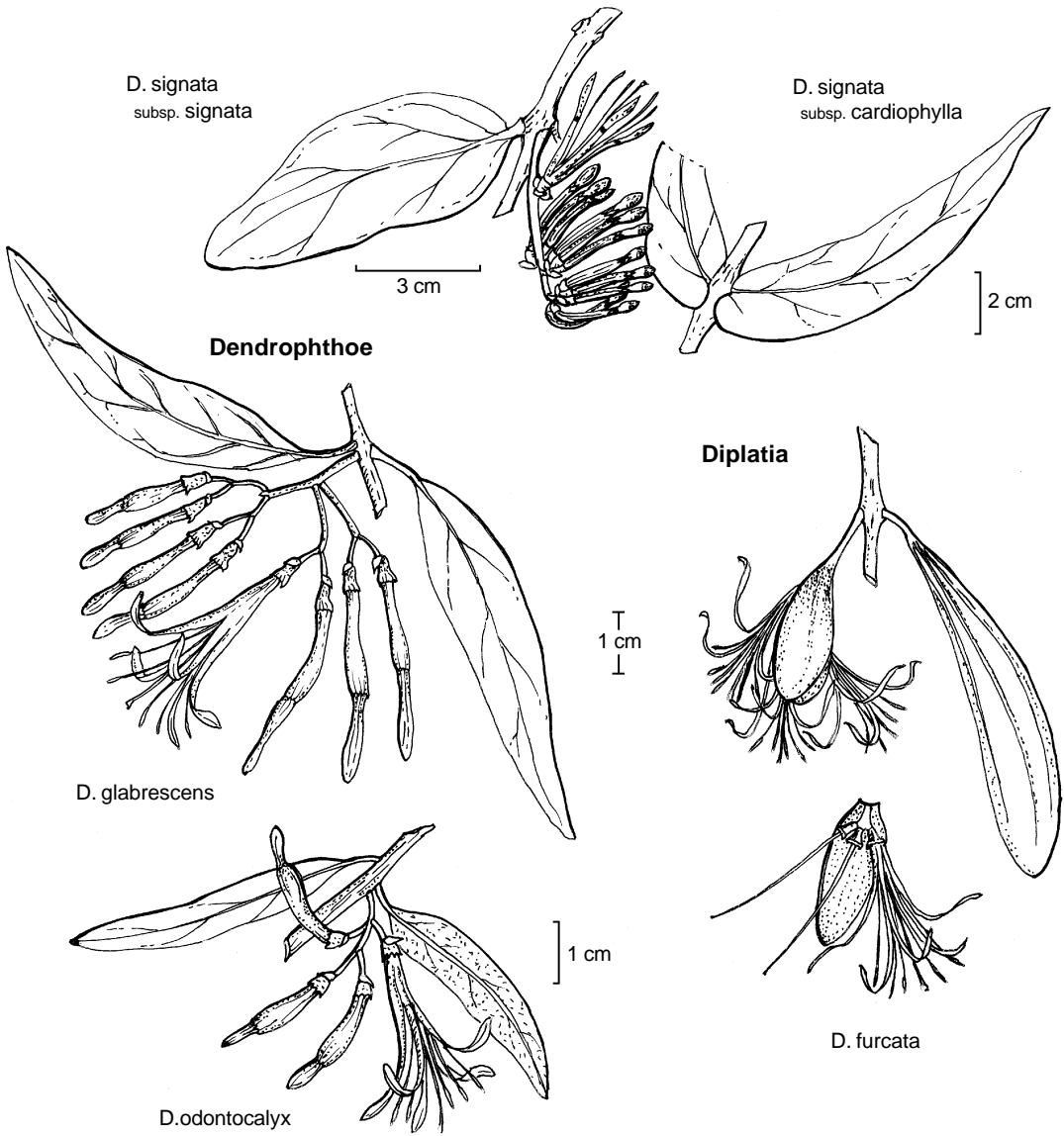


Fig. 66

DIPLATIA Tieghem

A genus of 3 species endemic in Australia. Only 2 species in the NT and 1 found in the DR.

***D. furcata* Barlow**

Glabrous. Leaves opposite; petioles 3-18 mm long; blades spatulate to narrowly oblanceolate, 30-100 mm long, 4-20 mm wide, L/B 2-13. Inflorescence axillary, a head of 2 opposite sessile triads; peduncle 10-15 mm long, dilated and flattened at apex; central bracts of triads foliaceous, elliptic, enveloping

inflorescence, 16-30 mm long; lateral bracts linear, caducous. Calyx entire, minute. Petals 5, free, green, 20-35 mm long. Anthers basifixed, 4-locular. Fruit obovoid, 10-11 mm long. Flowering: Apr - Sept; fruiting: Jan - Apr. Fig. 66

In the NT and Qld; in the DR, on the Wildman R. In savanna on various genera of Myrtaceae.