

# LAURACEAE

R.A. Kerrigan & D.J. Dixon

Evergreen *trees*, shrubs or parasitic vines, often aromatic; indumentum of simple, stellate or lepidote hairs. *Leaves* simple, alternate, sometimes opposite, entire or rarely lobed, reduced to scales in *Cassytha*, oil-dotted, sometimes glaucous or white; stipules absent. *Inflorescences* pseudoterminal or axillary, umbellate or paniculate, rarely solitary; bracts persistent or caducous, small or large in umbellate genera and enclosing the inflorescence. *Flowers* bisexual or unisexual (species dioecious or monoecious), green, yellow or white. *Perianth* partially united to form a perianth tube or receptacle. *Perianth segments* usually undifferentiated (tepals), usually 6 in 2 whorls, rarely 2 or 4. *Stamens* 2–20, usually 9, often in whorls, and sometimes inner-most whorl reduced to staminodes, stalked glands usually attached to the filaments of some anthers; anthers tetrasporangiate and tetrathecal or bisporangiate and dithecal, introrse or extrorse, dehiscing by hinged flaps. *Gynoecium* of a single carpel, ovary 1-locular, superior; ovule solitary; style terminal, stigma inconspicuous or thallose. *Fruit* a drupe, fleshy or leathery. *Seeds* 1 per fruit.

Pantropical family with *c.* 43 genera and *c.* 3,000 species. In Australia eight genera and 136 species occur naturally. Camphor Laurel (*Cinnamomum camphora*) is a naturalised weed in the eastern States. In the N.T. there are five genera and ten species, all of which are treated here.

Some species of this family provide spices, flavourings, timbers and fruit. Members include Cinnamon and Camphor (*Cinnamomum* spp.), Bay Leaf (*Laurus nobilis*) and Avocado (*Persea americana*).

Taxonomic references: Hyland (1989); Rohwer (1993); Hyland *et al.* (2003); Madriñán (2004); Le Cussan & Hyland (2007).

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|----|---|--------------------|
| 1  | Twining leafless vine .....   | <b>Cassytha</b>    |
| 1: | Leafy shrubs or trees .....   | <b>2</b>           |
| 2  | Domatia present, leaves glossy .....  | <b>Endiandra</b>   |
| 2: | Domatia absent .....  | <b>3</b>           |
| 3  | Inflorescence paniculate; flowers bisexual; fruit without a receptacle .....            | <b>Cryptocarya</b> |
| 3: | Inflorescence umbellate; flowers unisexual; fruit seated in a receptacle .....          | <b>4</b>           |
| 4  | Lower leaf surface green or tinged brown from ferruginous hairs, not triplinerved ..... | <b>Litsea</b>      |
| 4: | Lower leaf surface glaucous or green, triplinerved in the N.T. ....                     | <b>Neolitsea</b>   |

## CASSYTHA L.

*Parasitic* twiners, with small haustoria; indumentum of simple hairs or glabrous. *Leaves* reduced to minute scales. *Inflorescence* a panicle, spike or raceme or reduced to a sessile or stalked head. *Bract* persistent or caducous, indistinguishable from bracteoles. *Flowers* bisexual; free perianth parts and androecium confined to the rim of perianth tube or receptacle. *Perianth segments* 6, unequal, differentiated into 3 small outer sepals and 3 larger inner petals. *Stamens* 9, in 3 whorls of 3; stalked glands present on filaments of inner stamen whorl. *Staminodes* 3 inside staminal whorls, cordate. *Ovary* sessile or almost so; stigma capitate. *Fruit* globular, usually fleshy; tepals persistent as minute remnants. *Seeds* 1, protected by a bony pericarp.

Genus of *c.* 23 species occurring in Africa, Australia, Malaysia, New Guinea and New Zealand. Nineteen species (16 endemic) in Australia, three in the N.T.

Taxonomic references: Rohwer (1993); Weber (1981, 2007).

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|----|--|----------------------|
| 1  | Petals glabrous .....  | 2                    |
| 1: | Petals pubescent .....   | <b>C. candida</b>    |
| 2  | Fruit strigose, ovoid, reddish (never drying black); peduncle 0.3–0.4 mm thick .         | <b>C. capillaris</b> |
| 2: | Fruit glabrous, globular, greenish (drying black); peduncle <i>c.</i> 0.5 mm thick ..... | <b>C. filiformis</b> |

### **C. candida** (J.Z. Weber) J.Z. Weber

*C. aurea* var. *candida* J.Z. Weber

*Vine*; stems 0.4–1.8 mm diam., pubescent or glabrous, yellow-green to brown. *Leaves* ovate, *c.* 1–1.8 mm long, ciliate. *Inflorescence* an axillary spike to 90 mm long, pubescent. *Flowers* sessile, grey-green or yellow-green, 10–15 per inflorescence. *Bract* and bracteoles indistinguishable from each other, pubescent, widely ovate, 0.5–1.2 mm long, attached to base of receptacle. *Perianth tube* short, *c.* 0.5 mm long, glabrous. *Sepals* widely ovate, 0.5–1.1 mm long, 0.5–0.75 mm wide, pubescent. *Petals* widely ovate, to 2.5 mm long, *c.* 1–1.6 mm wide, pubescent. *Stamens* 9, in 3 whorls of 3, filaments glabrous; outer whorl adnate to petals, *c.* 1.5–2 mm long; second whorl opposite sepals, to *c.* 1.5–2.1 mm long; inner whorl opposite sepals, *c.* 0.75–1.6 mm long, with paired stalked glands present at base. *Staminodes* 3, alternating with inner stamens. *Pistil* to 2 mm long, stigma capitate. *Fruit* globular, *c.* 4.5–5 mm long, *c.* 4.5–5 mm diam., glabrous, greenish drying brown to black. *Seed* globular. *Flowering & fruiting*: Feb.–July.

Fig. 1 (*Menkhorst 336*).

Australia (W.A., N.T.). In the N.T. found throughout Kakadu N.P., Nitmiluk N.P. and eastern Arnhem Land. Grows on sandstone escarpment, in heath, woodland and monsoon vine forest. Not in the D.R.

### **C. capillaris** Meisn.

*Vine*; stems 0.2–1 mm diam., glabrous or rarely sparsely pubescent with ferruginous hairs, green to reddish-brown, sometimes glaucous. *Leaves* ovate *c.* 1–1.6 mm long, ciliate. *Inflorescence* an axillary spike to 11 mm long, pubescent but often sparsely so with ferruginous hairs and sometimes glabrous. *Flowers* sessile, 3–10 per inflorescence, white. *Bract* and bracteoles indistinguishable from each other, glabrous with ciliate margin, widely ovate 0.5–0.9 mm long, attached to base of receptacle. *Perianth tube* short, glabrous *c.* 0.5 mm long. *Sepals* widely ovate, *c.* 0.8–1 mm long, *c.* 0.8–1 mm wide, glabrous with ciliate margin. *Petals* widely ovate, to 1.9 mm long, to *c.* 1.8 mm wide, glabrous. *Stamens* 9, in 3 whorls of 3, filaments glabrous; outer whorl adnate to petals, *c.* 1–

1.5 mm long; second whorl opposite sepals, to *c.* 1–1.5 mm long; inner whorl opposite sepals, *c.* 0.5–1.2 mm long, with paired stalked glands present at base. *Staminodes* 3, alternating with inner stamens. *Pistil* to 1–1.5 mm long, stigma capitate. *Fruit* ovoid, *c.* 3.7–5.5 mm long, 2.5–4.5 mm diam., reddish-brown to yellow, drying darker, glabrous or strigose with ferruginous or white hairs, sometimes ribbed or with striations. *Seed* ovoid. *Flowering & fruiting*: all year.

Fig. 1 (*Cowie 8603*); Pl. 1 (*Cowie 12009*).

Australia (W.A., N.T., Qld), Borneo, Buru, Ceylon, New Guinea, Sri Lanka and possibly Timor. In the N.T. this species is widely distributed across the Top End from Keep River to Nhulunbuy and extends south to the Barkly Tablelands and the Tanami Desert. Recorded from Pine Creek and the Tiwi Islands in the D.R. Often found growing over *Triodia* in woodlands, grasslands or coastal dunes, on a variety of substrates.

### **C. filiformis** L.

*Vine*; stems 0.4–1.7 mm diam., glabrous or pubescent with ferruginous or white hairs, brown to orange. *Leaves* ovate, *c.* 1–2.3 mm long, ciliate. *Inflorescence* an axillary spike to 52 mm long, pubescent, often sparsely so with ferruginous hairs or glabrous. *Flowers* sessile, white, 2–16 per inflorescence. *Bract* and bracteoles indistinguishable from each other, glabrous with ciliate margin, widely ovate, 0.3–1 mm long, attached to base of receptacle. *Perianth tube* short, glabrous, *c.* 0.5 mm long. *Sepals* widely ovate, *c.* 0.5–1 mm long, *c.* 0.5–1 mm wide, glabrous with ciliate margin. *Petals* widely ovate, *c.* 1.5–2 mm long, *c.* 1.2–1.5 mm wide, glabrous. *Stamens* 9 in 3 whorls of 3, filaments glabrous, outer whorl adnate to petals, *c.* 1–1.2 mm long, second whorl opposite sepals, to 1–1.6 mm long, inner whorl opposite sepals, *c.* 0.5–1.2 mm long, with paired stalked glands present at base. *Staminodes* 3, alternating with inner stamens. *Pistil* *c.* 1–1.7 mm long; stigma capitate. *Fruit* ovoid, *c.* 4.5–6.7 mm long, 4.5–7.9 mm diam., green, orange to red, sometimes white, drying black, glabrous. *Seed* globular to depressed globular. *Flowering & fruiting*: all year. **Love Vine, False Dodder.**

Fig. 1 (*Rankin 1881*); Pl. 2 (*Cowie 12010*).

A pantropical species found in Australia (W.A., N.T., Qld), North and South America, southern Africa, Asia and islands of the Indian and Pacific oceans. In the N.T. this species is widely distributed across the Top End, including the

D.R., from Keep River to Nhulunbuy and extends south to the Barkly Tablelands and the Tanami Desert. Grows in a variety of habitats, including monsoon vine forest, woodlands, mangroves, grasslands, swamps, coastal dunes and thickets on a variety of substrates.

### CRYPTOCARYA R. Br.

*Trees* or shrubs; indumentum of simple hairs or glabrous. *Leaves* petiolate, minutely dotted with oil glands, spirally arranged or rarely opposite, penninerved or triplinerved. *Inflorescences* paniculate, racemose or cymose, axillary or pseudoterminal. *Bracts* persistent or caducous. *Flowers* bisexual. *Tepals* 6, in 2 rows of 3. *Stamens* 9, 6 outer and 3 inner; stalked glands present (in N.T. species). *Staminodes* 3. *Ovary* sessile or almost so; stigma usually capitate. *Fruit* solitary, ellipsoid to globular, usually fleshy; pedicel not swollen or cup-shaped. *Seeds* 1.

Genus of c. 200–250 species found in Africa, Asia, Malesia, Australia, Pacific islands, and South America. Forty-seven species in Australia, three in the N.T.

Taxonomic references: Hyland (1989); Le Cussan & Hyland (2007).

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|----|--|------------------------|
| 1  | Midrib of leaf raised on upper surface; crushed leaves smelling of pine resin or camphor or not obviously aromatic; cotyledons not runcate ..... | <b>C. exfoliata</b>    |
| 1: | Midrib of leaf not raised; crushed fruit, twigs and leaves emitting a coconut or peppery odour when fresh; cotyledons runcate .....              | <b>2</b>               |
| 2  | Crushed twigs, leaves and fruit emitting a strong coconut odour when fresh ...   | <b>C. cunninghamii</b> |
| 2: | Crushed twigs, leaves and fruit emitting a peppery odour when fresh .....  | <b>C. hypospodia</b>   |

#### **C. cunninghamii** Meisn.

*Tree* to 25 m tall (15 m in the N.T.); aromatic, emitting strong coconut odour from the bark, crushed leaves and fruit; indumentum of short, curved or twisted, ascending to erect, white to pale brown hairs throughout. *Petiole* 5.5–16 mm long. *Lamina* narrowly elliptic to oblanceolate, elliptic or rarely ovate, 57–187 mm long, 18–67 mm wide, base cuneate or obtuse, margin entire, apex acuminate to obtuse; upper surface sparsely to densely hairy, often concentrated along midrib or glabrous; lower surface sparsely to densely hairy; discolorous and gland-dotted, midrib not raised. *Inflorescence* paniculate, axillary, to 80 mm long, pubescent. *Bracts* at base of pedicel and subtending panicle branches, lanceolate or elliptic, 1–3.5 mm long, caducous. *Pedicel* and perianth tube 1.5–2 mm long. *Tepals* 6, in 2 whorls of 3, obovate or spatulate, c. 1.5–2.5 mm long, 1–1.5 mm wide, yellowish-green to cream. *Stamens* 9, filaments pubescent; 6 in outer whorl adnate to tepals, to c. 1.3 mm long; 3 in inner whorl opposite outer tepals, to c. 1.3 mm long; 6 stalked glands alternating with tepals. *Staminodes* 3, alternating with inner stamens,

cordate. *Pistil* to 2 mm long; stigma capitate. *Fruit* globular, 12–15 mm long, 12–15 mm diam., glabrous, black to purplish-black. *Seeds* with white or cream runcate cotyledons. *Flowering*: May–Oct. *Fruiting*: July–May.

Fig. 1 (*Dunlop*, D17470; *Hearne*, D16376); Pl. 3 (unvouchered).

Australia (W.A., N.T., Qld) and probably New Guinea. In the N.T. widely distributed across the Top End, from Victoria River to Groote Eylandt and including the D.R. Found in spring-fed rainforest, wet monsoon vine forest, riparian forest and coastal vine thicket. Fruits of this species have been known to cause burning in the mouth and the sawdust may cause dermatitis (Hyland 1989).

#### **C. exfoliata** C.K. Allen

*Shrub* or tree to 20 m (recorded to 8 m in the N.T.); rarely aromatic, although sometimes recorded as emitting a camphor odour; indumentum of short, appressed white to pale brown hairs throughout. *Petiole* 3–10 mm long. *Lamina* narrowly elliptic to lanceolate or elliptic, 41–170 mm long, 11.5–53 mm wide, base cuneate or

obtuse, margin entire, apex acute to acuminate; upper surface sparsely hairy with fine appressed hairs or glabrous; lower surface with fine appressed hairs or glabrous; midrib raised, occasionally first pair of lateral veins longer than others and appearing triplinerved; discolorous. *Inflorescence* paniculate, axillary or pseudoterminal, to 50 mm long, pubescent throughout. *Bracts* at base of pedicel and subtending panicle branches, lanceolate, to 1.5 mm long, caducous. *Pedicel* and perianth tube to 1.8 mm long. *Tepals* 6, 2 whorls of 3, ovate to widely ovate, to 2.1 mm long, to 1.5 mm wide, inner whorl wider than outer whorl, green or creamy-green. *Stamens* 9, filaments pubescent; 6 in outer whorl adnate to tepals, to 1.5 mm long; 3 in inner whorl opposite outer tepals, to 2 mm long; 6 stalked glands alternating with tepals. *Staminodes* 3, alternating with inner stamens, cordate. *Pistil* to 2.6 mm long; stigma capitate. *Fruit* globular, 9–13 mm long, 7–11 mm diam., glabrous, black. *Seeds* with cream cotyledons, not ruminant. *Flowering & fruiting*: throughout the year.

Fig. 1 (*Craven 6580*); Pl. 4 (unvouchered).

Australia (N.T., Qld) and New Guinea. In the N.T. not found in the D.R. but restricted to sandstone escarpments of the Arnhem Land plateau. Found in spring-fed rainforest, *Allosyncarpia* forest and sheltered positions associated with sandstone.

### **C. hypospodia** F. Muell.

*Tree* to 30 m, often aromatic, emitting a peppery odour; indumentum of short, tortuous, erect and

appressed hairs, white, pale brown or brown. *Petiole* 7–17 mm long. *Lamina* elliptic to ovate, 65–245 mm long, 25–135 mm wide, base cuneate or truncate, margin entire, apex acute or obtuse; upper surface sparsely hairy to glabrous; lower surface sparsely to densely hairy becoming glabrous; discolorous, midrib not raised. *Inflorescence* paniculate, axillary, usually exceeding leaves, pubescent throughout. *Bracts* at base of pedicel and subtending panicle branches, triangular, 0.4–0.6 mm long, caducous. *Pedicel* and perianth tube 1.5–2.5 mm long. *Tepals* 6, 2 whorls of 3, obovate, *c.* 1.4–1.9 mm long, 0.7–1.5 mm wide; tepals of inner whorl wider than outer whorl, pale brown, green or cream. *Stamens* 9, filaments pubescent, 6 in outer whorl adnate to tepals, *c.* 1–1.5 mm long, 3 in inner whorl opposite outer tepals, *c.* 1–1.5 mm long, 6 stalked glands alternating with tepals. *Staminodes* 3, alternating with inner stamens, cordate. *Pistil* to 3 mm long; stigma capitate. *Fruit* globular, 13–18 mm long, 12–17 mm diam., glabrous, black. *Seeds* with white or cream ruminant cotyledons. *Flowering & fruiting*: not recorded in N.T. **Northern Laurel.**

Fig. 1 (*Russell-Smith 3636*).

Rainforests of Australia (N.T., Qld) and New Guinea. In the N.T. only known from one collection of sterile material from Croker Island and this description is based on that of Hyland (1989). The fruit is eaten by fruit pigeons and the species is a food plant for larval stages of a number of butterflies.

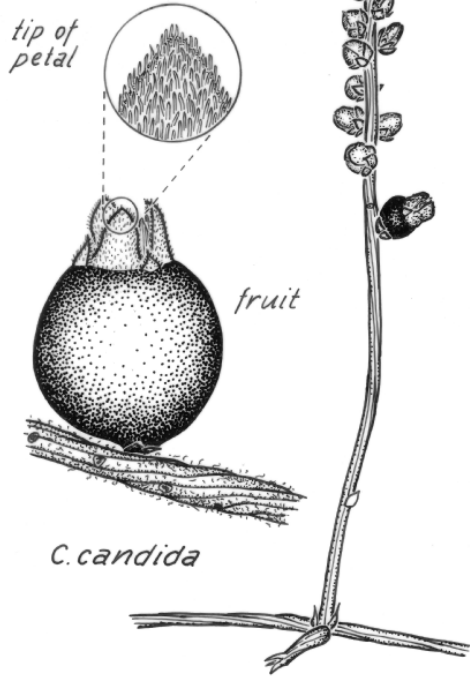
## **ENDIANDRA** R. Br.

*Tree* to shrub; indumentum of simple hairs or glabrous. *Leaves* petiolate, minutely oil-dotted, spirally arranged or opposite, penninerved or triplinerved. *Inflorescences* paniculate, racemose or cymose, axillary or pseudo-terminal. *Bracts* persistent or caducous. *Flowers* bisexual. *Tepals* 6, 3 inner and 3 outer. *Stamens* 3 (2, 6); stalked glands usually present and sometimes fused to form a disc. *Staminodes* usually 3, occasionally absent. *Ovary* sessile or almost so; stigma usually inconspicuous. *Fruit* solitary, ellipsoid to globular, usually fleshy, occasionally leathery; pedicel not swollen or cup-shaped. *Seeds* 1.

Genus of *c.* 100 species found in Asia, Malesia, Australia and the Pacific islands. Thirty-eight species occur naturally in Australia, with one in the N.T.

Taxonomic references: Hyland (1989); Rohwer (1993); Hyland *et al.* (2003); Le Cussan & Hyland (2007).

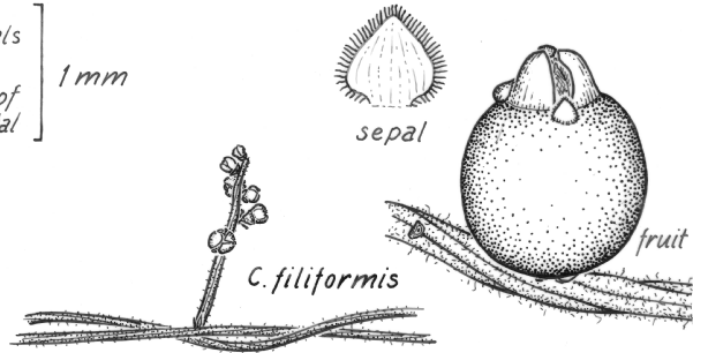
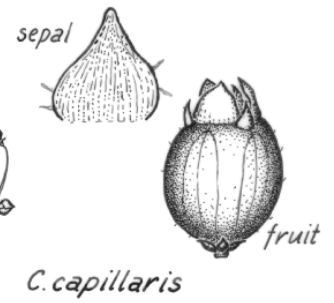
*Cassytha*



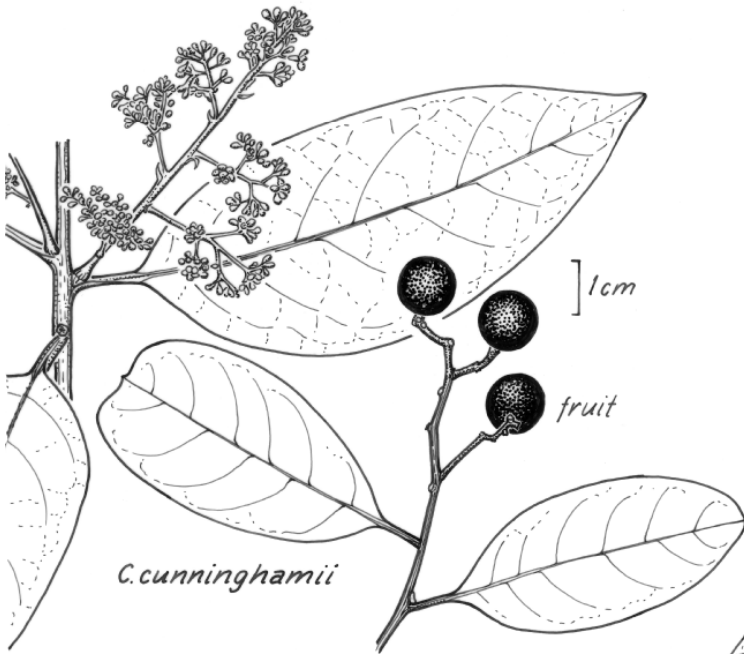
habit ] 1 cm

fruit ] 1 mm

sepals ] 1 mm  
tip of petal ]



*Cryptocarya*



] 1 cm



2 cm [

] 1 cm

Fig. 1

**E. limnophila** B. Hyland

*Tree* to 20 m tall; indumentum of short, appressed white to pale brown hairs. *Petiole* 7–13 mm long. *Lamina* mostly elliptic, 80–140 mm long, 35–60 mm wide, base cuneate or obtuse, margin entire, sometimes undulate, apex obtuse to shortly acuminate; sparsely hairy with fine appressed hairs or glabrous; upper leaf surface glossy, lower leaf surface pale green, domatia usually present; oil dots visible with hand lens. *Inflorescence* paniculate, axillary, to *c.* 10 mm long, not exceeding leaves, pubescent throughout. *Bracts* at base of pedicel, linear or triangular, to 1 mm long, caducous. *Pedicel* and perianth tube to 1.4 mm long. *Tepals* 6, in 2 whorls of 3, ovate to widely ovate, *c.* 1.2–

1.4 mm long, *c.* 0.7–0.8 mm wide, pubescent, pale green or cream. *Stamens* 3, *c.* 0.8 mm long, filaments hairy, opposite outer tepals; stalked glands 6. *Staminodes* 3, differentiated into a head and stalk. *Pistil* to 1.1 mm long, stigma inconspicuous. *Fruit* ellipsoidal, 28–35 mm long, 14–15 mm diam., glabrous, black, glaucous. *Seeds* with cream cotyledons, not ruminant. *Flowering:* *c.* Dec. *Fruiting:* not recorded.

Fig. 2 (*Fensham 1031*).

Australia (N.T., Qld). Rare in the N.T., restricted to the wet spring-fed rainforest and riparian forest of the Tiwi Islands and Channel Point. All but one specimen collected in the N.T. are sterile.

**LITSEA** Lam.

*Trees* or shrubs; glabrous or with an indumentum of simple hairs. *Leaves* petiolate, minutely oil-dotted, spirally arranged, penninerved. *Inflorescences* axillary or on twigs below leaves, umbellate. *Flowers* unisexual, dioecious. *Bracts* large and enclosing inflorescence. *Male flowers:* tepals 0–8; stamens 5–20; glands variable, sometimes peltate; staminodes usually absent, sometimes 1 or 2. *Female flowers:* tepals 0–8; staminodes 5–16; glands variable; ovary sessile; stigma usually thallose, sometimes bilobed. *Fruit* solitary or in pairs, ellipsoid to globular, fleshy; receptacle cup-shaped or swollen. *Seeds* 1.

Genus of *c.* 400 species found in Asia (as far north as Korea and Japan), Malesia, Australia, Pacific islands, New Zealand and the Americas. Eleven species in Australia, two in the N.T.

Taxonomic references: Hyland (1989); Le Cussan & Hyland (2007).

- |    |  |                          |
|----|--|--------------------------|
| 1  | Indumentum of ferruginous hairs; stalked floral glands attached to filaments (male flowers) and staminodes (female flowers); seeds with pink to purple cotyledons when cut fresh ..... | <b>L. breviumbellata</b> |
| 1: | Indumentum of white hairs; stalked floral glands not attached to filaments (male flowers) and staminodes (female flowers); seeds with cream-coloured cotyledons when cut fresh .....   | <b>L. glutinosa</b>      |

**L. breviumbellata** C.K. Allen

*Tree* to 20 m tall (recorded to 5 m in the N.T.); indumentum of curved, tortuous to erect white to pale brown hairs. *Petiole* 7–15 mm. *Lamina* narrowly elliptic to elliptic, 85–180 mm long, 40–72 mm wide, base cuneate, margin entire, apex acute to acuminate; upper surface sparsely hairy and gland-dotted; lower surface moderately hairy with white to pale brown hairs, veins on lower surface brownish. *Inflorescence* a compound umbel, axillary, the peduncle 4–9.5 mm long. *Bracts* 4, 2 inner and 2 outer, enclosing 3–6 flowers but spreading at maturity, concave, very widely ovate to orbicular, 2–4 mm long, 3–4 mm wide, inner bracts larger than outer bracts; pubescent on outer surface, cream, green, yellow or brown. *Tepals* 4–8, narrowly oblong to oblanceolate,

*c.* 2 mm long, sericeous. *Male flower:* pedicel and perianth tube 1.8–3.4 mm long; stamens *c.* 9, to 4 mm long, filaments sericeous, dimorphic, some filaments with 2 glands attached. *Female flowers:* pedicel and perianth tube *c.* 1.5–2.7 mm long; staminodes *c.* 9, linear, dimorphic, with or without 2 attached glands; pistil to 3.5 mm long, stigma thallose, ciliate. *Fruit* globular to ellipsoidal, 10–13 mm long, 7.5–11.5 mm diam., fleshy, glabrous, black. *Seeds* with pink to purple cotyledons when fresh. *Flowering:* Mar.–July. *Fruiting:* *c.* Nov.

Fig. 2 (*Dunlop 6566; Russell-Smith 2431*).

New Guinea and Australia (N.T., Qld). In the N.T. restricted to the Tiwi Islands and found in wet monsoon vine forest and riparian forest.

**L. glutinosa** (Lour.) C.B. Rob.

*Tree* to 15 m tall; indumentum of curved, retrorse or tortuous white hairs. *Petiole* 9–35 mm long. *Lamina* narrowly elliptic to elliptic or oblanceolate to obovate, 70–314 mm long, 30–122 mm wide, base cuneate, margin entire, apex acute to acuminate; hairs when present concentrated on mid and lateral veins, lower surface discoloured and gland-dotted. *Inflorescence* a compound umbel, axillary. *Bracts* 4, 2 inner and 2 outer, enclosing 6–14 flowers but spreading at maturity, concave, very widely ovate to orbicular, 2.3–7 mm long, 2.7–6 mm wide, inner bracts larger than outer bracts; pubescent on outer surface, cream, green or yellow. *Tepals* 0–6, narrowly oblong to oblanceolate, *c.* 2 mm long. *Male flowers* on umbels with peduncles 10–18 mm long; pedicel and perianth tube 1.5–6.5 mm long; stamens numerous 8–20, 2.3–4 mm long, filaments densely hairy, obscuring staminodes if

present; vestigial pistil and glands present, glands not attached to filaments. *Female flowers* on umbels with peduncles 5–6 mm long; pedicel and perianth tube 1–3.2 mm long; staminodes 9–16, sometimes difficult to differentiate from tepals, hairy and obscuring stalked glands present at base of staminodes, glands not attached to staminodes; pistil 2.8–4 mm long, stigma thallose, ciliate. *Fruit* globular to ellipsoidal, 8.5–10 mm long, 8.7–9 mm diam., fleshy, glabrous, black. *Seeds* with cream-coloured cotyledons when fresh. *Flowering*: Nov.–Mar. *Fruiting*: Feb.–June.

Fig. 2 (*Rankin 1008*; *Cowie 483*); Pl. 5 (unvouchered).

India and China to Malesia and Australia (W.A., N.T., Qld), naturalised in Madagascar and Mauritius. In the N.T. widely distributed across the Top End, from Victoria River to Groote Eylandt and including the D.R. Grows in coastal vine thickets, monsoon vine forests and *Allosyncarpia* forests on a variety of substrates.

**NEOLITSEA** Merr.

*Tree*; indumentum of simple hairs when young or glabrous. *Leaves* petiolate, minutely oil-dotted, spirally arranged, opposite or verticillate, penninerved or triplinerved. *Inflorescence* umbellate, axillary. *Bracts* persistent, large and enclosing inflorescence. *Flowers* unisexual, species dioecious. *Male flowers*: tepals 4 (–5); stamens usually 6 (4–8); glands variable; staminodes usually absent. *Female flowers*: tepals 4 (–6); staminodes 5–9; glands peltate; ovary sessile, stigma usually thallose. *Fruit* ellipsoid or globular, fleshy; receptacle swollen. *Seeds* 1.

Genus of *c.* 80 species found in Asia, Malesia and Australia. Three native species in Australia, one in the N.T.

Taxonomic references: Hyland (1989); Rohwer (1993); Hyland *et al.* (2003); Le Cussan & Hyland (2007).

**N. brassii** C.K. Allen

*Tree* to 25 m tall (16 m recorded in the N.T.); indumentum of clear, white or pale brown, long, straight to shortly curved appressed hairs. *Petiole* 9.5–35 mm long. *Lamina* narrowly elliptic to elliptic or ovate, 47–204 mm long, 17–129 mm wide, base cuneate or obtuse, margin entire, apex acute, acuminate or rarely obtuse; upper and lower surface with appressed hairs throughout to glabrous; lower surface discoloured and often glaucous, sometimes aromatic. *Inflorescence* umbellate, sessile or almost so, axillary. *Bracts* 4, enclosing 2–6 flowers but spreading at maturity, hemispherical, 4.5–5.3 mm long, 3.3–4 mm wide, pubescent on outer surface, gland-dotted. *Flowers* opening widely at anthesis, cream, green or yellow. *Tepals* 4, elliptic to ovate, *c.* 2.4–

3.4 mm long, pubescent towards base. *Male flowers*: pedicel and perianth tube to 6 mm long; stamens usually 6, the 4 outer stamens opposite tepals to *c.* 5 mm long and with glandular filaments, the 2 inner stamens to *c.* 3.6 mm long and their filaments pubescent towards the base and with stalked glands. *Female flowers*: pedicel and perianth tube to 5.2 mm long; staminodes usually 8 (5–7), the outer staminodes 4, glabrous, and to 2 mm long, the inner staminodes 4, glabrous, and to 1.7 mm long, with 2 stalked glands per staminode; pistil to 4 mm long, stigma thallose. *Fruit* globular to ellipsoidal, 9–12 mm long, 7.5–10.5 mm diam., fleshy, glabrous, red; on receptacle. *Seeds* with cream cotyledons when fresh. *Flowering*: Jan.–Apr. *Fruiting*: May–June.

Fig. 2 (*Jones 1662*; *Fensham 1189*).

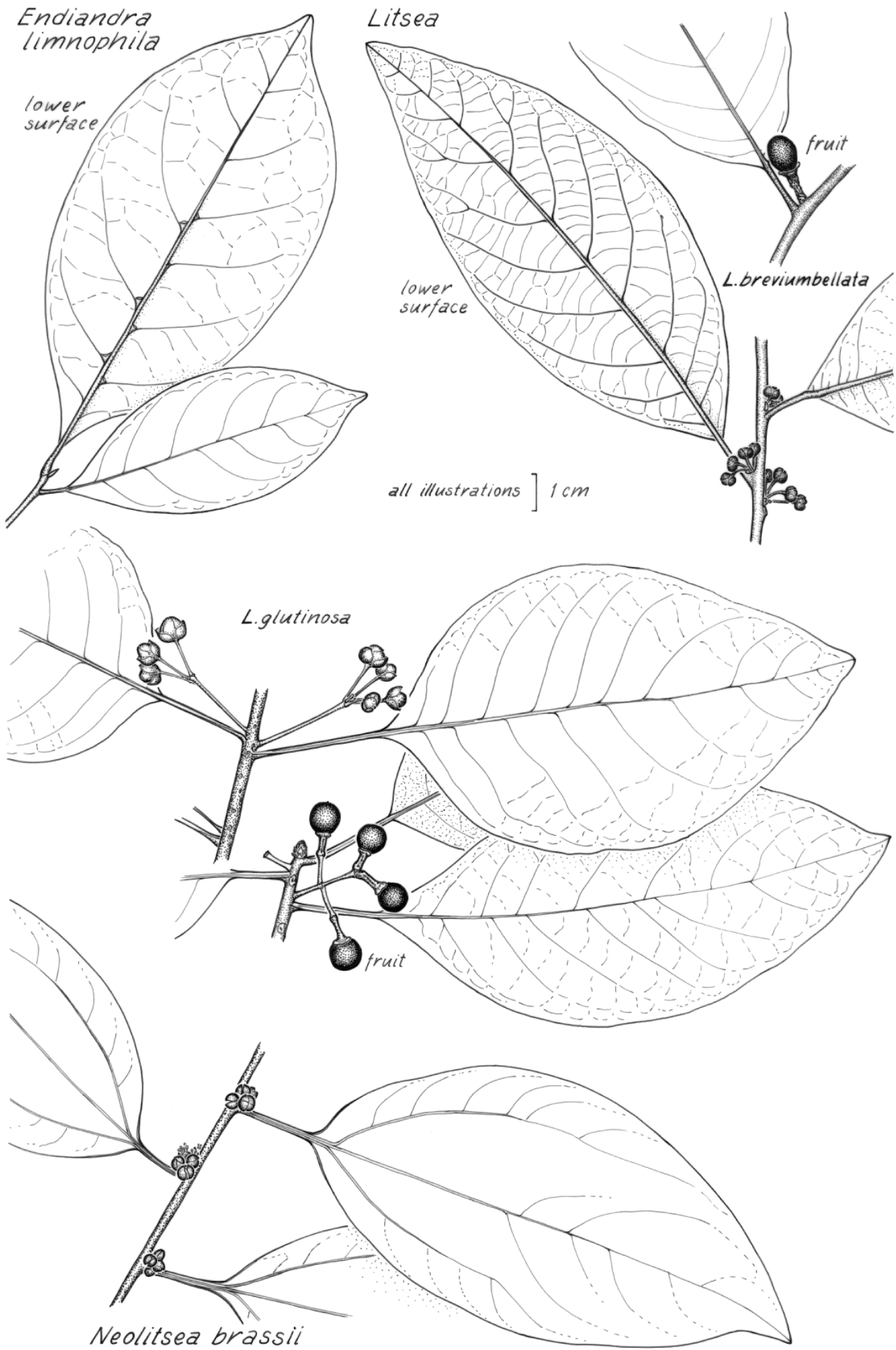


Fig. 2



Australia (N.T., Qld) and New Guinea. In the Tiwi Islands. Grows in wet monsoon vine forests, N.T. distributed across the western half of the riparian forest and swamp edges on a variety of D.R., from the mouth of the Daly River to the substrates.

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Pl. 1 *Cassytha capillaris* (Photo: I.D. Cowie)



Pl. 4 *Cryptocarya exfoliata* (Photo: B.M. Stuckey)



Pl. 2 *Cassytha filiformis* (Photo: I.D. Cowie)



Pl. 5 *Litsea glutinosa* (Photo: J. Brock)



Pl. 3 *Cryptocarya cunninghamii* (Photo: J. Brock)