

# *Eucalyptus gittinsii* subsp. *illucida*

## Classification

Eucalyptus | Eudesmia | Limbatae | Heteropterae | Tetraedrae

## Nomenclature

***Eucalyptus gittinsii* subsp. *illucida*** D.Nicolle, *Nuytsia* 13: 319 (2000).

T: Western Australia: Hi-Vallee (Williams' Farm) Tootbardi Road, north of Badgingarra, 21 Sept. 1982, *M.I.H.Brooker 7651*; holotype: PERTH; isotype: PERTH.

## Description

**Mallee** to 4 m tall. Forming a lignotuber.

**Bark** smooth, grey-brown over cream to creamy brown to yellow, sometimes with a short stocking of grey-brown ribbony rough bark.

**Branchlets** not glaucous; oil glands present in or absent from the pith.

**Juvenile growth (coppice or field seedlings to 50 cm):** stems square in cross-section, not glaucous, hairy to glabrous; juvenile leaves opposite, sessile to shortly petiolate, broadly lanceolate to ovate to elliptical, 6–14 cm long, 2.5–4.5 cm wide, base lobed to rounded to tapering, apex acute, dull grey-green, hairy to glabrous.

**Adult leaves** usually alternate, occasionally opposite to sub-opposite, petioles 0.8–2.5 cm long; blade lanceolate to broadly lanceolate, sometimes falcate, 5.5–11 cm long, 1.2–3.2(3.5) cm wide, base tapering to petiole, concolorous, dull, blue-green to green, side-veins mostly acute, rarely penniveined, tertiary venation sparse to moderate, intramarginal vein present, oil glands mostly island.

**Inflorescence** axillary single, peduncles 0.7–1.6 cm long, buds 3 per umbel, pedicels 0.4–1.1 cm long. **Mature buds** clavate, 0.5–0.9 cm long, 0.4–0.6 cm wide, hypanthium four-angled, not glaucous, outer perianth whorl sepaline, inner whorl operculate, operculum rounded to flattened, stamens grouped in four clusters, inflexed, anthers oblong to ovoid, versatile, dorsifixed, dehiscing by longitudinal slits (non-confluent), style short, stigma tapered, locules usually 3 or 4, the ovules arranged in 4 distinct vertical rows on the placentae. Flowers whitish.

**Fruit** pedicellate (pedicels 0.2–1 cm long), cylindrical to barrel-shaped, 1.1–2 cm long, 0.8–1.1 cm wide, not glaucous, usually four angled, disc descending, valves 3 or 4, enclosed or near the rim.

**Seeds** dull brown to grey to black, obliquely pyramidal with a ragged flange around the edge, sides ribbed, 3–5 mm long, surface smooth not deeply pitted, hilum ventral.

**Cultivated seedlings (measured at node 10):** cotyledons reniform; stems square in cross-section, non-glaucous to slightly glaucous, conspicuously hairy, leaves petiolate, opposite, ovate, 4.5–8 cm long, 1.5–5 cm wide, dull grey-green to green, margins undulate and irregular due to hairs, apex rounded to acute, base lobed to rounded, lamina hairy.

## Flowering Time

Flowering has been recorded in January, February and March.

## Notes

*Eucalyptus gittinsii* is a mallee species growing on sandplains from two disjunct areas north of Perth; the first area from the Moore River northwards to Three Springs and the second from the Kalbarri National Park area. The stems are smooth or more rarely with loose, flaky, rough bark. The adult leaves are opposite to sub-opposite, glossy (northern population) to dull (southern population), light green or yellow-green with prominent side-veins and island oil glands.

It is related to *E. eudsmioides* which differs by the consistently opposite leaves and smaller buds and fruits. It can also be confused with *E. conveniens* which can be distinguished by having glaucous branchlets and buds.

There are two subspecies:

***E. gittinsii* subsp. *gittinsii***



Grows in the Kalbarri National Park area and is distinguished from subsp. *illucida* by its glossy adult leaves.

#### **E. gittinsii** subsp. *illucida*

Grows from Three Springs south to the Moore River and can be distinguished from subsp. *gittinsii* by having dull adult leaves.

*Eucalyptus gittinsii* belongs in *Eucalyptus* subgenus *Eudesmia* because of the combination of cotyledons reniform in shape and folded and clasping in embryo, buds with the calyx free and evident as four small teeth around the midline of the bud. (Sections *Ebbanoenses* and *Reticulatae* in this subgenus have the calyx fused to the corolla and evident as four small teeth at the apex of the bud.) Within subgenus *Eudesmia*, *E. gittinsii* belongs in the section *Limbatae*, series *Heteropterae*, subseries *Tetraedrae*, that is further characterised by having seedling leaves with stellate hairs, the presence of oil glands in the pith of the branchlets, stamens arranged in four bundles, flanged  $\pm$  pyramidal seeds and buds and fruit square in cross-section. The other species in subseries *Tetraedrae* are *E. eudesmioides*, *E. pleurocarpa*, *E. conveniens*, *E. extrica*, *E. erythrocorys* and *E. roycei*. Of this group, *E. gittinsii* is closest to *E. conveniens* and *E. eudesmioides* and the differences are discussed above. *E. pleurocarpa* differs by having glaucous branchlets, buds and fruit (*E. gittinsii* is never glaucous). *E. extrica* is the non-glaucous form of *E. pleurocarpa* and is distinguished from *E. gittinsii* by the more consistently opposite, larger adult leaves. *E. erythrocorys*, with its large red buds and bright yellow anther filaments, should not be confused with any other eucalypt. *E. roycei* can be easily distinguished by having seven buds in each umbel. (*E. gittinsii* has three buds per umbel.)

#### Origin of Name

*Eucalyptus gittinsii*: after Clifford Halliday Gittins (1904–1995). Clifford Gittins was an engineer with a keen interest in native flora. He visited many remote places and made many important botanical collections, including being the first to collect this species named in his honour.

subsp. *illucida*: Latin *il*, not and *lucidus*, shining or bright; referring to the dull adult leaves.

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