

Eucalyptus viridis

Green mallee

Classification


Eucalyptus | Symphyomyrtus | Adnataria | Apicales | Buxales | Continentes

Nomenclature

Eucalyptus viridis R.T. Baker, *Proc. Linn. Soc. New South Wales* 25: 316 (1900). 

T: on hills near Girilambone, NSW, March 1900, *W.Bauerlen* 2535; Lectotype: NSW33684; isolectotypes: NSW333679, NSW333681, NSW333682, NSW333683), *fide* A.R. Bean *Telopea* 12: 476 (2010).

Eucalyptus acacioides A.Cunn. ex Maiden, *Crit. Revis. Eucalyptus* 2: 45 (1914) *nom. illeg.* T: Lachlan R., NSW, 23 May 1817, *A.Cunningham* 203; holo: NSW; iso: CANB, K.

Eucalyptus viridis var. *ovata* Blakely, *Key Eucalypts* 229 (1934). T: Mt Boppy, Cobar, NSW, Aug. 1903, *J.L.Boorman s.n.*; syn: NSW; Cobar, May 1918, *J.L.Boorman s.n.*; syn: NSW. 

Eucalyptus wimmerensis Rule, *Muelleria* 7: 193 (1990); *E. viridis* subsp. *wimmerensis* (Rule) Brooker & Slee, *Muelleria* 9: 81(1996). T: Victoria, Lawoit Range on the Western Hwy between Nhill and Kaniva, 36°24'S, 141°31'E, 27 Dec. 1964, *J.H.Willis s.n.*; holo: MEL.

Eucalyptus aenea K.D.Hill, *Telopea* 7(2)101(1997). T: New South Wales: Central Western Slopes: Death Adder rock, near Gungah, *K.D.Hill* 4806, *et al.*, 12 Mar. 1996; holo: NSW; iso: AD, BRI, CANB, K, MEL, MO, NY.

Description

Mallee or **tree** to 8 m tall. Forming a lignotuber.

Bark rough, dark grey and box-type on lower stems, smooth above, grey-brown and coppery to bronze-grey and pink-grey, or smooth throughout.

Juvenile growth (coppice or wild seedling to 50 cm tall) stem rounded or square in cross-section; juvenile leaves sessile or shortly petiolate, opposite for a few nodes then alternate, linear to narrowly lanceolate or narrowly elliptical, 4.5–9.5 cm long, 0.2–1.1 cm wide, base tapering, green or blue-green.

Adult leaves alternate, petiole 0–1.3 cm long; blade narrowly lanceolate to linear and falcate or narrowly elliptical, 5–13 cm long, 0.3–1.5 cm wide, base tapering, glossy, green, side-veins acute, reticulation sparse or absent, intramarginal vein parallel to and just within margin, oil glands mostly island and very irregular in shape or obscure.

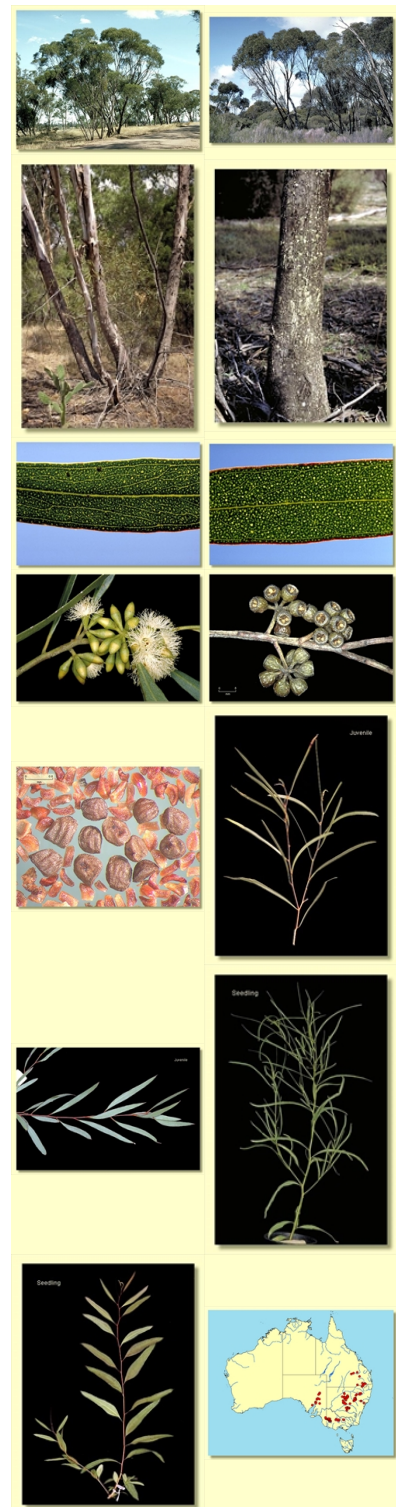
Inflorescence terminal compound, or some axillary single umbels also, peduncles 0.3–1.3 cm long, buds 7 or 9 per umbel, pedicels 0.1–0.6 cm long. **Mature buds** broadly ovoid to diamond-shaped, 0.4–0.8 cm long, 0.2–0.4 cm wide, green to yellow, scar absent, operculum conical, stamens inflexed, or irregularly flexed, anthers adnate, cuboid to globoid, dehiscing by small lateral or subterminal pores, stigma blunt or pin-head shaped, locules 3 or 4, the placentae each with 4 vertical ovule rows. Flowers white.

Fruit usually pedicellate, rarely sessile (pedicels 0.1–0.5 cm long), cup-shaped, (0.2)0.3–0.7 cm long, 0.3–0.5(0.7) cm wide, disc descending, valves 3 or 4, near rim level or enclosed.

Seeds brown, 0.7–2 mm long, ovoid or flattened-ovoid, dorsal surface shallowly reticulate, sometimes lacunose, hilum ventral.

Cultivated seedlings (measured at ca node 10): cotyledons reniform to oblong; stems rounded in cross-section; leaves scarcely petiolate, opposite for 3 or 4 nodes then alternate, linear to narrowly lanceolate 6–15(20) cm long, 0.2–2.5 cm wide, base tapering, apex pointed or rounded, dull, green or grey-green.

Flowering Time



Flowering has been recorded in February, March, April, May, June, August, September, October, November and December.

Notes

Eucalyptus viridis is a mallee or small tree of scattered and widespread distribution from the Middleback Range, southern Flinders Range and upper south-east of South Australia continuing into Victoria across to the Bendigo area with a gap to mid-western New South Wales around West Wyalong, then north and north-east to Yathong, Cobar, Gungal, Singleton and Broke and north to Yetman, and in Queensland from Inglewood extending sporadically north to north-west of Taroom. A glossy green-leaved mallee box, it is usually rough-barked over part of the stems, has relatively narrow adult leaves, and has axillary and terminal buds in sevens and nines with two intact opercula. Fruit are small and more or less cupular and juvenile leaves green or blue-green.



Of the mallee species in the box group in South Australia, *Eucalyptus viridis* is most likely to be confused with *E. odorata*, which differs in having only axillary inflorescences and much more extensive rough bark. In the Wilpena and Blinman area of the Flinders Ranges the undescribed species *E. sp.* Flinders Ranges has glaucous axillary inflorescences and very narrow leaves that are usually dull and green, blue-green or glaucous. *Eucalyptus albopurpurea*, restricted to southern Eyre Peninsula and Kangaroo Island, has much broader adult and juvenile leaves and often colourful flowers. Of the related species with wider distributions, *E. polybractea*, which sometimes grows with *E. viridis*, differs in having broader, dull blue-green to glaucous leaves on glaucous branchlets, and glaucous axillary inflorescences, while *E. porosa* has broader leaves than *E. viridis*, pedicellate buds in axillary clusters, fruit which are more rounded in cross-section and have four or five valves (three or four in *E. viridis*). The Victorian endemic *E. froggattii*, has fruit square in cross-section and adult leaves with numerous oil glands obscuring the venation.

The recently described mallee-box *Eucalyptus aenea* from the Gungal area of the Hunter Valley in New South Wales seems to always be smooth-barked but otherwise morphologically fits neatly within *E. viridis*, the latter being somewhat variable in the development of rough bark over its entire geographic range. Development of rough bark seems to be linked to the stature of the plant, which in turn may be linked to the habitat in which it grows and time since fire. We found at the type locality for *E. aenea* that the juvenile leaves can be narrower than reported in the original description. We include *E. aenea* in synonymy with *E. viridis*.

Another recently described mallee-box from east of Broke in the Hunter Valley region of New South Wales, *Eucalyptus castrensis* (Hill & Stanberg, 2002) (see image of type specimen held at CANB), is unconvincing. The adult specimens of this taxon fall within our circumscription of *E. viridis* as does one specimen of juvenile leaves whilst a second specimen of juvenile growth (and the illustration accompanying the original description) has ovate leaves and looks quite different. We have not yet seen this species in the field, and we understand all populations have been recently burnt (2005?). We are reluctant to include it as a separate taxon, or in synonymy, until variation in juvenile leaves is re-assessed.

Eucalyptus viridis var. *latiuscula* (see image of type specimen held at CANB), originally described from plants at Inglewood, Queensland, is a broader-leaved mallee-box regarded by Chippendale (1988) as a hybrid between *E. viridis* and *E. microcarpa*. This purported hybrid requires some investigation as plants from this site are scarcely different morphologically to those more recently described as *E. wimmerensis* also included in EUCLID in synonymy with *E. viridis*. Seedlings grown from one plant each of the Inglewood and Durakai populations in Queensland are kept at the Australian National Herbarium and suggest seedling leaves are similar to those of Rule's *E. wimmerensis*, but are not adequate for the assessment of any variation inherent in the populations nor adequate evidence of a hybrid origin.



In the classification of Brooker (2000) *Eucalyptus viridis* belongs in *Eucalyptus* subgenus *Symphyomyrtus* section *Adnataria* (the boxes) because the buds have two opercula, ovules are in four rows, seeds are flattened-ovoid, cotyledons are reniform, and anthers are rigid on the staminal filaments. Within section *Adnataria*, *E. viridis* is part of a subgroup, series *Buxeales* subseries *Continentes*, further distinguished by having buds that retain the outer operculum until flowering time when both opercula are shed together. Most species in this group are from eastern Australia and have all stamens fertile and are woodland trees of hills and plains, often dominant in the landscape, viz. *E. albens*, *E. moluccana*, *E. microcarpa* and *E. pilligaensis*. Others, viz. *E. viridis*, *E. polybractea*, *E. froggattii*, *E. odorata*, *E. albopurpurea*, *E. sp.* Flinders Ranges and *E. porosa*, are mallees, some of them also occurring as small trees occasionally.

Three new species were split off from *Eucalyptus viridis* (in the broad sense) by Rule (2004). One of these, *E. filiformis* Rule, seems better placed in *E. polybractea* especially considering the Flinders ranges populations; *E. walshii* Rule, has broader juvenile and adult leaves than is typical for *E. viridis* (subsp. *wimmerensis*) and *E. odorata*, but seems to be based on a single unusual small population of short slender partly rough-barked trees in the Little Desert which may simply differ as a result of slightly more favourable growing conditions; *E. hawkeri* Rule, from the flatter country immediately below Mount Arapiles, are trees or mallees with features inbetween *E. viridis* (subsp. *wimmerensis*) and *E. microcarpa* and are here regarded as intergrades.

Nicolle in his recent book "*Native eucalypts of South Australia*" (2013, pp. 186-187) resurrects the name *E. cajuputea* F. Muell. ex Miq., applying it to green-leaved mallee boxes growing on rocky hill sites on the northern Eyre Peninsula, Flinders Ranges and Mount Remarkable. Historically *E. cajuputea* has been synonymized with *E. odorata*, including in EUCLID. Nicolle also makes a comment about the similarity between *E. cajuputea* and *E. wimmerensis* Rule from the Little Desert of Victoria and adjacent areas in South Australia. In EUCLID we currently regard these "cajuputea" stands of mallee-box to be *E. viridis*.

The treatment of species of green-leaved mallee box in EUCLID needs to be reconsidered in light of all of these recent differences of

opinion. There are now several names available for different variants of the mallee-boxes *E. viridis*, *E. odorata* and *E. polybractea*, most erected on the visual features of a few specimens with no real assessment of within and between population variation in morphology or genetics for species that are found sporadically over a geographic range of some 2000 km. The differences between *E. viridis* and *E. odorata* are not great, with considerable overlap in measurements of juvenile and adult leaves, and bud and fruit size.

In 2018 Rule extended his studies of Victorian populations of mallee-box species describing four new subspecies of *Eucalyptus wimmerensis* and a new subspecies of *E. polybractea*. At present none of these are recognized in EUCLID as type specimens have not been distributed. See Rule (2018) for further information.

Origin of Name

Eucalyptus viridis: Latin *viridis*, green, referring to the leaves.

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