

# *Eucalyptus elata*

## River peppermint, River white gum

### Classification

Eucalyptus | Eucalyptus | Aromatica | Radiatae

### Nomenclature

***Eucalyptus elata*** Dehnh., *Cat. Plant. Hort. Camaldulensis* 1: 26 (1829).



T: Italy: ex Hortus Camaldulensis, (cultivated), *F. Dehnhardt s.n.*, undated; lectotype: RO; isolectotype: NAP; *fide* Bean, A.R., *Telopea* 12(4): 515 (2010).

*Eucalyptus amygdalina* var. *numerosa* Maiden, *Proc. Linn. Soc. New South Wales* 29(4): 752 (1904, publ. 1905); *A Critical Revision of the Genus Eucalyptus* 1(6): 155 (1905). T: not cited; *nom. illeg.*, as *E. amygdalina* var. *radiata* (DC.) Benth. was cited as a synonym; *fide* Bean, A.R., *Australian Systematic Botany Society Newsletter* 147-148: 10 (2011).

*Eucalyptus numerosa* Maiden, *Proc. Linn. Soc. New South Wales* 29(4): 752 (1904, publ. 1905); *A Critical Revision of the Genus Eucalyptus* 1(6): 155 (1905). T: not cited; *nom. illeg.* as *E. elata* Dehnh. was cited as a synonym; *fide* Bean, A.R., *loc. cit.*

*Eucalyptus lindleyana* var. *stenophylla* Blakely, *Key Eucalypts* 209 (1934); *E. andreana* var. *stenophylla* (Blakely) Cameron, *The Victorian Naturalist* 63: 41 (1946). T: Nullica, near Eden, NSW, October 1932, *W.A.W. de Beuzeville s.n.*; syn: NSW323478; *fide* Bean, A.R., *loc. cit.*; syn: Nullica, Eden, NSW, 12 Oct. 1932, *W.A.W. de Beuzeville s.n.*; CANB (3 sheets CANB412307, 412308, 412309.); [note: NSW323478: the image of this specimen clearly shows the date "9/1932" whilst the sheet CANB412307 has the date "12/10/32", whereas Bakely (*ibid.*) cites "October 1932"], *fide* A.V. Slee.

### Dubious names

*Eucalyptus andreana* Naudin, *Rev. Hort.* 346 (1880). T: [cultivated specimen from gardens in France]; syntypes: P (4 sheets); *nomen dubium*, *fide* Bean, A.R., *loc. cit.*

*Eucalyptus lindleyana* DC., *Prodr.* 3: 219 (1828), based on *E. longifolia* Lindl., *Bot. Reg.* 11, t. 947 (1826) *nom. illeg.*, *non* Link (1822). T: illustration (t. 947) in *Botanical Register*; *nomen dubium*, *fide* Bean, A.R., *fide* Bean, A.R., *loc. cit.*

### Description

**Tree** to 40 m tall, or rarely a **mallee** to 6 m tall. Forming a lignotuber.

In trees **bark** on lower trunk rough, compacted, dark grey to black, smooth above, white or cream, pale brown, green or pale grey, branches very ribbony; in mallees **bark** smooth throughout.

**Juvenile growth (coppice or field seedlings to 50 cm)**: stem rounded in cross-section, warty or smooth; juvenile leaves opposite, sessile for many pairs, lanceolate to falcate, 3.3–10.5 cm long, 0.6–1.6 cm wide, bases often amplexicaul, green.

**Adult leaves** alternate, petiole 0.6–2 cm long; blade lanceolate to falcate, 6–22 cm long, 0.6–2 cm wide, base tapering to petiole, concolorous, glossy, green, side-veins acute to sub-parallel, sparsely reticulate, intramarginal vein parallel to and well removed from margin (sometimes doubled), oil glands island.

**Inflorescence** axillary unbranched, peduncles 0.4–1.2 cm long, buds 11 to 30 or more per umbel, pedicels 0.3–0.5 cm long. **Mature buds** clavate, 0.2–0.4 cm long, 0.15–0.3 cm wide, green to yellow, scar absent, operculum conical to rounded sometimes apiculate, stamens inflexed or irregularly flexed, anthers reniform to cordate, versatile, dorsifixed, dehiscent by confluent slits (usually), style short, stigma blunt or tapered, locules 3 or 4, the placentae each with 2 vertical ovule rows. Flowers white.

**Fruit** pedicellate (pedicels 0.1–0.6 cm long), hemispherical or truncate-globose, 0.3–0.5 cm long, 0.3–0.6 cm wide, disc level or descending, valves 3 or 4, enclosed.

**Seeds** black, brown or reddish brown, 1.5–2.2 mm long, pyramidal or obliquely pyramidal, dorsal surface smooth or shallowly pitted, hilum terminal.

**Cultivated seedlings (measured at ca node 10)**: cotyledons reniform; stems rounded in cross-section, warty; leaves sessile, opposite for many nodes, linear to narrowly lanceolate, 3.5–7 cm long, 1.2–2 cm wide, amplexicaul, discolorous, darker green above.



## Flowering Time

Flowering has been recorded in January, September and October.

## Notes

A medium-sized to tall peppermint tree, usually on alluvial soils associated with creeks of coastal ranges from west of Sydney south to Gippsland in eastern Victoria.

Of the mainland peppermints, *E. elata* is notable for the upper smooth bark of the trunks and lower compact bark similar to that of the unrelated *E. badjensis* and *E. smithii*. Leaves are bright green and strongly scented, buds are delicate and numbers can exceed 30 per inflorescence, such that the mass of flower is more or less spherical. Other mainland peppermints are wholly rough-barked, some with glaucous buds and fruit (*E. radiata* subsp. *robertsonii*), one with ovate glaucous juvenile leaves (*E. dives*), characters that contrast strongly with *E. elata*, which is essentially half-barked, green-leaved at all stages and has a large number of small buds and fruit. A smooth-barked mallee form of *E. elata* is known from Little River Gorge and the hills of the upper Macalister River in Victoria, and from exposed rocky sites in Wadbilliga and Nalbaugh National Parks in south-eastern New South Wales.

*Eucalyptus elata* belongs to *Eucalyptus* subgenus *Eucalyptus* section *Aromatica* (the peppermints) because the buds have a single operculum, anthers are reniform, ovules are in two rows, seeds are  $\pm$  pyramidal, adult leaf venation is acute to sub-parallel (rarely parallel) and juvenile leaves are sessile and opposite for many pairs. Within this section five closely related species form series *Radiatae*, viz. *E. elata*, *E. radiata* (with three subspecies), *E. croajingolensis*, *E. willisii* (with two subspecies), and *E. dives*. They differ from each other in bark and leaf characteristics, and, as a group, series *Radiatae* differs from the endemic Tasmanian peppermints, series *Insulanae*, by having numerous oil glands in the juvenile leaves.

## Origin of Name

*Eucalyptus elata*: Latin *elatus*, tall.

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