

# New England Blackbutt

*Eucalyptus andrewsii* Maiden

New England blackbutt on good sites is an erect tree to 45 m tall and dbh up to 2 m. The crown is of moderate width and density. In cold and poorer sites it may be only 20 m with a shorter trunk but wider, less compact crown. There are two subspecies, the typical and subsp. *campanulata*.

Subsp. *andrewsii* occurs principally on the Northern Tablelands of New South Wales and the adjacent high country of Queensland (Stanthorpe–Warwick–Toowoomba). There are sporadic occurrences farther north in Queensland in the Kroombit Range, south-west of Gladstone, Biggenden Bluff (west of Maryborough) and near Eungella (west of Mackay). Subspecies *campanulata* occurs in the ranges and the eastern side of the Northern Tablelands of New South Wales and possibly into far south-eastern Queensland.

The topography is undulating to somewhat hilly. The soils mainly have strongly differentiated profiles with a bleached subsurface horizon (duplex or podzolic types) and vary from moderately deep loamy sands of good fertility by forest criteria, to skeletal. The parent rock material is mainly granite, but there is some quartz porphyry and basalt.

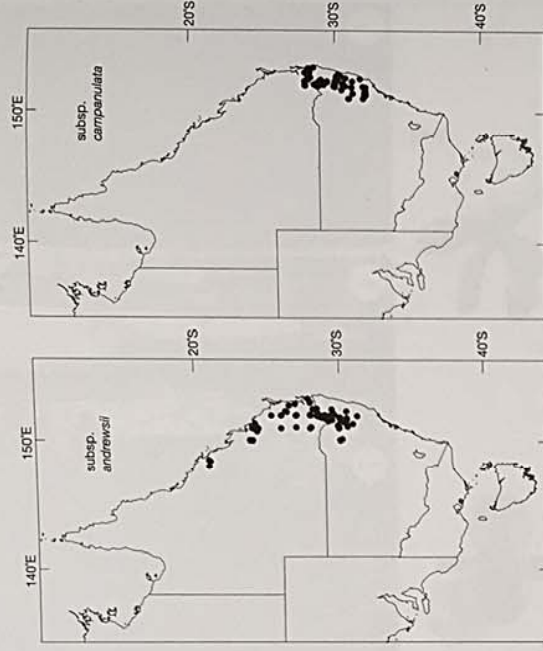
New England blackbutt grows in open or tall open eucalypt forests or in eucalypt woodland on poorer soils. Stringybarks (e.g. *E. macrorhyncha*, *E. caliginosa*, *E. youmanii* and *E. mckieana*) are common associates and other species include white box (*E. albens*), red ironbark (*E. sideroxylon*), silver-leaved ironbark (*E. melanophloia*), rough-barked apple (*Angophora floribunda*) and, on lower drainage lines, red gums (e.g. *E. blakelyi*, *E. prava*).

**Related species:** New England blackbutt is one of the taller tree species in the 'blue ashes group', placed in section *Cineraceae* by Brooker (2000). It belongs in the series *Psathyroxylon*, diagnosed by buds with staminodes (an unusual character in subgenus *Eucalyptus*), although this character is rare in this species. Within this series it is allied to a group with rough bark, the other group being the easily distinguished, smooth-barked scribbly gums (e.g.

*E. racemosa*). New England blackbutt is related to silvertop ash (*E. sieberi*), which differs in the compacted rough bark and larger buds and fruits. The bark of New England blackbutt is a peppermint-type, but the blue ash type seedlings and juvenile leaves easily distinguish it from the true peppermints (e.g. *E. radiata*). Subspecies *andrewsii* has hemispherical fruits which distinguish it from subspecies *campanulata* which has obconical fruits resembling small silvertop ash fruits in shape. The Queensland form of *E. andrewsii* has been published as *E. montivaga* by Bean (1997), but the differences from subsp. *andrewsii* are minor.

**Publication:** *E. andrewsii*, *Proc. Linn. Soc. N.S.W.* 29, 472 (1904). Type: Tingha, New South Wales, 16 Oct. 1903, R.H. Cambage. Subsp. *campanulata* (R.T. Baker and H.G. Smith) L. A.S. Johnson & D.F. Blaxell: *Contrib. N.S.W. Natl. Herb.* 4, 381 (1973). Type: Tenterfield, New South Wales, Dec. 1909, C.F. Laseron.

**Names:** Botanical—*andrewsii*, honours E.C. Andrews (1870–1948), geologist and botanist in New South Wales;



*campanulata*, Latin *campanulatus* (bell-shaped), in reference to the fruit shape. Common name—refers to the New England tablelands, a common habitat of both subspecies.

**Bark:** Rough and persistent on the trunk and larger branches, peppermint-type, smaller limbs smooth, whitish, often with ribbons of partly decorticated bark hanging in the canopy.

**Leaves:** Seedling—opposite for 3 or 4 pairs then alternate, petiolate, elliptical to ovate, 7–15 × 3–6.5 cm, greyish green, slightly discolorous. Juvenile—alternate petiolate, ovate, 10–20 × 3.5–9 cm, pendulous, greyish green. Intermediate—subopposite to alternate, petiolate, broad-lanceolate to almost ovate, 10–15 × 3.8–6.5 cm, but sometimes with an oblique base and up to 7.5 cm wide, bluish green or grey-green, concolorous. Adult—alternate, petiolate, lanceolate or falcate, 10–16 × 1.2–2.5 cm, bluish green or grey-green (*andrewsii*), green or grey-green (*campanulata*), concolorous.

**Inflorescences:** Simple, axillary, 11 to 15-flowered; peduncles terete to angular, 0.5–2 cm long; pedicels 0.3–0.6 cm long; buds clavate, slightly pruinose (*andrewsii*), 0.4–0.5 × 0.25–0.3 cm; opercula hemispherical, apiculate, Flowers Nov.–Feb.

**Fruits:** Pedicellate, hemispherical, 0.4–0.5 × 0.5–0.6 cm (*andrewsii*); obconical, 0.6–0.8 × 0.4–0.6 cm (*campanulata*); disc relatively broad, more or less level, valves 4 or 5, about rim level. Seeds dark brown, pyramidal or obliquely pyramidal, hilum terminal.

**Wood:** Sapwood very pale brown, up to 7.5 cm wide, susceptible to attack by *Lyctus* borers; heartwood light brown, to moderately fine texture, kino (gum) veins common, durable to moderately durable; density 725–1030 kg m<sup>-3</sup>; used for general building construction and occasionally for veneer.

**Climate:** Altitudinal range: 400–1250 m; Hottest/coldest months: 25–30°C/–2–3°C; Frost incidence: moderate to high (40–70 each year and snow at high elevations); Rainfall: 750–1800 mm per year, summer max.

**Distinctive features:** Peppermint-type bark; typical ash seedlings; intermediate and adult leaves, twigs and buds slightly pruinose for subsp. *andrewsii*; long pedicels; buds small, clavate, staminodes rare; fruits hemispherical (*andrewsii*) or obconical (*campanulata*).