

More about White Mahoganies

Notes

White mahogany eucalypts are fully rough-barked forest or woodland trees confined to eastern New South Wales and Queensland.

Taxonomy

In the classification of Brooker (2000) white mahogany species are placed in *Eucalyptus* subgenus *Eucalyptus*, because the buds have a single operculum, the anthers are reniform, ovules are in two rows on the placenta and the seeds are more or less pyramidal. Brooker (*ibid.*, p. 124) groups the five white mahogany species published up until that time into section *Amentum*, chiefly recognised by the extensive finely fibrous bark, the clustering of inflorescences towards the ends of branchlets, the densely reticulate venation of the adult leaves, and the opposite, sessile juvenile leaves. The juvenile leaves may indicate some affinity with the blackbutts (section *Pseudophloius*) and the peppermints (section *Aromatica*). The species included in section *Amentum* by Brooker are *E. acmenoides*, *E. apothalassica*, *E. psammitica*, *E. umbra* and *E. carnea*.

The species level classification of white mahogany species has been revised recently (Hill, 1999) where seven new taxa were described. A review of specimens and some field observations by the authors of EUCLID have found this revision to be partly unworkable because some species delineations seem to be weakly founded in morphology. The three main features used by Hill in delineating species are discolourous or concolorous adult leaves and associated stomatal distribution patterns, fruit shape and presentation of disc and valves, and height of plant at transition from juvenile to intermediate foliage where opposite sessile leaves become alternate and ultimately petiolate. Leaf colour and sheen are two additional characters.

White mahogany species are easier to identify from fresh material than from dried herbarium specimens. It is easy to tell when fresh leaves are discolourous but the feature is not always obvious when leaves are dry. Leaves that are strikingly discolourous in the field usually remain so when dry, whereas leaves only slightly discolourous when fresh often seem concolorous when dry. Stomatal distribution patterns are difficult to see even with a good light microscope. Fruit shape in the white mahoganies usually varies from truncate-globose to hemispherical or barrel-shaped, whilst the disc (formed from the nectary of the flower) may be level with the rim, level but placed below the rim, descending at an oblique to vertical angle or largely hidden from view within the fruit. In dehisced fruit the valve tips are usually visible and placed near the disc, sometimes slightly protruding but more commonly below the disc or the rim and scarcely visible. The amount of variation in fruit features is itself variable between taxa with some taxa showing constancy in disc presentation and others varying from tree to tree in a population. Juvenile leaf growth is helpful if available and if its height can be assessed.

Synopsis of the White Mahogany species as treated in EUCLID

In EUCLID the authors recognize eight of the twelve species Hill (1999) recognized and these are briefly enumerated below:

1. *Eucalyptus acmenoides* - a strikingly discolourous-leaved forest tree from the coastal zone from central New South Wales to north of Cairns, Queensland. Juvenile leaves are ovate-lanceolate; fruit often have a descending or concealed disc, and valves are at rim level or enclosed. We synonymise the Blackdown Tableland endemic *E. contracta*, and the coastal species *E. portuensis* and *E. uvida*. See *Eucalyptus acmenoides* fact sheet for details.
2. *E. apothalassica* - an inland tree from Yetman in northern New South Wales north to Inglewood, Barakula, Yarraman and Eidsvold in south-eastern Queensland, with concolorous adult leaves and ovate to lanceolate juvenile leaves, generally small-fruited but variable in presentation of the disc.
3. *E. carnea* - forest tree distributed from the Hunter Valley in New South Wales north to Gympie in Queensland, with more or less concolorous, thick, dull, blue-green or green adult leaves, juveniles broadly ovate becoming alternate and petiolate after few nodes; fruit with disc flat or slightly descending and valves at rim level.
4. *E. helidonica* - an inland tree endemic in south-eastern Queensland where found around Helidon and Crows Nest, with dull discolourous adult leaves, linear-lanceolate juvenile leaves with stem-clasping bases persisting opposite until young sapling size; fruit with disc level or descending and valves at rim level or enclosed.
5. *E. latisinensis* - tree endemic to areas of deep sands (wallum) from coastal south-eastern Queensland, with concolorous dull to slightly glossy leaves, ovate juvenile leaves which become alternate and shortly petiolate after very few nodes; fruit with level or slightly descending disc and valves at rim level. Formerly included in *E. umbra* but see below.
6. *E. mediocris* - a tree endemic to inland Queensland from the Carnarvon Range north-east to Atherton Tableland and, as treated in EUCLID, includes *E. irritans* because the type specimens of the two species are virtually identical. It has concolorous or only slightly discolourous adult leaves and lanceolate to ovate juvenile leaves; fruit have level or descending disc with valves usually visible at rim level.

7. *E. psammitica* - a species of drier sub-coastal sites in northern New South Wales and south-eastern Queensland, with concolorous adult leaves, lanceolate juveniles and largish fruit almost always with a level disc with valves at rim level or enclosed.

8. *E. umbra* - forest tree of coastal New South Wales from elevated sites with shallow sandy soil from the Sydney region north to about Kempsey, with concolorous, thick adult leaves, semi-glossy to glossy, juveniles broadly ovate becoming alternate after few nodes; fruit largish, flat-topped with level disc and valves at rim level. This species was previously regarded as extending north through subtropical coastal Queensland as far as Yeppoon. Hill (1999) renamed these coastal Queensland populations as *E. latisinensis*, distinguishing them from typical *E. umbra* using a combination of habitat and slight morphological differences. *E. latisinensis* invariably occurs on low-lying deep sands.

White mahogany species data from EUCLID: every species overlaps with at least one other

species	Fruit length cm	Fruit width cm	Juvenile leaf length cm	Juvenile leaf width cm
acmenoides	0.4–0.9	0.5–0.8	5–12.5	1.3–5
apothalassica	(0.3)0.4–0.6	0.4–0.6(0.7)	6.5–14	2–4.2
carnea	0.3–0.6(0.7)	0.5–0.8	8–20	5–10
helidonica	0.4–0.6	0.4–0.6	6–13.5	0.7–1.8
latisinensis	0.3–0.7	0.5–0.9	5–15.5	3–7
mediocris	0.5–0.8	0.5–1	6–12	1–4
psammitica	0.8–0.9	0.7–0.9	6.5–11	2–5
umbra	0.3–0.7	0.6–1	8–20	5–10

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