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THE BROOMBUSH COMPLEX

Margaret Byrne

Broombush is widespread in the dry woodlands and shrublands of southern Australia. Formerly it was all called *Melaleuca uncinata*, but now it has been recognised that there are 11 species in the broombush complex, so it is important to know which is which when planting broombush for revegetation.

Recognition of these different species means that selection and development of appropriate plants for revegetation can be undertaken more effectively. When a species is planted it is important to know that it has the desired characteristics and will deliver the product and/or environmental benefits that are required. It is also important that the species is adapted to the conditions in which it is planted.

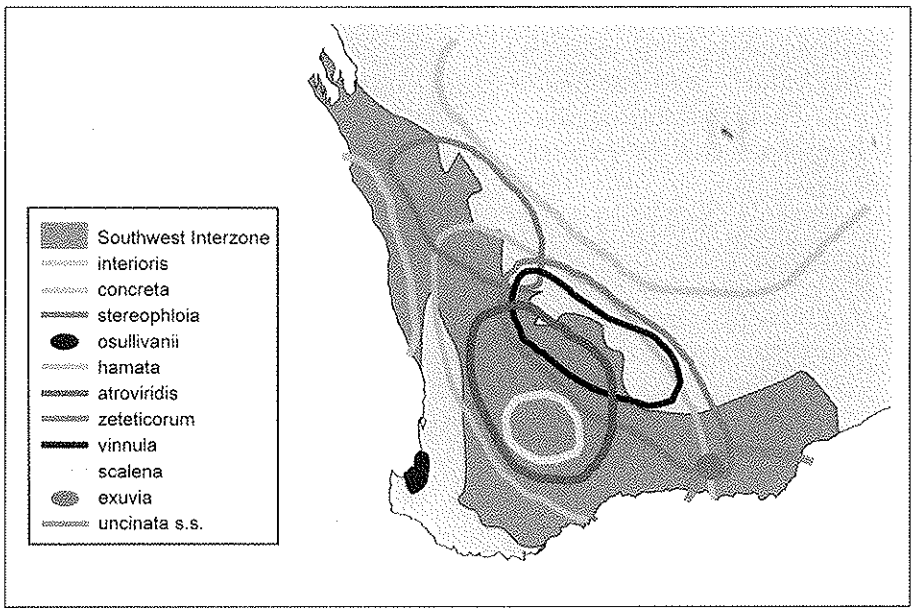
Each of the newly defined species has a specific geographic range (see map), but the ranges are not mutually exclusive, i.e. more than one species may occur at a given site. At most sites where more than more species occur there is no evidence of hybridisation between them. But hybrid plants have been seen at a few sites.

The species can generally be distinguished by their leaf shape and the distribution of oil glands, by the form of the infructescence (collection of fruit), and by the bark. Most species have circular (terete) shaped leaves but true *M. unicnata* has quadrate leaves (they won't 'roll' between your fingers) and two species have flat leaves. The leaves of *M. stereophloia* are flattened but dumbbell shaped in cross section. In most species the oil glands are scattered on the leaves, but in *M. uncinata* and *M. stereophloia* they are in rows along the leaf margins. The cluster of fruits is generally globular-shaped around the stem but is elongated in *M. atroviridis*. The table summarises this information.

All species except for *M. atroviridis* (and possibly *M. exuvia*) resprout. There are two variants in *M. atroviridis*, one grows in saline and winter-wet depressions and doesn't resprout, and the other one occurs on upland sites and does resprout.

To determine which species may occur in your area, you should first

Map showing distribution of species



(This map is very clear in colour! If you would like a colour copy, please contact me and request that one be sent to you by post or by email. - Ed.)

The main morphological characteristics of species in the *Melaleuca uncinata* complex.

species	leaf shape in cross section	oil glands	bark	infructescence
M. uncinata	quadrate	in rows	papery	globular
M. interioris	circular	scattered	papery	globular, open
M. concreta	linear, flat, thickened	scattered	papery	globular
M. stereophloia	dumbbell	in rows	fibrous	globular
M. osullivanii	circular, fine	scattered	papery	globular
M. hamata	circular, thick	scattered	papery	globular
M. atroviridis	circular	scattered	papery	cylindrical
M. zeteticorum	circular, short, hairy	scattered	papery/fibrous	globular
M. vinnula	linear, flat, thin	scattered	papery	globular
M. scalena	circular	scattered	papery	globular
M. exuvia	circular	scattered	papery	globular

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Broombush

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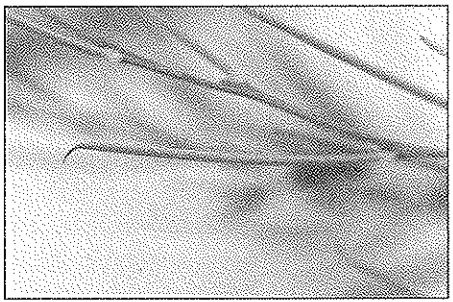
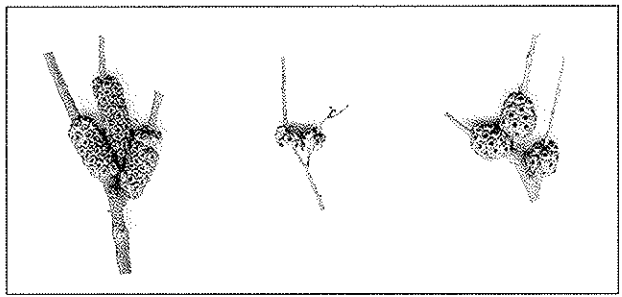


M. hamata *showing the 'typical' needle-shaped hooked leaf.*



Fruit clusters, showing clylindrical, M. atroviridis*; open,* M. interioris *and the globular clusters of most species.*

M. stereophloia *showing flat leaves and oil glands in rows*

look at the map to see what is likely, then study the different combination of features as shown in the table. For those who would like to be really accurate, a botanical key to the Broombush complex is given in the reference below.

Craven LA, Lepschi BJ, Broadhurst L and Byrne M (2004) Taxonomic revision of the broombush complex in Western Australia (Myrtaceae, *Melaleuca uncinata* s.l.). Australian Systematic Botany **17**: 255-271.

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