

## *Acacia euthycarpa* (J. Black) J. Black

### Common Name

None known.

### Habit

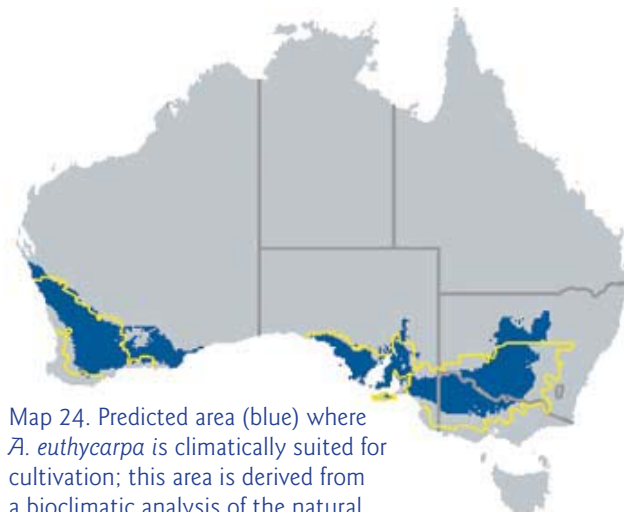
Obconic shrubs 2–6 m tall, reputed to attain small tree stature to c. 10 m high but such plants have not been seen by the authors (see discussion under Variants below), with 3–6 main stems from near ground level, the main stems sub-straight to somewhat crooked, 7–10 cm dbh and becoming much divided

into many twiggy, ascending to erect terminal branches (pendulous on plants from the Gawler Range, S.A.), the crown sub-dense and occupying  $\frac{1}{4}$ – $\frac{1}{2}$  total plant height, develops strong lateral roots. Bark smooth, thin, grey.

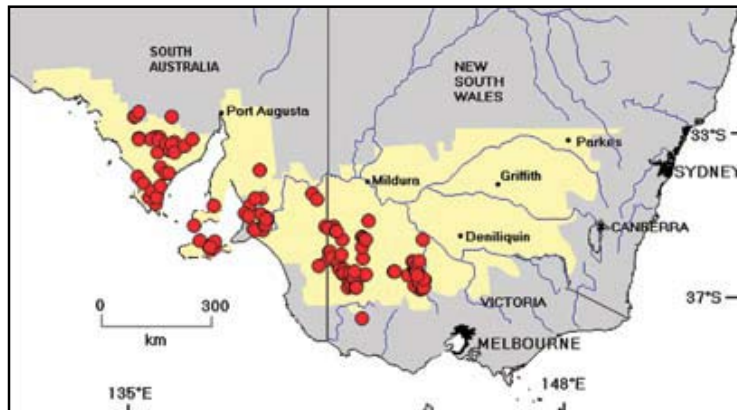
Botanical descriptions and illustrations/photographs are provided by Maslin & O'Leary (2001).

### Taxonomy

*Acacia euthycarpa* is referable to *Acacia* section *Phyllodineae*, a diverse, and probably artificial, group of about 408 species (Maslin 2001) which are characterized by having '1-nerved' phyllodes and flowers arranged in globular heads (see Maslin & Stirton 1998 and Maslin 2001 for discussion). More specifically this species is a South Australian member of the Australia-wide '*Acacia microbotrya* group' (Maslin 1995) and has until recently been treated as conspecific with its very close relative, *A. calamifolia* (see Maslin & O'Leary 2001 for discussion). *Acacia calamifolia* is not regarded as a prospective species for development as a woody crop plant on account of its low wood biomass production. However, a number of other species from the '*Acacia microbotrya* group' are detailed in the present report, namely, *A. bartleana*, *A. microbotrya*, *A. retinodes*, *A. rivalis* and *A. wattiana*. Species of section *Phyllodineae* are widespread in Australia with the main centres of richness located in temperate and adjacent semiarid areas of eastern, southeastern and southwestern Australia; species numbers greatly decline in the arid zone and in northern tropical/subtropical areas (Hnatiuk & Maslin 1988 and Maslin & Pedley 1988).



Map 24. Predicted area (blue) where *A. euthycarpa* is climatically suited for cultivation; this area is derived from a bioclimatic analysis of the natural distribution (red circles, Map 23), see also Table 5. Target area shown in yellow.



Map 23. Distribution of *A. euthycarpa*.

As discussed by Maslin & O'Leary (2001) *A. euthycarpa* exhibits a wide range of variation and further study is needed to elucidate this complexity. The species normally grows as a shrub 2–4 m tall, however, under the name of *A. calamifolia*. Court (1973) reports *A. euthycarpa* from the Wedderburn–Wychitella district in Victoria to occur as substantial trees reaching 10 m high and with a stem diameter of c. 20 cm. Despite having briefly visited this area we have not been able to locate these plants. Tall shrub forms (to 6 m high)

Figure 11. *Acacia euthycarpa*



**A** – Old plant at Saunders Creek, S.A. (note sub-straight main stems & terminal crown). (Photo: B.R. Maslin)



**B** – Stem branching near base. (Photo: B.R. Maslin)



**C** – Section of stem of plant in A (wood dense). (Photo: B.R. Maslin)



**D** – Adolescent plant at Saunders Creek showing typical obconic growth form. (Photo: B.R. Maslin)



**E** – Flowering branch showing heads (in very short racemes) & short phyllodes. (Photo: M. O'Leary)

occur near Saunders Creek in South Australia and it is these plants that form the basis of the above description.

## Distribution and habitat

Occurs in South Australia from Mt Finke, Gawler Ranges, Eyre Peninsula, Kangaroo Island, the Barossa Range south to Goolwa, and eastwards through the Murray Mallee to north-western and western Victoria (including Mt Arapiles). This distribution is largely confined to the target area. Occurs on plains or gently undulating terrain on deep sand or alluvial loams derived from granite.

## Flowering and fruiting

Flowers from August to October and pods with mature seeds occur between December and January (Martin O'Leary, pers. comm.).

## Biological features

No experimental data available, however, based on field observations of the Saunders Creek population it is probable that this species would be only moderately fast growing (it may take around 10 years to produce stems c. 3 cm dbh), its coppicing ability is unknown but it is unlikely to sucker. It is probably moderately long-lived (around 30 years, D. Kraehenbuehl pers. comm.)

## Cultivation

Not known in cultivation. However, it would be best suited to light-textured, well-drained soils.

## Weed potential

No records of weediness for this species despite the fact that its natural distribution is within the cleared, agricultural zone.

## Wood

Based on field observations from one plant from Saunders Creek the wood is dense and had an extensive development of medium brown heartwood.

## Utilisation

### Land use and environmental

Suited to low windbreaks on account of the porous crowns.

## Potential for crop development

Because of a paucity of relevant information it is difficult to accurately assess the crop potential of this poorly known species. Nevertheless, based on current evidence it is not regarded as particularly prospective as a crop plant for high volume wood production. It is ranked as a category 4 species and would seem best suited as a phase crop (Table 6). Judging from our observation of a natural population at Saunders Creek, South Australia, *A. euthycarpa* develops quite a good growth form but does not produce excessively large amounts of woody biomass (the upper branches are very twiggy). Furthermore, it is probably not overly fast growing and the wood appears to be rather dense (therefore lowering its attraction for use in reconstituted wood products). However, *A. euthycarpa* is a member of the '*Acacia microbotrya* group' which contains a number of species considered prospective in this report. It may therefore be worth further investigating *A. euthycarpa* and in particular trying to locate and assess the reported arborescent form that is reported to occur near Wedderburn in Victoria.

The area predicted to be climatically suitable for the cultivation of *A. euthycarpa*, based on its natural climatic parameters, is shown in Map 24. This analysis indicates that *A. euthycarpa* is a good match for climatic conditions throughout the less than 500 mm rainfall zone of the eastern and western target areas. This prediction suggests its cultivation could be extended beyond its natural distribution into large areas of New South Wales and Western Australia. The potential for cultivation on appropriate soils types throughout much of the target areas is a possibility.