

## Botanical name

*Acacia brumalis* (light land variant)

The taxon described here might possibly be a hybrid between *A. daphnifolia* (syn. *A. microbotrya* var. *borealis*) and *A. affin. jennerae*. It is referred to locally as the "Light Land Form" of *A. brumalis*, a name that is retained here for convenience.

## Common name

None known.

## Characteristic features

Bushy growth habit. *Phyllodes* variable in shape and size, most tend towards narrowly oblanceolate, 7-12(-14) cm long, (4-)5-17(-22) mm wide, 1-nerved on each face; glands 1-2, the lowermost 15-30 mm above the pulvinus. *Heads* globular, arranged in short racemes, the raceme axes and peduncles glabrous or appressed hairy. *Pods* prolific, 4-7 mm wide. *Funicle* 3/4 encircling the seeds, drying light brown or pale reddish.

## Description

**Habit.** Bushy *shrubs* 2-3 m tall and about the same across, sometimes clonal due to root suckering, dividing at, or just above, ground level into 2-4 or more main stems.

**Bark.** Smooth, variable in colour, grey near base of stems otherwise dull plum red to light bronze, commonly yellow-green on young plants.

**Branchlets.** Glabrous, bronze or dull reddish on upper surface (exposed to sun) but commonly greenish on lower surface (in shade).

**Phyllodes.** Variable in shape and size (even on a single plant), most tending towards narrowly oblanceolate, 7-12(-14) cm long, (4-)5-17(-22) mm wide, thinly coriaceous, not rigid, ascending to spreading, mostly straight (a few tending falcate), glabrous, dull green or sub-glaucous; with 1 *longitudinal nerve* (midrib) on each face; *apices* obtuse to (when narrow) acuminate; *glands* not prominent, 1 or 2 along upper margin of phyllode, the lowermost 15-40 mm above the pulvinus.

**Heads.** Arranged in 5-11-branched racemes 15-30 mm long, globular, light- to mid-golden, about 30-flowered (few heads seen); *raceme axes* glabrous to minutely appressed-hairy; *peduncles* 4-7 mm long, +/- glabrous to minutely appressed-hairy.

**Flowers.** 5-merous; *sepals* united.

**Pods.** Linear to sub-moniliform, 6-18 cm long, 4-7 mm wide, thinly coriaceous, prolific and occurring in clumps, pendulous, glabrous, dark brown tinged purple.

**Seeds.** Longitudinal in the pods, fairly large (4-6 long, 2-3 mm wide), dull, black; *funicle* 3/4 encircling the seed in a double fold, drying light brown or pale reddish, the aril cream-coloured.

## Taxonomy

Based on morphological criteria it is suspected that the taxon described here might possibly be a hybrid between *A. daphnifolia* and *A. affin. jennerae*. Characters suggesting this include its wide variation in phyllode width and the fact that the peduncles and raceme axes vary from glabrous to appressed-hairy.

This taxon is referable to the large, Australia-wide assemblage informally called the "*Acacia microbotrya* group" (see Maslin 1995 for discussion). Five members of this group occur in the Kalannie region, namely, *A. brumalis* (incurved phyllode variant and light land variant), *A. daphnifolia*, *A. jennerae* and *A. affin. jennerae*.

### **Distribution**

Appears to be rare within the Kalannie region. Plants attributed to this taxon have all been collected from a very restricted area about 40 km due northeast of Kalannie. They occurred along a farm track within a fenced-off area that had previously been cropped.

### **Habitat**

Light brown or yellow-brown sandy loam, with some gravel, on the lower slopes of rises high in the landscape.

**Recorded from the following Kalannie region Land Management Unit.** Sand over Gravel.

### **Conservation status**

Although this taxon is seemingly rare, its biological status needs to be clarified before a conservation status can be ascribed to it.

### **Flowering**

This taxon probably flowers from around April to June, but this needs to be confirmed. By early July 1997 plants in the Kalannie region had almost finished flowering.

### **Fruiting**

Pods with mature seeds were collected from the Kalannie region plants in early December 1996, suggesting that they were probably also present in the latter part of November.

Large quantities of pods and seeds are produced by this taxon. The pods occur in bunches and are easily collected by hand or by simple shaking techniques.

There are about 35 000 seeds per kilogram. *Note:* This figure is derived from a single sample counted by Angela Waters (Kalannie Tree Supplies) and would most probably have included both viable and non-viable seeds.

### **Biological features**

No information available.

### **Propagation**

Informal germination tests, using various hot water treatments, were conducted by Angela Waters (Kalannie Tree Supplies). Good results were obtained by either soaking the seed overnight in just-boiled water before sowing, or by boiling the seed for 5 minutes prior to soaking. Seeds appear to germinate more quickly by using the "5 minute boiled" pre-treatment. Untreated showed very low rates of germination.

### **Revegetation**

Although this taxon is apparently rare in the Kalannie region it could have potential for inclusion in mixed shelter belt plantings for sandplain soils on upper slopes in the landscape. It shows good naturally regeneration within a fenced-off area that had previously been cropped for 20 years.

### **Utilisation**

**Shade and shelter.** On account of its dense crown has some potential for providing shade and shelter for stock and wildlife.

**Windbreak.** See Revegetation above.

**Seed for human food.** *Acacia brumalis* (light land variant) form has characteristics that render it suitable for consideration as a source of human food (see Maslin *et al.* 1998). It produces large, easily collected pod crops which can seemingly be produced on quite young plants (perhaps 2-4 years old) and the seeds are fairly large and readily separated from the pods. It is emphasised, however, that much more research is needed before this species can be recommended for food production; in particular, there is a need for comprehensive biochemical analyses to ascertain if any anti-nutritional or toxic components are present in the seeds.

### **Reference**

Maslin, B.R. (1995). *Acacia* miscellany 14. Taxonomy of some Western Australian "Uninerves-Racemosae" species (Leguminosae: Mimosoideae: section Phyllodineae). *Nuytsia* 10(2): 181-203.

Maslin, B.R., Thomson, L.A.J., McDonald, M.W. and Hamilton-Brown, S. (1998). *Edible Wattle Seeds of Southern Australia. A review of species for semi-arid regions of southern Australia.* (CSIRO, Forestry and Forest Products, Australian Tree Seed Centre: Canberra.)