

### Botanical name

*Acacia fragilis* Maiden & Blakely, J. Roy. Soc. W. Australia 13: 5, pl. 4, figs 1--11 (1928)

The botanical name is a Latin word meaning *fragile* or *brittle*, and refers to the phyllodes which are very brittle when dry.

### Common name

None known.

### Characteristic features

*New shoots* invested with pale yellow or golden hairs, the young phyllodes erect. *Phyllodes* terete to sub-terete, often widely spreading, occasionally some deflexed, dark green, rather shiny, the tips narrowed to long, delicate, recurved points which are hairy at least when young, obscurely 8-nerved; *pulvinus* distinct, light orange. *Heads* globular. *Pods* linear, raised on alternating sides over seeds.

### Description

**Habit.** Dense, rounded *shrubs* (0.5-)1-2(-3) tall and 1-4 m wide, multi-stemmed or much-branched from just above ground level, less commonly single- or few-stemmed at ground level, crowns either extending to the ground (especially in open sites such as road verges) or occupying up to about 60% of the total plant height.

**New shoots.** With pale yellow or golden hairs, the young phyllodes erect.

**Upper branches and branchlets.** Glabrous, shiny, brown, lenticellular.

**Phyllodes.** Terete to sub-terete, 3.5-7(-8) cm long, about 1 mm in diameter, often widely spreading, occasionally some deflexed, erect when young, straight to shallowly incurved, smooth, rather shiny, glabrous, dark green; *longitudinal nerves* 8, obscure and widely spaced; *apices* narrowed to slender, curved, normally hairy (at least when young), long-tapered, non-pungent points; *pulvinus* 1.5-3 mm long, cylindric (not basally flared as in *A. consanguinea*), transversely wrinkled (at least when dry), glabrous, light orange.

**Heads.** Paired within axil of phyllodes, globular, 7-9 mm diameter when fresh, bright light golden, slightly fragrant, prolific and showy, 23-31-flowered; *peduncles* 4-5.5 mm long, sometimes to 8 mm when in fruit, sparsely appressed-hairy or glabrous.

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

**Pods.** Linear, sometimes undulate, raised on alternating sides over seeds and slightly constricted between them, 5-7 cm long, 2-3 mm wide, pendulous, firmly chartaceous thinly crustaceous, glabrous, shiny, light brown.

**Seeds.** Longitudinal in the pods, 2.5-3 mm long, 1-1.5 mm wide, dull to slightly shiny, very dark brown to black and often faintly mottled yellow; *aril* off-white and 2/3 as long as the seed.

### Taxonomy

**Related species.** *Acacia fragilis* together with *A. assimilis*, *A. aulacophylla*, *A. consanguinea*, *A. ophiolithica* and *A. uncinella* constitutes the "*A. fragilis* group", see Cowan and Maslin (1995) for discussion. Three taxa from this group occur in the Kalannie region, namely, *A. assimilis* subsp. *assimilis*, *A. consanguinea* and *A. fragilis*.

Within the Kalannie region *A. fragilis* is sometimes +/- sympatric with *A. assimilis* subsp. *assimilis* (which has generally longer phyllodes with more numerous, closely-spaced nerves) and *A. consanguinea* (which have generally shorter phyllodes with a basally flared pulvinus: see *A. consanguinea* for further details).

It is also closely related to, and somewhat arbitrarily distinguished from, *A. uncinella*, a species not occurring in the Kalannie region (see Cowan and Maslin 1995 for discussion).

**Variants.** Plants of *A. fragilis* from the Kalannie region show little variation. However, over its geographic range this is a highly variable species and further work is needed to satisfactorily resolve its taxonomy ( see Cowan and Maslin 1995 for discussion).

### **Distribution**

Occurs in southwest Western Australia where it is common from near Carnamah south-southeast to the Cunderdin-Merredin area. There are outlying populations near Holt Rock (c. 170 km southeast of Merredin), near Boondi (c. 190 km east of Merredin) and on Ponton Creek (20.5 km east of Zanthus, about 600 km east of Merredin). Additionally, there is a variant that occurs along the south coast from near Grasspatch and the Ravensthorpe Range.

*Acacia fragilis* is not common in the Kalannie region but it can form dense roadside regrowth populations in the places where it occurs.

### **Habitat**

Over its range *A. fragilis* grows in sand, gravelly or clayey sand and in rocky or sandy loam. It occurs in heath and on sandplains with mallee eucalypts and wattles.

In the Kalannie region it grows on yellow gravelly sand on low rises in tall mixed shrubland.

**Recorded from the following Kalannie region Land Management Units.** Pediment; Shallow Soil over Laterite; Spillway Sand.

### **Conservation status**

Not considered rare or endangered.

### **Flowering**

Over its geographic range *A. fragilis* flowers from August to October, or occasionally in July.

In 1997 plants from the Kalannie region were mostly in flower in August and September, except for one population which was in bud in early September.

### **Fruiting**

Over its geographic range this species produces pods with mature seeds from December to January.

Plants in the Kalannie region were with mature seed in mid-December 1996.

Pods are not especially easy to collect in quantity by hand as they tend to be scattered over the plants. The best method is to manually shake or gently beat the plants and collecting the pods and seeds on a ground sheet.

### **Biological features**

No information available.

## **Propagation**

Propagate from seed.

Informal germination tests, using various hot water treatments, were conducted by Angela Waters (Kalannie Tree Supplies). The best results were obtained by either soaking the seed overnight in just-boiled water prior to sowing, or by boiling the seed for 1 minute prior to soaking. Untreated seed showed a low germination response.

## **Revegetation**

Wilcox *et al.* (1996) recommend this species for revegetation in the Midlands and northern wheatbelt regions of Western Australia in areas where the soil comprises red loam or sandy loam over hardpan or sand over red clay.

## **Utilisation**

**Wildlife refuge.** On account of its dense, domed crowns with the foliage commonly extending to ground level *A. fragilis* has potential as a wildlife refuge for small animals. This growth form most commonly develops on plants that occur in open sites such as along road verges.

**Horticulture and amenity planting.** A decorative species with potential for planting in semi-arid areas.

## **References**

- Cowan, R.S. and Maslin, B.R. (1995b). *Acacia* Miscellany 15. Five groups of microneurous species of *Acacia*, mostly from Western Australia (Leguminosae: Mimosoideae: section Plurinerves). *Nuytsia* 10(2): 205-254.
- Wilcox, D.G., Lefroy, E.C., Stoneman, T.C., Schoknecht, N.R. and Griffin, E.A. (1996). *Trees and shrubs for the Midlands and Northern Wheatbelt*. (Agriculture W.A.: Western Australia.).