

## Botanical name

*Acacia colletioides* Benth., London J. Bot. 1: 336 (1842)

The botanical name is derived from *Colletia* (a genus in the family Rhamnaceae) and the Greek suffix *-oides* (like). Some species referred to *Colletia* have a resemblance to the spiny, rigid foliage of this *Acacia*.

## Common names

Wait-a-while, Pin-bush, Spine Bush.

## Characteristic features

Large, prickly, much-branched *shrubs*. *Phyllodes* +/- terete, sessile, rigid, straight to shallowly curved, widely spreading, finely 8-nerved (with a distinct inter-nerve space between each nerve), narrowed to needle-like points. *Heads* sub-globular on short peduncles. *Pods* strongly curved to openly coiled or twisted. *Seeds* black and 2/3 sheathed by a conspicuous, orange or yellow aril.

## Description

**Habit.** Harsh, rigid, prickly, much-branched, dense, rounded, usually multi-stemmed *shrubs* (0.5)1-3 m tall and about the same across, maturing to single-stemmed *small trees* 3-4 m tall with a dense canopy occupying 50% of the total plant height, in open sites (e.g. roadverges) it grows as a domed plant with the canopy extending to ground level, in dense vegetation it can grow as a small, erect plant with spindly stems and non-spreading crowns (however, these forms are not common in the Kalannie region).

**Branchlets.** Glabrous or sparsely hairy, scarred where phyllodes have fallen.

**Phyllodes.** More or less terete, sessile, inserted on distinct, yellow stem projections, 1.5-3(-4) cm long, 1-1.5 mm in diameter, rigid, widely spreading, straight to shallowly curved, green, glabrous; *longitudinal nerves* 8, widely spaced and distinct; *apices* narrowed to rigid, needle-like points.

**Heads.** Mostly 2 within axil of phyllodes, sub-globular, small, 15-24-flowered; *peduncles* 1.5-5 mm long, glabrous.

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

**Pods.** Strongly curved to openly once- or twice-coiled or twisted, 3-7 cm long (expanded length), 3-5 mm wide, thinly coriaceous, glabrous, light brown.

**Seeds.** Longitudinal in the pods, 3-4 mm long, 2-3 mm wide, shiny, black; *aril* conspicuous, orange or yellow, 2/3 sheathing seed.

## Taxonomy

**Related species.** *Acacia colletioides* is closely related to, and easily confused with, *A. nyssophylla* (which does not occur in the Kalannie region). *Acacia nyssophylla* is most readily recognized by its phyllodes which have many (about 20), very fine, closely spaced, longitudinal nerves.

## Distribution

Widespread across southern Australia where it extends from near Geraldton, Western Australia, eastwards through South Australia and northwest Victoria to near Dubbo and Barrigun in New South Wales. It normally occurs as scattered plants within the communities in which it occurs, only rarely forming dense thickets.

*Acacia colletioides* has a scattered distribution in the Kalannie region.

## Habitat

Over its extensive geographic range *A. colletioides* grows in a variety of soils, but commonly calcareous sand or sandy loam, in mallee scrub or open eucalypt woodland.

In the Kalannie region *A. colletioides* grows on medium- to heavy-textured, slightly to moderately saline soils on flats and on also higher in the landscape (along catchment divides) associated with Red Brown Earth.

**Recorded from the following Kalannie region Land Management Units.** Colluvial Flat-Earth; Red Brown Earth; Colluvial Flat-Solodic; Sandy Loam over Clay.

## Conservation status

Not considered rare or endangered.

## Flowering

Over its extensive geographic range *A. colletioides* flowers from July to October, with local conditions (especially the timing and/or intensity of rainfall events) seemingly influencing the onset of flowering.

In 1997 plants of *A. colletioides* in the Kalannie region had just finished flowering by early September while just to the north of the region (around Buntine Rock) it appeared as though plants did not flower at all that year.

## Fruiting

Over the extensive geographic range of this species pods with mature seeds have been collected from November to December.

In mid-December 1996 plants from the Kalannie region were with mature seeds. Pods often remain on the plants after the seeds have dropped.

Collecting pods and seeds can prove troublesome on account of the prickly foliage (stout gloves are recommended). Gently beating of the plants and collecting the pods and seeds on a ground sheet is probably a more efficient way of collection. Seeds can also be dislodged by firmly rubbing the pods in the hands (again gloves are recommended because the spiny phyllodes can become mixed-in with the pods).

There are about 180 000 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

**Growth characteristics.** A drought, frost and lime tolerant species according to Simmons (1987).

**Miscellaneous.** According to Bonney (1994), in South Australia the seeds of this species are eaten by birds such as parrots and pigeons.

## Propagation

Propagate from seeds or cuttings (Elliot and Jones 1982).

Informal germination tests, using various hot water treatments, were conducted by Angela Waters (Kalannie Tree Supplies). Best results were achieved by soaking the seed overnight in just-boiled water prior to sowing. Boiling the seed for 3 minutes prior to soaking or using untreated seed substantially reduced the germination

response. Rusbridge *et al.* (1996) reported similar results with seed that had been manually nicked prior to sowing.

According to Bonney (1994): Plant at 5-10 mm depth and keep propagation mix moist until germination; seeds can be sown from Springtime but for direct seeding sow from early Winter.

### **Revegetation**

*Acacia colletioides* has some potential for use in revegetation within the Kalannie region for use on on medium- to heavy-textured, slightly to moderately saline soils.

Wilcox *et al.* (1996) recommend this species for revegetation of crabholes (Gilgai soils, sometimes saline) and areas where the soil comprises red sand over clay or red loam or sandy loam over hardpan, in the Midlands and northern wheatbelt regions of Western Australia. *Acacia colletioides* is also recommended by Lefroy *et al.* (1991) for regeneration of "Salmon gum" country (i.e. alkaline loam over clay with distinctive white nodules of calcium carbonate at depth) and "Morrel" country (i.e. brown or grey, fine textured, alkaline loam grading to brown clay at depth) in the central wheatbelt region.

Although this species has been widely used in rehabilitation in the goldfields area, the results to date tend to be fairly poor according to Rusbridge *et al.* (1996).

### **Utilisation**

**Salinity control.** See Revegetation above.

**Erosion control.** Has some potential for controlling soil erosion given its low spreading habit.

**Live fence.** Its large spreading growth form, entangled branches and prickly foliage offer scope for growing as a low, live fence. If *A. colletioides* were grown in combination with *A. tetragonophylla* a particularly effective live fence could be produced.

**Wildlife refuge.** The much-branched crown and prickly foliage provides good wildlife protection (especially for birds and small animals).

**Tannin.** The bark of very old plants has been reported as having been used for tanning leather (Maiden 1889).

**Honey.** In New South Wales this species is regarded as a useful honey plant, with the best production following a wet winter (Cunningham *et al.* 1981)

### **References**

- Bonney, N. (1994). *What Seed Is That?* (Published by the author.)
- Cunningham, G.M., Mulham, W.E., Milthorpe, P.L and Leith, J.H.. (1981). *Plants of western New South Wales*. (Government Printer: Sydney.)
- Elliot, W.R. and Jones, D.L. (1982). *Encyclopaedia of Australian Plants suitable for cultivation*. vol. 2. (Lothian Publishing Company).
- Lefroy, E.C., Hobbs, R.J. and Atkins, L.J. (1991). *Revegetation guide to the central Wheatbelt*. (Agriculture W.A.: Western Australia.)
- Maiden, J.H. (1889). *The useful native plants of Australia*. (Compendium: Melbourne.)
- Whibley, D.J.E. and D.E. Symon (1992). *Acacias of South Australia*. (South Australian Government Printer: Adelaide.)
- 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.)

Rusbridge, S., Bradley, G. and G. (1996). *Plant Identification Handbook for Land Rehabilitation in the Goldfields of Western Australia*. (Published by the Goldfields Land Rehabilitation Group.)

Simmons, M.H. (1987). *Growing Acacias* (Kangaroo Press.)