

Botanical name

Acacia acuaria W.Fitzg., J. W. Austral. Nat. Hist. Soc. 1: 7 (1904)

The botanical name is derived from the Latin *acus* (needle) and *-arius* (suffix, belonging to), and refers to the needle-like phyllodes which characterise this species.

Common name

None known.

Characteristic features

Much-branched, diffuse *shrubs* with +/- spiny branchlets. *Phyllodes* short, slender and needle-like, widely spreading, green and tapered to very sharp points. *Heads* +/- globular. *Pods* strongly curved to openly once-coiled into a circle and/or somewhat irregularly twisted, dark (reddish) brown aging black.

Description

Habit. Prickly, much-branched, diffuse *shrubs* (0.5-)1-1.5(-2) m tall and 1-2 m across.

Bark. Light grey.

Branchlets. More or less spiny, rather rigid, glabrous or minutely hairy, often slightly white-pruinose.

Phyllodes. Confined to the short terminal branchlets, slender and needle-like, terete to sub-terete (but often flattish when dry), 6-20 mm long, usually about 1 mm wide, rigid, smooth (but with fine longitudinal grooves when dry), widely spreading, usually glabrous, green; with 1 obscure *longitudinal nerve* (midrib) on each face; *apices* narrowed to straight, slender, sharp points; pulvinus very small.

Heads. Single within axil of phyllodes, +/- globular, 6 mm diameter when fresh, golden, 14-23 flowered; *peduncles* 4-12 mm long, glabrous.

Flowers. 5-merous; *sepals* about 2/3-united.

Pods. Strongly curved to openly once-coiled into a circle and/or somewhat irregularly twisted, raised over seeds, 4-5 cm long (expanded length), 3.5-5 mm wide, firmly chartaceous to thinly crustaceous, glabrous, dark (reddish) brown aging black.

Seeds. Longitudinal in the pods, 2.5-3.5 mm long, 1.5-2 mm wide, slightly shiny, dark brown to black; *aril* club-shaped and about as long as the seeds, cream-coloured.

Taxonomy

Related species. The phyllodes *A. acuaria* commonly resemble those of *A. sessilis* and *A. aculeatissima*, neither of which occur in the Kalannie region.

Variants. Plants of *A. acuaria* from the Kalannie region show little variation. However, in the Wongan Hills area, near Bullfinch and north of Northampton a number of informal variants have been recognized (see Maslin 1982 and in press for discussion).

Distribution

Acacia acuaria occurs south-west Western Australia, principally in the area extending from near the Murchison River southwest to near Merredin; there are outliers at Fields Find, Mount Jackson and near Bullfinch.

The species is not common in the Kalannie region but is locally abundant in the places where it occurs. It is somewhat opportunistic and regenerates well in appropriate soils along roadverges.

Habitat

Over its geographic range *A. acuaria* grows in a variety of habitats but is most commonly found on clay or sandy clay soil in *Eucalyptus* woodland or open Mallee scrub.

In the Kalannie region it favours loams or clay-loams on flats, however, it sometimes occurs in lighter soils on the slopes of low rises or is associated with granite outcrops.

Recorded from the following Kalannie region Land Management Units.
Colluvial Flat-Earth; Red Brown Earth; Shallow Soil over Granite; Colluvial Flat-Solodic.

Conservation status

Not considered rare or endangered.

Flowering

Over its geographic range *A. acuaria* has a long flowering period, extending from June to September.

Plants in the Kalannie region were with bud and flowers at anthesis in late June 1997.

Fruiting

Over the geographic range of this species pods with mature seeds have been collected mainly in December and January, however, seeds are sometimes present as early as October. Some old dehisced pods often remain attached to the plants into the following flowering season.

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

Collecting pods by hand is often difficult on account of the prickly foliage (stout gloves are recommended). Manually shaking or gently beating the plants and collecting the pods and seeds on a ground sheet is probably a more efficient way of collection.

Biological features

Growth characteristics. Drought and moderately frost tolerant according to Simmons (1987).

Propagation

Grows from seeds or cuttings (Simmons 1987).

Revegetation

Suitable for inclusion in biodiversity plantings as part of the low shrub stratum, especially on medium-textured, slightly saline soils.

Acacia acuaria has been recommended by Wilcox *et al.* (1996) for revegetation on a variety of soil types (sometimes saline) in the Midlands region and northern wheatbelt region of Western Australia. It is also recommended by Lefroy *et al.* (1991) for regeneration of "White gum" country (i.e. shallow grey neutral to acidic sand over sandy clay with kaolinitic clay at depth), "Salmon gum" country (i.e. alkaline loam over clay with distinctive white nodules of calcium carbonate at depth) and "York

gum" country (i.e. shallow, neutral to alkaline brown sandy loam over shallow sandy clay with granite at depth) in the central wheatbelt region.

Utilisation

Biodiversity plantings. See under Revegetation above.

Wildlife refuge. The intricately-branched crowns and prickly foliage provides good wildlife protection (especially for small nesting birds).

References

- Lefroy, E.C., Hobbs, R.J. and Atkins, L.J. (1991). *Revegetation guide to the central Wheatbelt*. (Agriculture Western Australia: Western Australia.)
- Maslin, B.R. (1982). Studies in the genus *Acacia* (Leguminosae: Mimosoideae) - 10. *Acacia* species of the Wongan Hills, Western Australia. *Nuytsia* 4(1): 29-46.
- Maslin, B.R. (in press). *Acacia*. In *Flora of Australia* vol. 11 (CSIRO, Melbourne: Australia.)
- Simmons, M.H. (1987). *Growing Acacias* (Kangaroo Press.)
- 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.)