

Botanical name

Acacia daphnifolia Meisn.

Synonym: *microbotrya* var. *borealis* E. Pritzl, Bot. Jahrb. Syst. 35: 300 (1904).

Common name

Northern Manna Wattle.

Characteristic features

Bushy *shrubs* or *small trees*, often forming dense clonal clumps by root suckers. *Phyllodes* normally oblanceolate, straight to shallowly falcately recurved, widely spreading, glaucous to sub-glaucous, with one longitudinal nerve on each face, apices obtuse to acute (sometimes acuminate); *glands* normally single (rarely 2). *Heads* globular, showy, arranged in short racemes, the raceme axes and peduncles appressed hairy. *Pods* moniliform to sub-moniliform, 7-8 mm wide. *Seeds* large; *funicle* encircling seeds in a single fold and drying red- brown. *Flowering* around autumn.

Description

Note. *Acacia microbotrya* is a somewhat variable species and is in need of critical revision. The description here applies only to plants occurring within the Kalannie region.

Habit. Bushy, +/- rounded *shrubs* or +/- obconic *small trees* mostly 2-4 m tall with crowns 2-5 m across, often forming dense clonal clumps by root suckers, dividing at ground level into 2-4 main trunks (6-9 cm in diameter at breast height) or with a single trunk (about 11 cm diameter at ground level) to about 1 m before branching, crowns on oldest plants occupying 20-30% of the total plant height,

Bark. Grey, thin and hard, shallowly longitudinally fissured with fine transverse fractures, exfoliating in short strips on oldest trunks, smooth on upper branches.

Gum. Sometimes exuded from the trunks and/or branches.

Branchlets. Glabrous, light brown tinged orange, rarely pruinose.

Phyllodes. Oblanceolate, rarely narrowly elliptic, variable in size, (4-)6-11 cm long, (3.5-)5-15 mm wide (can reach 20-40 mm on sucker regrowth), thinly coriaceous, straight to shallowly falcately recurved, widely spreading, sometimes a few reclined, glaucous to sub-glaucous; with 1 *longitudinal nerve* (midrib) on each face; *apices* obtuse to acute, sometimes acuminate, not pungent; *glands* minute, 1 (rarely 2) on the upper margin of phyllodes 2-22(-35) mm above the pulvinus.

Heads. Arranged in 4-9(-13) -branched racemes (5-)10-30(-40) mm long, globular, 5-6 mm in diameter (when fresh), bright light- to mid-golden (aging pale yellow as the anthers shrivel), 20-30-flowered; *raceme axes* minutely appressed-hairy (hairs white or yellow); *peduncles* 2-5(-6) mm long, minutely appressed-hairy (hairs yellow, sometimes white).

Flowers. 5-merous; *sepals* united.

Pods. Moniliform to sub-moniliform, 5-15 cm long, 7-8 mm wide, pendulous, thinly coriaceous, glabrous, brown.

Seeds. Longitudinal in the pods, large (7-8 mm long, 4-5 mm wide), dull to slightly shiny, black; *funicle* creamy white (drying red-brown), encircling the seed in a double fold.

Taxonomy

Related species. *Acacia daphnifolia* along with 43 related species comprise the informal "Acacia microbotrya group" (see Maslin 1995). These species occur throughout Australia, mainly in southern temperate and semi-arid regions, however, a

few extend to the dry Arid Zone. Five members of this group occur in the Kalannie region, namely, *A. brumalis* (variant 3 and the Light Land Form), *A. jennerae*, *A. affin. jennerae* and *A. daphnifolia*. *Acacia daphnifolia* is most likely to be confused with *A. jennerae* (rare in the Kalannie region) which is recognized by its glabrous peduncles and raceme axes and its pale-coloured funicle; also, the phyllodes of *A. jennerae* are commonly straighter than those of *A. daphnifolia* and they normally possess 2-3 small glands along their upper margin (*A. daphnifolia* normally has a single gland, only occasionally 2).

Acacia affin. jennerae is most reliably distinguished from *A. daphnifolia* by its glabrous peduncles and raceme axes and narrower pods. *Acacia brumalis* (variant 3) is easily distinguished from *A. daphnifolia* by its narrower, incurved phyllodes and deeper golden heads which come into flower around mid-year. It is possible that the Light Land Form of *A. brumalis* from the Kalannie region is a hybrid involving *A. affin. jennerae* and *A. daphnifolia*.

Variants. Plants of *A. daphnifolia* from the Kalannie region exhibit considerable variation, especially in phyllode size (see above description). Within a large regrowth population at the disused Xantippe Cricket Club some suckering individuals are atypical in having pruinose stems and atypically wide phyllodes (20-40 mm: see *B.R. Maslin* 7697). Plants with narrowly elliptic, atypically narrow phyllodes (some as little as 3.5 mm wide) occur at this same locality and have also been found along the Rabbit Proof Fence Road between Wubin and Kalannie (see *B.R. Maslin* 7687 and 7695). Because *A. daphnifolia* can reproduce both from seed and from root suckers it adds to the complexity of understanding the underlying causes of variation within the variety.

Distribution

As currently understood, *A. daphnifolia* occurs in the northern wheatbelt from about Moora north to the Murchison River; however, further studies are required to more precisely define the extent of its geographic range..

This variety is not uncommon in the Kalannie region and commonly forms rather large communities in the places where it occurs.

Habitat

Within the Kalannie region *A. daphnifolia* occurs on red sandy loam, often near the base of granite rocks, and as roadside regrowth in a few areas (e.g. east of Wubin).

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

Conservation status

Not considered rare or endangered.

Flowering

Acacia daphnifolia and *A. microbotrya* flower earlier in the season than many other acacias in south-west Western Australia.

In the Kalannie region *A. daphnifolia* flowering commences around early May and by the end of June the main flowering flush has finished.

The flowers are normally produced in great profusion.

Fruiting

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

Biological features

Longevity. Probable 20-30 years under most conditions according to Gardner (1957)

Growth characteristics. *Acacia daphnifolia* is a fast-growing species which sometimes forms dense clonal thickets due to its root-suckering habit.

Propagation

Propagate from seed or cuttings.

Revegetation

Acacia daphnifolia has considerable scope for use in revegetation within the Kalannie region. The species is currently used in direct seeding programs for regeneration and shelter belt plantings in the northern wheatbelt region of Western Australia (P. Ryan, pers. comm.). *Acacia daphnifolia* occurs generally throughout the Kalannie region but it predominates on medium- to heavy-textured soils; in some areas (particularly open disturbed sites) it forms dense, localized populations. Plants of *A. daphnifolia* are fast-growing and hardy and are well-suited for providing windbreaks, visual screens and shade and shelter for stock and wildlife. Suckering forms have good potential for providing soil stabilisation and salinity control on slightly to moderately saline sites.

Acacia daphnifolia (under the name *A. microbotrya*) is one of the species recommended as being suitable for revegetation on a variety of soil types in the Midlands and northern wheatbelt region (Wilcox *et al.* 1996) and central wheatbelt region (Lefroy *et al.* 1991) of Western Australia.

Utilisation

Salinity control. See Revegetation above.

Soil stabilisation. See Revegetation above.

Windbreak. On account of its dense, porous crowns this species would be effective as a low windbreak.

Shade and shelter. Suitable for providing shade and shelter for stock and wildlife. *Acacia daphnifolia* (under the name *A. microbotrya* var. *borealis*) is currently used in some shelter belt plantings in the northern wheatbelt region of Western Australia (P. Ryan, pers. comm.).

Visual screen. See Revegetation above.

Wildlife refuge. See Revegetation above.

Horticulture and amenity plantings. A decorative, profusely-flowering ornamental which commences flowering in April, considerably earlier than many other Wattles in the Kalannie region.

Seed for human food. *Acacia microbotrya* is one of the promising species suggested by Maslin *et al.* (1998) for trialling in southern Australia as a source of seed for human food. *Acacia daphnifolia* may have similar potential. However, it is emphasised 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.

References

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