

Botanical name

Acacia dielsii E.Pritzl, Bot. Jahrb. Syst. 35: 294 (1904)

The botanical name commemorates Pritzl's colleague, Friedrich Ludwig Emil Diels. Diels and Pritzl collected extensively in south-west Western Australia at the beginning of the century and described many new species in their joint work *Fragmenta Phytographiae Australiae Occidentalis* which was published in 1905 (see Hall 1978 for biographical details).

Common name

Diels' Wattle.

Characteristic features

Phyllodes short, terete, slender, sub-fleshy, finely multi-nerved, glaucous and appressed to stems when young, green and slightly spreading when mature, abruptly narrowed to a rounded-obtuse apex. *Heads* globular, few-flowered, on short, slender peduncles. *Pods* indehiscent, thin, brittle, breaking readily at constrictions between the seeds. *Seeds* mottled; *funicle* not or scarcely expanded into an aril.

Description

Habit. Moderately dense, normally obconic *shrubs* 0.5-1.5(-2) m tall and 0.3-1 m wide, the tallest plants occur where the species grows in dense scrub, dividing at ground level into 3-6 (or more) slender, somewhat crooked main stems, crowns +/- sub-rounded and occupying 30-40% of the total plant height, in exposed sites it can occur as a rounded shrub with foliage extending to the ground.

Bark. Grey, smooth except finely longitudinally fissured at the base of the main stems.

Branchlets. Terete or weakly angled, glabrous, occasionally hairy.

Phyllodes. Terete, slender, 1-3.5 cm long, 0.5-1.2 mm in diameter, sub-fleshy, straight to curved, glabrous, glaucous and erect (+/- appressed to the branchlets) when young, light green and slightly spreading when mature; *longitudinal nerves* numerous, fine and close together; *apices* abruptly narrowed to a rounded-obtuse, mucronate point; *pulvinus* dull yellow.

Heads. Twinned within axil of phyllodes, globular, golden, loosely 8-17-flowered; *peduncles* mostly 2-4 mm long, slender, glabrous.

Flowers. 5-merous; *sepals* 1/3-2/3-united, rarely free.

Pods. Indehiscent, 2-3 cm long, 1-2 mm wide, very thin-textured and breaking readily into 1-seeded fusiform articles at the narrow constrictions between the seeds, sub-straight to variously curved, sparsely hairy, purplish brown and lightly pruinose.

Seeds. Longitudinal in the pods, 2.5-3 mm long, about 1.5 mm wide, slightly shiny, mottled greyish yellow and dark brown; *funicle* not or scarcely expanded into an aril.

Taxonomy

Related species. *Acacia dielsii* together with *A. nivea* and *A. obesa* constitute the "A. dielsii group", see Cowan and Maslin (1995) for discussion. Only *A. dielsii* itself occurs in the Kalannie region. The pods of *A. dielsii* are very distinctive and with its +/- exarillate seeds, form the most important characters separating the species from the other members of the group.

Variants. There is considerable variation in some of the characters, especially in the vestiture of the branchlets and degree of union of the perianth parts, see Cowan and Maslin (1995) for discussion. Plants of *A. dielsii* from the Kalannie region show little variation.

Distribution.

Occurs southwest Western Australia in a belt extending from the Murchison River south to near Newdegate.

Acacia dielsii is not common in the Kalannie region but forms dense, localized populations in the places where it occurs.

Habitat

In the Kalannie region it grows in light brown sandy loam, yellow-brown gravelly sandy loam or yellow sand on the lower slopes (and fringing flats) of low rises in 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

Herbarium records show that over its geographic range *A. dielsii* flowers in most months of the year. However, local conditions are likely to influence the onset of flowering in given areas.

There is no reliable information available on the flowering period for plants from the Kalannie region.

Fruiting

Herbarium records show that over its geographic range this species produces pods with mature seeds from November to December. However, considering the long flowering period it is likely that further sampling will extend its known fruiting range.

In early December 1996 most plants from the Kalannie region were sterile, however, a few had mature seeds.

The pods difficult to collect by hand on account of their being very brittle and readily breaking into 1-seeded segments. The seeds very small and not easily extracted from the pod segments.

Biological features

Diseases. Kalannie region plants are susceptible to infection by Gall Rust.

Propagation

No information available.

Revegetation

A short-lived, primary colonizer, especially useful for revegetating gravelly sites. The inclusion of *A. dielsii* with *A. neurophylla* subsp. *erugata* in gravel pit rehabilitation would improve the biodiversity representation of such sites.

Recent observations in the central wheatbelt showed natural regeneration of this species within a gravel pit located in a paddock that had been under crop and pasture for about 50 years; this suggests that seed of this species can remain viable in the soil for long periods (A. Napier, pers. comm.).

Utilisation

Biodiversity plantings. See Revegetation above.

Soil stabilisation. See Revegetation above.

Horticulture. On account of its attractive foliage and prolific flowering this low shrub could have some horticultural potential.

References

Cowan, R.S. and Maslin, B.R. (1995). *Acacia* Miscellany 15. Five groups of microneurous species of *Acacia*, mostly from Western Australia (Leguminosae: Mimosoideae: section Plurinerves). *Nuytsia* 10(2): 205-254.

Hall, N. (1978). *Botanists of the Eucalypts*. (CSIRO: Melbourne.)