RED-EYED WATTLE (*Acacia cyclops*)

By Robert Powell, local ecologist.

Red-eyed wattle is easily recognized by its old, twisted seed-pods, which remain on the plant for two or three years. It is a coastal species, occurring from Jurien Bay round to the south coast and eastwards into South Australia. In the Perth area it occurs in the coastal strip and the tuart belt, growing both in sand and on limestone.

It is one of three large wattles of Perth's coastal strip, the others being summer-scented wattle (*Acacia rostellifera*) and coojong (*A. saligna*), sometimes called golden-wreath wattle. These three species all have phyllodes (flattened leaf-stalks that look like and serve the purpose of leaves), whereas some of Perth's common smaller wattles — for example, dune moses (*Acacia lasiocarpa*) — have true, bipinnate leaves. Summer-scented wattle has a similar distribution to that of red-eyed wattle but differs in that it reproduces mostly by suckering, so that it characteristically grows in thickets. Coojong, a common species with a very general distribution, can be distinguished by its very large phyllodes, 8-25 cm long, which usually hang downwards. A further wattle species with phyllodes that is common in the coastal strip is rigid wattle (*Acacia cochlearis*). It is much smaller than red-eyed wattle, and its phyllodes have three prominent veins, whereas those of red-eyed wattle have three to five rather indistinct veins. White-stemmed wattle (*Acacia xanthina*) is much less common near Perth and rather less coastal, and has an obvious white bloom on its branchlets.

Red-eyed wattle is a hardy species. Where it grows close to the ocean it has to withstand salt spray, which is very damaging to foliage. Moreover, on the sandy sites the soil is often unstable, and the plants also have to withstand sand-blast, or having sand swept away from them or piled up on them. Whereas smaller plants growing together protect each other from salt spray, red-eyed wattle, being taller, is more exposed. It helps itself survive by growing as a densely foliaged dome-shaped shrub, thus deflecting the salt winds and reducing the amount of salt deposited on the individual phyllodes. The foliage comes right to the ground, sheltering and stabilizing the soil underneath. These shrubs are usually not more than three metres tall. The more exposed the plant to salt, the more its upper foliage is killed, which may reduce its height to a metre or less on some sites.

A kilometre or two further inland, where the air is less salty, red-eyed wattle grows taller and sparser, particularly in the dappled shade of the tuart forest, where it forms a small tree up to seven metres tall.

Some wattles use ants to disperse their seeds, whereas others use birds as well; red-eyed wattle is an excellent example of the latter. It flowers sparsely for much of the year, but the fruits all ripen in late spring to early summer. The seed-pods open to reveal shiny black seeds encircled by thick orange-red stalks — suggesting the bloodshot eyes that give the species its name. (The botanical name *cyclops* refers to the one-eyed giant blinded by Odysseus.) The bright colour of the stalks is designed to attract birds, and species such as wattlebirds, singing honeyeaters, silvereyes and ringneck parrots feast on the seeds, as do emus, if they are present. The seed-stalks are digested but the seeds are too hard, and pass through the bird in its droppings. Since the birds often fly some distance, this is an effective way of dispersing the seeds. Many of the seeds are deposited below where the birds roost for the night, such as in a tuart tree. Thus often one will find two or three, or sometimes more, red-eyed wattles growing near the base of a tuart.

Like many large wattles, red-eyed wattle has a rich associated fauna, especially of insects and other invertebrates. Here are just a few examples. In the stems of red-eyed wattle tunnel the larvae of various moths and beetles, including those of large cossid moths and the ant-longicorn, a small beetle that mimics an ant. Other insects, such as native bees, later nest in the abandoned holes. The tiny larvae of a small butterfly, the two-spotted line-blue, feed on the flower-buds, flowers and young pods. As well as the birds already mentioned, various insects eat the seed and possibly the seed stalks. One is a bug brightly marked with a red circle enclosing a black patch on its abdomen, resembling the wattle seed and its surrounding stalk. Ants gather any seed-stalks they find on the ground, storing them, often with the seeds attached, in their nests. The heat of a fire causes the coats of those seeds to burst, and the seeds will germinate the following winter. In addition to the many insects that feed on the wattle itself, further species feed on rust-fungi that grow on the wattle, such as one that often forms conspicuous globular galls on the wattle's smaller stems.

Collectively, the various insects reduce the wattle's vigour and production of seed, and may shorten its life. This is important in preventing red-eyed wattle from becoming the rampant weed that it became in South Africa, where it was introduced, before biological controls were exercised. In Perth, some specimens of red-eyed wattle die at three or four years old, when still saplings, apparently from some insect that feeds extensively under the bark of the young plants; but most survive and live a dozen years or more.

Red-eyed wattle is a most desirable species to include in revegetation projects in the coastal strip. It contributes enormously to biodiversity in providing food and shelter for a great many different insects, which in turn support lizards, birds and bats.

References

Powell, R., 1990, *Leaf and Branch: Trees and Tall Shrubs of Perth* (Perth: Department of Conservation and Land Management)

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The bug pictured is Coleotichus costatus (family Scutelleridae), sometimes given the common name of jewel shield bug. The adults resemble the dried up seed pods, while the juveniles, which tend to congregate, have red bands to look like seeds. Don't touch them as they put out a toxic fluid. The ants collecting the seeds are a species of Rhytidoponera, don't handle them either as they sting!

Photos and information from Dr Jan Taylor