

Native mistletoe (Five genera, eight species)

Introduction:

New Zealand is home to eight species of native mistletoe that fall into two general groups: - the cryptic and rather colourless dwarf mistletoes and the so-called loranthaceous mistletoes, several of which are rather showy. The former group consists of three species: *Korthasella clavata*, *K. lindsayii* & *K. salicornioides*. The loranthaceous mistletoes include *Ileostylus micranthus* - a relatively large-leaved green mistletoe, *Alepis flavida* - the yellow beech mistletoe, *Tupeia antarctica* - the white mistletoe, and two showy red flowered *Peraxilla* mistletoes - *P. tetrapetala* and *P. colensoi*. Another species of mistletoe (*Trilepidea adamsii*) is now extinct.



Peraxilla tetrapetala

Vital Statistics:

Although mistletoes have the ability to photosynthesis carbohydrates to fuel their energy requirements like most plants they also have the ability to draw nutrients and water from their host tree as parasites do. Mistletoes attach themselves to a host plant and penetrate into the host plants vascular system by way of an organ called a haustorium, which is somewhat like a large needle that pierces through the protective bark layers of the host plant. This allows them take nutrients from their host, as they require.

What makes it unique?

One particularly unique feature of some of the New Zealand mistletoes is the way in which they are pollinated. The *Peraxilla* mistletoes require their pollinator to twist the unopened flower buds. If this is done correctly, as it is by native nectar feeders such as tuis, bellbirds and stitchbirds, the flower will spring open showering the bird in pollen that may then be passed onto the next flower and complete the pollination process. If however, the bird attempting to open the flower is not a nectar feeder, and it fails to twist the unopened bud, the flower will burst at the base. As a result the bird misses out on a feed of energy rich nectar and the flower misses out on being pollinated and thus producing seed.

Conservation:

Many New Zealand mistletoe species are a favourite food of possums. In addition, they are at threat from a loss of habitat and a decline in the abundance of native pollinators that disperse their seeds. Nationwide surveys of all mistletoe species have been undertaken by the Department of Conservation and when host trees are located they are banded with aluminium in order to protect their mistletoes from browsing possums. Attempts have been made to translocate mistletoes to new sites by "planting" mistletoe seed on potential hosts in the hope that they will grow. This technique has had mixed success.