

Mistletoes in Auckland

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Mistletoes are semi-parasitic plants with green leaves or stems that photosynthesise but rely on a host tree or shrub for water and nutrients. Auckland has five of the nine mistletoes native to New Zealand. These include a beech mistletoe, a dwarf mistletoe and two green mistletoes. Two other beech and dwarf mistletoes grow elsewhere in New Zealand and one mistletoe is thought to be extinct.

Mistletoes under threat

Mistletoe populations have declined all over New Zealand since the early 1900s mainly due to possum browse, vegetation clearance and decline in native bird species which act as pollinators and seed-dispersers. Rats are also suspected of eating mistletoe and insects damage them. In Auckland, mistletoe has been lost from three-quarters of the places it once grew since the mid-1880s.

Green mistletoes uncommon

The two species of green mistletoe, *Ileostylus micranthus* and *Tupeia antarctica*, occur throughout New Zealand but are less common in Auckland than elsewhere. This mistletoe prefers areas with lots of light such as regenerating shrubland, forest edges and roadsides. In Auckland *Tupeia* was once known at several locations but is now restricted to one island in the Mokohinau group in the outer Hauraki Gulf. Its host tree there is maire (*Nestegis apetala*).

Ileostylus is known to grow in seven locations on the mainland and on Great Barrier Island. Totara and kanuka are the preferred hosts in this region although it is also found on other native and exotic host trees. *Ileostylus* populations are scattered and tend to have only a small number of plants in each. Some grow on the roadside and are particularly vulnerable.

Beech mistletoe hanging on

Beech or red mistletoes are found throughout New Zealand. They are known for their masses of red or yellow-orange flowers in summer. Auckland's beech mistletoe *Peraxilla tetrapetala* is found only on Little Barrier Island where it grows not on beech but on tawheowheo (*Quintinia serrata*). It has not been seen in the Waitakere or Huna ranges for decades.



Ileostylus micranthus
growing on salt marsh
ribbonwood.
Photograph by R. Stanley



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Te Papa Atawhai



Dwarf mistletoe.
 Photograph by R. Stanley

Dwarf mistletoe survives in the inner city

The dwarf mistletoe *Kortbalsella salicornioides* is found on Little and Great Barrier islands and in six mainland sites. It grows on kanuka and manuka. This mistletoe is also at home in an inner city park where the manuka border of the grassy reserve provides great habitat for this light loving mistletoe.

One mistletoe gone for good?

Trilepidea adamsii used to be found from Waikato to Northland and in the Auckland Region on Great Barrier Island, Waiheke Island and in the Hunua Ranges. No-one has seen it since the 1940s in Auckland and the last known plant anywhere was seen in 1954.

How you can help

If you have mistletoes on your property the following actions will help to protect these threatened plants:

Take care when clearing or trimming vegetation not to disturb mistletoes, their host trees or habitats.

Wrap aluminium bands around host tree trunks to prevent possum browse (not too tight as that will strangle the tree).

Control possums and other pest species. On-going possum, rat and mustelid control may also cause native bird populations, which are crucial to disperse mistletoe fruit, to increase.

Resist picking mistletoes. New Zealand species take many years to replace lost branches.

Report any sightings of mistletoes to your nearest DOC office. Green and dwarf mistletoes are obvious throughout the year, while the beech mistletoes tend to stand out during summer when they are flowering.

On the hunt for mistletoe

The Department of Conservation (DOC) is surveying areas to find out more about where mistletoes grow and the number of plants out there. Recently green mistletoe (*Ileostylus micranthus*) plants were found in the Rodney District and on Great Barrier Island, proving that further survey is worthwhile. The green mistletoe *Tupetia antarctica* has also reappeared in places after possum and rat control. With the work DOC, Auckland Regional Council and community groups are doing to control rats and other animal pests, we may see more of this mistletoe in the future.

Mistletoe recovery

At Miranda, on the Firth of Thames, DOC is replanting the hosts of green mistletoe (*Ileostylus micranthus*) beside a roadside population of this species to ensure its survival. The site is vulnerable to roadside clearance so DOC is attempting to restore a shrubland community on an adjacent reserve and encourage mistletoe to spread to these new host plants. Every year in June hosts are planted and mistletoe hand-seeded at the site.

DOC has a national recovery plan for mistletoe to coordinate conservation efforts and ensure the long-term survival of these plants.



Red mistletoe *Peraxilla tetrapetala*
 Photograph by G. M. Crowcroft