

Why are green mistletoes threatened?

Although *Ileostylus* and *Tupeia* are the most common mistletoes in New Zealand, they are currently declining in many areas, particularly in the North Island. Browsing by possums, habitat destruction and over-collecting are the biggest threats to green mistletoes.

What can be done to save mistletoes?

Since green mistletoes are still widely distributed, we have the chance to protect these species before they decline further. *Tupeia* in particular has the unique ability to survive adverse conditions without leaves and then to re-sprout once conditions improve.

Possum herbivory is a major threat to all mistletoe species, and possum control can lead to a rapid recovery of many plants. Mistletoes can also be protected from possums by wrapping host tree trunks with slippery aluminium bands.

The Department of Conservation has developed a national recovery plan for native mistletoes that includes priorities for mistletoe research and management. DOC conducts surveys for new mistletoe populations, monitors existing populations and works with local landowners to manage mistletoes on private land.

Please contact your local DOC office if you are interested in learning more about the mistletoe recovery plan.

What can you do to help?

Many green mistletoe populations occur on private land. One way you can protect your mistletoes is by banding the host tree trunks to prevent possum attacks. Better yet, control possums through trapping or poisoning!

Controlling other pests such as stoats and rats also helps mistletoes by benefiting birds that disperse mistletoe seeds.

You can also help save native mistletoes by not damaging or collecting mistletoe plants or their hosts. The New Zealand mistletoe species grow very slowly and take many years to replace lost branches.

A second pamphlet on beech mistletoes is also available. For more information or free copies of either pamphlet please contact:

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Also see our website at:
www.pams.canterbury.ac.nz/105mtd.htm

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NEW ZEALAND'S NATIVE GREEN MISTLETOES

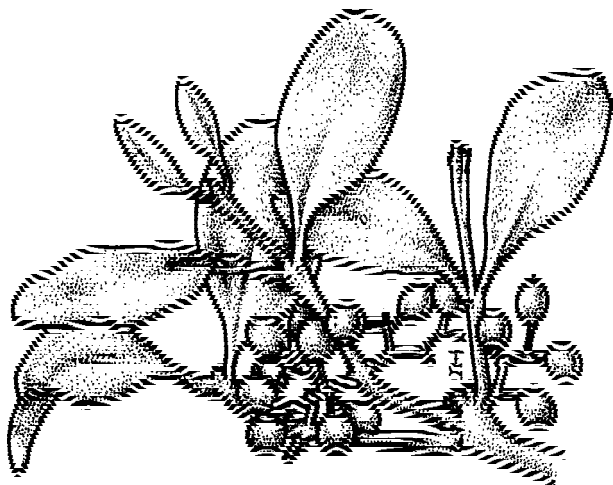


***Tupeia antarctica* flowers**

What are mistletoes?

Mistletoe is the general name given to plants that have green leaves for photosynthesis but cannot make food on their own. Mistletoes attach themselves to a host tree through specially adapted roots that remove water and nutrients from the host.

Mistletoes grow in many countries around the world, but New Zealand has eight native species that are found nowhere else (except *Ileostylus* which is also found on Norfolk Island). A ninth New Zealand species (*Trilepidea adamsii*) was last seen in 1954.



Ileostylus micranthus

New Zealand has two species of green mistletoe or piritā: *Ileostylus micranthus* and *Tupeia antarctica*. These two species are the most common mistletoes in New Zealand, but they are currently declining in many areas, especially in the North Island.

Identifying green mistletoes

The pictures in this pamphlet will help you distinguish between the green mistletoe species. *Ileostylus* usually has slightly larger leaves (20-80 mm long) than *Tupeia* and its young branches are flattened sideways and green.

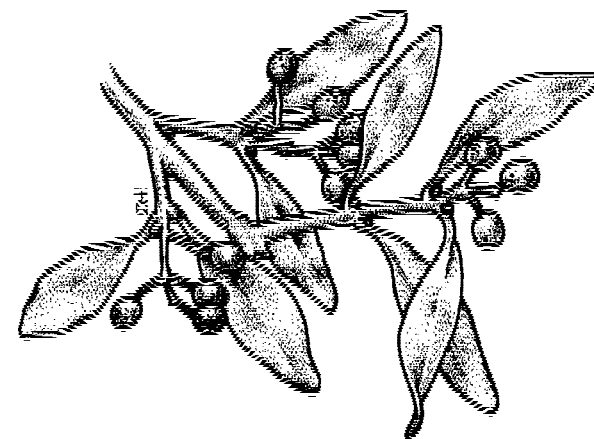
Tupeia is distinguished by its round young branches, opposite leaves 20-30 mm long and pale, whitish bark. It rarely grows larger than 1 metre in diameter, compared to *Ileostylus*, which can reach 2 m across.

Both green mistletoe species have small (2-5 mm long), greenish yellow flowers that appear in spring. The flowers are pollinated by insects like bees and flies. These flowers open by themselves when they are mature, unlike flowers of the beech mistletoes, which must be opened by birds or bees.

Ileostylus fruits are bright yellow, while *Tupeia* fruits are white with purple markings. Birds must remove the fruit flesh and disperse the seed onto a host branch for the seed to germinate into a new mistletoe plant.

Where do green mistletoes grow?

Both green mistletoe species grow throughout the North and South Islands. *Ileostylus* is also found on Stewart and Norfolk Islands.



Tupeia antarctica

Unlike the beech mistletoes, which grow almost exclusively on beech host trees, green mistletoes may grow on a wide range of host plants. *Ileostylus* has been found on more than 206 different native and exotic host species. It mostly grows in low altitude shrubland, but totara (*Podocarpus totara*) is a common host in Northland, Nelson and Southland.

Tupeia mostly grows in eastern shrublands. It can grow at higher and colder sites than *Ileostylus*, and it grows on over 37 different host species. Five finger (*Pseudopanax arboreus*), *Pittosporum* species and putaputaweta are its most common native hosts, while in urban areas it often grows on introduced plants such as tree lucerne (*Chamaecytis palmensis*).