

were involved in the presumed extinction of *Trilepidea adamsii*, then why did that mistletoe apparently disappear from Great Barrier Island, which has no possums? If *Trilepidea* still occurs, then Great and Little Barrier Islands would seem likely places to search.

Why do leafy mistletoes persist in some eastern and southern parts of the South Island, despite the presence of possums? Are there other animals which eat the flowers or fruit without depositing seed on new hosts or do some introduced birds such as chaffinches destroy mistletoe seed if they eat the fruits? Is disease a factor? How long would it take to establish the relative importance of various factors, if more than one is involved, and is there time to do this if mistletoes are already under threat?

What can be done now to conserve mistletoes? Some have been successfully protected on isolated host trees by constructing possum-proof barriers around the trunk, but this protects no more than a few mistletoe plants. Establishing mistletoes on host trees in urban areas and perhaps around dwellings in forests where possum numbers are kept down could have similar local success.

While it might be unusual in New Zealand to speak of "marooning" as a technique for saving threatened plants from extinction, the technique is now well-known for certain native animals (Williams 1977), and could be equally valid for preserving some plant species.

Tupeia antarctica in flower; growing on ribbon-wood in Peel Forest.

Photo: B. J. Molloy.

As with vulnerable birds, the main prospects for large populations of mistletoes might lie in establishing the species on islands which are free of the problem animals, or on islands such as Kapiti and Codfish if they can be cleared of possums. Ian Atkinson reports that heavily-browsed plants of *Ileostylus* on karo bushes on Kapiti Island have recently begun to produce new leafy shoots, following the massive reduction in possum numbers there through hunting in 1983-84.

Whatever the answers to these questions, we believe that time is running out for at least the two *Peraxilla* species, *Tupeia antarctica* and *Alepis flavida*. Although not mentioned in *Rare and endangered plants of New Zealand* (Given 1981), *Peraxilla colensoi* has been added to a new working draft of Dr Given's checklist of threatened plants, with a rating of vulnerable. We recommend that the conservation status of all mistletoe species be re-evaluated and that action be taken to preserve, and if possible enhance, their remaining populations.

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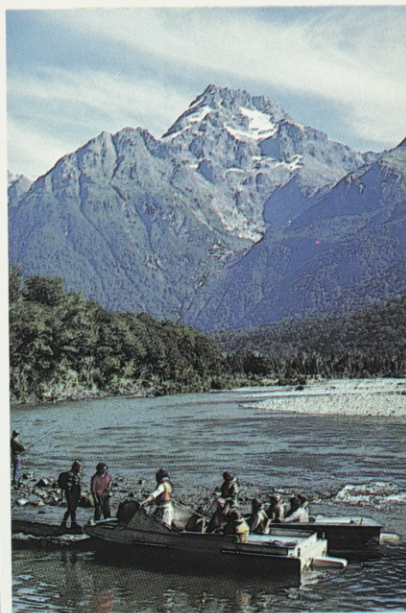
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