Growing Mistletoes

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Through the New Zealand Royal Forest and Bird Protection Society's journal I have learnt that several of New Zealand's native mistletoes are threatened species (Ogle and Wilson 1985). Because cultivation of these offers one solution to their conservation, it may be helpful to describe a technique for growing the British mistletoe, *Viscum album*, from seed on to host trees.

Literature generally available in this country gives only the most basic instructions; as the result of records kept over a number of years, I have made several refinements and the following method gives the best chances of success.

Mistletoe berries are gathered when ripening and preferably a small sprig bearing several berries should be snipped off. Sprigs are placed in paper bags (not plastic ones) and the neck of the bag tied before hanging in a cool, dry place. The best planting time is in Spring, when the sap of the host tree is rising strongly and new growth is evident. A branch is selected of between 1.3 and 3cm diameter which is ascending at an angle of between 45 and 75 degrees to the horizontal. The underside of the branch is used and there should be no nearby twigs. It is sometimes suggested that the tree bark is incised and the seed inserted beneath, but this is not advisable because the damage will cause a reaction which may well interfere with germination. A small bed is prepared for the seed by gently scraping away the outer bark, but not sufficient to cause any bleeding; then the skin of the berry is nicked so that a little gum exudes and it is pressed gently into the prepared place with the pointed end of the seed towards the trunk of the tree. Finally, a piece of Cellotape about 5 cm by 2 cm is placed over the seed — this will not stay in place indefinitely, but it will help the seed to adhere firmly and will prevent removal by birds. Little growth will take place in the first year, but a shoot will appear in anything up to 4 months. When this is observed the Cellotape, if still in position, is carefully removed by peeling from below upwards.

Observed germination rates may be as high as 50%, but 20% is a reasonable working figure, so several seeds should be placed simultaneously on the same host.

Reference

Ogle C.; Wilson P. 1985. Where have all the mistletoes gone? *Forest and Bird 16(3)*: 10-13.

Editor's Note

After receiving Dr. Thomas's paper I put his method of growing mistletoes to the test on a New Zealand species, *Ileostylus micranthus*. Fourteen pairs of mistletoe seeds were placed on a total of 12 different host plants (nine different species) in my garden, on 18 May 1986. As at 1 January 1987 two mistletoe seedlings have their first leaves (Fig. 1), the host plants being *Sophora microphylla* and *Coprosma rotundifolia*. In some other cases the mistletoe seed appears green under the dried mucilage, but a number of seeds have disappeared, and on one plant of *Coprosma propinqua* where three pairs of mistletoe seeds were placed the entire branch has died.

Fig. 1
Seedling of *Ileostylus micranthus* on a garden shrub of *Coprosma rotundifolia* at Pukerua Bay, 20 December 1986. The mistletoe fruit was from Upper Hutt in May 1986, and was placed on the host plant in the manner prescribed by Dr Thomas in his accompanying article.

Photo: Colin Ogle

A Rarely Seen Native Grass, *Amphibromus fluitans*

Colin Ogle, Pukerua Bay

Found by Thomas Kirk at "Waihi Lake and Creek" in the Waikato district in 1883, the wetland grass *Amphibromus fluitans* was named by him as an endemic species to New Zealand (Kirk 1884). Its rather late discovery and the low number of collections made of it over the following century (Table 1) suggest that this grass has always been very rare. It is, however, not endemic; a recent publication (Jacobs and Lapinpuro 1986) has shown that *A.gracilis*, of southern New South Wales, Victoria and Tasmania, is the same species as our earlier-named *A. fluitans*.

In the 1970's I was shown *A. fluitans* by Tony Druce in the central North Island, once on the edge of a lake near Kuripupango and later in an ephemeral wetland on a terrace of the Awapatu River, a tributary of the Moawhango. Wetlands such as these lack adventive grasses, and *A. fluitans* is easily spotted as a sprawling, grey-green grass, superficially not unlike creeping bent (*Agrostis stolonifera*). However, it is not so easily recognised