

# Hosts of *Loranthus micranthus*

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WHILE visiting Kelsey's Bush, Waimate, and Peel Forest, near Geraldine, in April 1966 I was struck by the great abundance of golden mistletoe (*Loranthus micranthus*) which was growing on a number of different hosts. Remembering some previous sightings elsewhere and with various authors' published records available for comparison I have compiled a list of hosts in an endeavour to see what they have in common and what *Loranthus* seems to require.

My own observations are as follows:

Host	Locality
<i>Coprosma crassifolia</i>	Peel Forest outskirts
<i>C. propinqua</i>	Kelsey's Bush; Peel Forest outskirts
<i>C. rotundifolia</i>	Kelsey's Bush
<i>C. linariifolia</i>	Kelsey's Bush
<i>C. rhamnoides</i>	Kelsey's Bush
<i>Plagianthus betulinus</i>	Kelsey's Bush; Peel Forest outskirts
<i>Hoheria angustifolia</i>	Peel Forest outskirts
<i>Pennantia corymbosa</i>	Kelsey's Bush; Peel Forest outskirts
<i>Pseudowintera colorata</i>	Peel Forest outskirts
<i>Pseudopanax crassifolium</i>	Peel Forest outskirts
<i>Podocarpus totara</i>	many on giant totaras of Peel Forest, high in their sunlit crowns; also in the totara bush at Ohau
<i>Rubus cissoides</i>	Kelsey's Bush
<i>R. squarrosus</i>	Peel Forest outskirts
<i>Corokia cotoneaster</i>	Hokio dune forest (coastal, near Levin)
<i>Salix caprea</i> (pussy willow)	Kelsey's Bush
<i>Acacia</i> , probably <i>A. baileyana</i>	above Okere Falls, Rotorua district

Other available records are:

Cheeseman's "Manual of the N.Z. Flora", 1925: *Coprosma*, *Melicope* and *Leptospermum*; and pear and plum trees at the south end of Lake Taupo.

Dr H. H. Allan, *Bull. Wellington Bot. Soc.* 11, 1943: sweet briar in some valleys of the Nelson district.

Miriam A. Aiken, *Tuatara* 6(3) 1957: *Coprosma*, *Melicope*, *Leptospermum*, also introduced *Acacia*, *Rhododendron*, poplar, plum, apple, hawthorn.

Dr H. H. Allan, "Flora of New Zealand" Vol. 1, 1961: *Carmichaelia*, *Coprosma*, *Hoheria*, *Leptospermum*, *Leucopogon*, *Lophomyrtus*, *Podocarpus*, *Cytisus*, *Crataegus*, *Pinus*, *Pyrus*, *Platanus*, *Rosa*.

A. P. Druce, *Bull. Wellington Bot. Soc.* 33, 1966: *Melicope simplex*, *Melicytus ramiflorus*, *Coprosma crassifolia*, on the Otaki Plain.

Analysing the above lists we note a great number of different hosts representing life-forms ranging from climbers and small-leaved shrubs to a tall canopy tree. Infestation is not confined to native species nor to evergreens, a number of the above species being deciduous. Slowing down of the sap flow in winter seems to make no difference to the growth of the hemi-parasite which indeed was particularly luxuriant, for instance, on the large pussy willows at Kelsey's Bush, where the green leaves of the *Loranthus* could function fully without competition for light. *Loranthus* is always found in sunny situations—on shrubs and climbers in the open or at the edge of the bush, on solitary trees in open places, and high on tall trees such as the emergent totaras of Peel Forest—and however unselective it may be of host species they must supply this need for light. A large plant of *Loranthus* growing on a totara at Ohau died when shaded by the crown of the host. A need for light would also explain its frequent occurrence on small-leaved shrubs whose foliage does not completely exclude the sunlight. An abundance of birdlife is also needed for distribution of the seeds.

Host plants show no obvious signs of impoverishment even when harbouring a number of these hemi-parasites.

The frequency of *Loranthus* in Kelsey's Bush and the environs of Peel Forest (broadly speaking, the foothills of inland southern Canterbury) was conspicuously greater than I have seen anywhere else, and I would be interested to hear of other localities where it is plentiful, and also of its occurrence on hosts other than those listed here.

## Notes on Ferns

WHILE in the Wairongomai Valley, west of Lake Wairarapa, we came across the parsley fern, *Botrychium australe*. On returning to show it to an Auckland visitor in March we had quite a long search but eventually found one plant, then several others nearby. This time they had fertile fronds distinctly more yellow than the sterile fronds. A plant was taken to Otari where it appears to be doing well in the new fern section. Since then the Auckland visitor has seen the species in the Waitakere Ranges where it was again quite abundant in a particular small area.

*Anogramma leptophylla*. We have recently looked for this tiny annual fern unsuccessfully on the cliffs at Seatoun, and also on Miramar steps where one member remembers Dr Oliver showing it to the Society many years ago. Does anyone know where it can be found near Wellington?

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