

Mistletoe Hunt in Hunua

Bec Stanley

The aim of our July field trip was to get familiar with the mistletoe *Ileostylus micranthus* by visiting bush remnants on the Gilbert's farm near Ararimu, Hunua. After a week of heavy rain, we picked a superb day - at least it felt like the finest day in weeks. However, gumboots were a definite advantage!

Ileostylus micranthus has a ranking of Local (Cameron *et al.* 1995) and in Auckland Conservancy there are now only 4 known locations where it still grows. *Ileostylus* is a bushy semi-parasitic shrub with small, greenish-yellow flowers and bright yellow fruit. Unfortunately our trip was a little late for the fruit, and little early for the flowers, which were just coming into bud (*Ileostylus* flowers September to December and has fruit from April to June).

On this trip we counted at least 40 individual *Ileostylus* plants, mostly in one remnant. All *Ileostylus* we saw were parasitic on Hall's totara (*Podocarpus hallii*). On one Hall's totara alone we counted at least 8 individuals.

Ileostylus parasitises a much wider range of hosts than any other member of New Zealand mistletoes - so far 209 host species are recorded both exotic and native (de Lange *et al.* 1997). At the Gilbert's, several of the known host species of *Ileostylus* are present but the mistletoe does not parasitise them for example: tawa (*Beilschmiedia tawa*), mapou (*Myrsine australis*), privet (*Ligustrum* sp.), wineberry (*Aristotelia serrata*), raurekau (*Coprosma grandiflora*), karamu (*Coprosma lucida*), kahikatea (*Dacrydium dacrydioides*), rimu (*Dacrydium cupressinum*), matai (*Prumnopitys taxifolia*), pohuehue (*Muehlenbeckia complexa*), and blackberry (*Rubus fruticosus* agg.). *Ileostylus* is recognised as having low host specificity overall but shows a high degree of local or regional specificity (Norton 1997). Within Auckland Conservancy, *Ileostylus micranthus* is recorded as parasitising the indigenous hosts *Coprosma propinqua*, *Podocarpus totara* and *Podocarpus hallii*. It is suggested that *Ileostylus* is a more recent arrival to NZ and therefore shows only a tendency towards host specificity (as seen at the Gilbert's) and if climates were to remain stable for a long period of time, host specialisation would occur (Norton 1997).

Ileostylus resents shading, and soon dies out in dense forest conditions. Many of its hosts are therefore small leaved shrubs that do not completely exclude the sunlight and it often grows on forest margins and in canopy gaps. This is perhaps why it is flourishing on the Gilbert's farm - the bush patches have lots of 'edges'.

Mr. and Mrs. Gilbert have taken excellent care of their bush remnants - fencing them off 7 years ago. The regeneration since then is very impressive, aided by excellent possum control. It was quite fortunate our trip had been after a week of bad weather and there was a lot of 'debris' on the ground! This allowed us to notice that the rimu and kahikatea had what seemed like millions of immature fruit present. All podocarps were regenerating, except totara, the host species of the mistletoe. There was also thick understorey regeneration, primarily of mapou (*Myrsine australis*) and mamangi (*Coprosma arborea*).

In another remnant I had not visited in my previous trip to the farm we hoped to find more mistletoe. Apart from one small plant that Mrs. Gilbert had discovered since my last trip, we did not find any mistletoe in



Ileostylus micranthus, on *Plagianthus*
Rebecca Stanley, at Miranda 27 July 1997

bush remnants a short distance from the main mistletoe site. However, a week after our trip Mrs. Gilbert found three new plants (aided by her binoculars) in this patch. We must have been too busy pulling out privet seedlings to notice! It is encouraging that the mistletoe has established in another remnant on the farm.

References

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Preliminary species list for remnant on the Gilbert's farm

compiled by Carol McSweeney and Bec Stanley

Fungi

**Favolaschia calocera*

Ferns

Asplenium flaccidum
Blechnum filiforme
Cyathea cunninghamii
Cyathea dealbata (one double headed plant)
Cyathea medullaris
Doodia media
Grammitis sp.
?Histiopteris incisa
Phymatosorus pustulatus
Pyrrosia eleagnifolia
Rumohra adiantiformis

Conifers

Dacrycarpus dacrydioides
Dacrydium cupressinum
Phyllocladus trichomanoides
Podocarpus hallii
Prumnopitys ferruginea

Prumnopitys taxifolia

Dicots

Acaena novae-zelandiae
Aristotelia serrata
Beilschmedia tarairi
Beilschmedia tawa
Carpodetus serratus
Clematis paniculata
Coprosma arborea
Coprosma grandifolia
Coprosma robusta
Coprosma spathulata
Dysoxylum spectabile
Galium propinquum
Hedycarya arborea
Ileostylus micranthus
**Ilex aquifolium*
Knightia excelsa
**Ligustrum* sp.
Melicytus ramiflorus
Metrosideros fulgens

Metrosideros perforata
Muehlenbeckia australis
Mysine australis
Myrsine salicina
Nestegis lanceolata
Parsonsia heterophylla
Passiflora tetrapanda
Pseudopanax crassifolius
?Rubus cissoides
**Rubus fruticosus* agg.
Vitex lucens

Monocots

**Allium triquetrum*
Astelia banksii
Astelia solandri
Carex virgata
Collospermum hastatum
Cordylina ?banksii
Earina mucronata
Rhopalostylis sapida

No kaikomako (*Pennantia corymbosa*, Icacinaceae) on Gt Barrier Island

Rhys Gardn

As a forest plant that favours relatively cool sites, kaikomako occurs only sporadically in the northern part of the country. The Auckland Museum herbarium (AK) has a dozen or so collections from north of Auckland, scattered from the Waitakere Ranges to Kaitia. Two other collections, made in the 1960s from Great Barrier Island (AK 130582; 133460) were named as this plant by their collectors and were uncritically accepted as such by John Bartlett and myself (Bartlett & Gardner 1983).

In the course of a revision of *Pennantia* I recently examined these two specimens, both of which consist only of juvenile foliage. They are actually specimens of *Melicytus micranthus*. Both species have somewhat flexuose or zig-zag stems, finely pubescent new growth, and more or less obovate, lobed leaf blades. The hairs of kaikomako, or at least some of them, have hooked tips, however, and the lobes of its blades never have a distinct denticle — Icacinaceae is a family in which it seems that the leaves are always entire, never truly toothed. Particularly when dealing with dried material, these differences might all be useful in helping to distinguish adult kaikomako from *Melicytus micranthus* x *ramiflorus*.

Kaikomako, therefore, has to be deleted from the Great Barrier flora. (The *Melicytus* is already known from other specimens). It can be noted that kaikomako is absent from Little Barrier too, and seems to be uncommon on the Coromandel Peninsula, being known in AK only from an old specimen from Kennedy Bay and a recent one from Wilson Bay (36° 52' S).