



# Newsletter

No. 118

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It's time for an update on the Friends of Flora's numerous activities over recent months -

## Hoary Head *Clematis marmoraria* Survey – Laura Parks, DOC Biodiversity Ranger

After much anticipation and multiple reschedules due to a wet start to February, a team of six finally made it up to Hoary Head for two days of searching for the “Threatened - Nationally Vulnerable” alpine *Clematis*. This is the only place this species is known from, and the team were attempting to repeat a survey that was carried out nearly 20 years ago.



*Clematis marmoraria* in fruit. Photo by Peter Born



Manu Danner and Chris Ecroyd (FOF) using GPS units to mark locations of plants found. Photo by Peter Born



Sandy Toy (FOF), Laura Parks (DOC), and Manu Danner (FOF) navigating some of the terrain on the SE side of Hoary Head. Photo by Peter Born

The team was also surveying for *Myosotis arnoldii* which can also be found in South Marlborough and is categorised as “At Risk - Naturally Uncommon”. Hoary Head is the stronghold for this species.

I am pleased to report that our team found lots of *Clematis* – so much so that we didn’t have time to survey the whole area! Whilst less than half of the planned survey area was covered in two days, the team located significantly more *Clematis marmoraria* than was recorded in 2003 - some with seed present (as pictured above). They also found more *Myosotis arnoldii* than was recorded in 2003. Further monitoring will enable us to answer more specific questions around whether browsing pressure from hares is having a significant impact on *Clematis marmoraria*, but the initial findings are that whilst both of these threatened plant species are incredibly restricted in their distribution, they are abundant on Hoary Head, and their populations have increased since 2003.

## Hunting the Tiger – Sandy Toy

*‘...the track gradually descends, following the bed of Flora Creek for a matter of ten miles, and passing through dense birch (now known as beech) forest all the way. Here on favourable days in January and February may be seen the rare and beautiful Dodonidia helmsii flying quietly about in and out of the sunshine, and settling on the branches just out of reach....’* This description from the renowned entomologist, George Hudson\* in 1889 prompted a lot of questions in our minds. Why have there been no recent reports – has the forest ringlet butterfly, considered by some, the most beautiful New Zealand butterfly, disappeared from the Flora, as it has from several other sites around the motu? The butterflies are on the wing for just a few weeks in summer and often high in the canopy, so we focussed our search on caterpillars. Less dramatic certainly, but also less mobile, and helpfully, detectable for 7 or 8 months of the year. We mapped out likely suitable habitat over the course of a year, then in January mounted a search expedition with butterfly experts Roger, Sarah and Pauline.



Within about ten minutes we’d found the first caterpillar distinctive with its ‘double-headed’ appearance. Over the course of the day we found 22 caterpillars – indicative of a good population, and in a sunny glade, Sarah called out ‘TIGER’ - the elusive adult butterfly flew erratically above us, distinctive with its’ stripey underwings. Wow! We were hooked. We continued searching over the summer and found larvae at ten different clusters of locations as well as more adult butterflies, a pupa and even an egg. It appears that our patch is indeed a tiger hotspot. Sadly though, an intensive hunt of the main Flora valley, in which Hudson had revelled at all the butterflies, revealed not one

caterpillar. Many of the host plants for the caterpillars had been heavily grazed by deer and goats and the hum of wasps suggests predation risk. It seems likely that these two threats have proved too much for the vulnerable butterfly with its two year life cycle at this altitude. Our focus now is on gathering more information on distribution, annual variability and whether the threats can be managed.



To borrow the words of George Hudson once more, '*the insect life on the mountains can only be studied by numerous and prolonged visits by entomologists*' or in our case, informed and dedicated volunteers.

\*If you want to find out more about this remarkable naturalist, his grandson George Gibbs, also an entomologist, has written a beautiful biography - *An exquisite legacy. The life and work of New Zealand naturalist G.V. Hudson*, published by Potton & Burton 2021.

### Rorua stretch their legs –Sandy Toy

Twelve years after FOF and DOC brought the first rorua back to the Flora, our acoustic monitoring across 47 stations this year, has revealed that not only are the known home ranges still occupied, but rorua are spreading out. Unlike North Island Brown kiwi, rorua have a very low reproductive rate and may successfully get a chick to the size at which it can fend off a stoat, once every few years. So we expected population growth and spread to be slow. We were elated therefore, to identify calls from between 18 and 21 separate pairs plus a couple of extra singles. They've extended south into the Peel valley and north to the Grecian, which was the northern boundary of the FOF trapping area. The challenge is how to keep those that have moved outside our project area safe. Without predator control, a rorua chick has virtually no chance of survival and outside the National Park, even the adults are vulnerable to predation by dogs. Having stood on the southern edge of the Tableland and looked 800 m down to the dark depths of Peel Creek, trap line extensions in this direction aren't an option. As Bill once said, '*if we go any further, we'll fall off the edge*'. But we can extend traplines to the north and east.



Over the edge into the Peel. *Photo Martin Howard.*

### Trapline extensions –Robin Toy

First, secure the funds, then identify and mark out the route, get the traps made up - thanks Menzshed - and adjusted, fly them into the Park, deploy them at marked stations and secure them with rebar, set and bait them and finally they're ready to start catching! Next, repeat the whole process in the upper Grecian to protect more whio. Voila! An extra 59 trap stations are now operational within the FOF network. Sounds easy and we've done it all before, but these two extensions cost \$10,500 and 30 FOF volunteer days - on top of everything else the Friends of Flora do.



Traps dropped by helicopter in the upper Grecian. Packframe with monster net ready for Paul to carry out!  
 Photo Paul Ewers

### Rorua distribution published –Sandy and Robin Toy

Conservation management requires knowledge of the distribution of species and how this changes over time. Our great spotted kiwi (rorua, *Apteryx maxima*) is classified as globally threatened, 'Vulnerable' by the IUCN. It occurs only in the northwest of the South Island of New Zealand, but until recently there was no good map of its distribution. Over the last decade many FOF volunteers, DOC staff and lots of other wonderful folk, deployed acoustic recorders at 1,215 locations across 1,400,000 ha. Analysis of 3,356 nights of recordings was used to determine presence and call rates at each location. Rorua were distributed across 848,000 ha, with a high call rate core area in northwest Nelson, representing just 12% of the distribution (101,000 ha). The full story has just been published in the journal *Notornis*.

Toy, R.; Toy, S.; MacKenzie, D.; Simister, K.; Yong, S. 2022. Distribution of great spotted kiwi (*Apteryx maxima*), 2012–2021. *Notornis* 69(1): 1–18.

### Flora Wasp Wipeout – Ivan Rogers, DOC Biodiversity Ranger

European and German wasps are a menace in the South Island beech forests, stripping the honeydew from beech trunks and thus robbing the ecosystem of its prime source of energy. For the users of Kahurangi NP wasps are at best a nuisance - and at worst, a deadly threat. Whilst landscape-scale control of wasps is not currently feasible in the Flora, a 'safe haven' can be created in the heart of the Flora project. Bait stations were first installed in 2017, and filled with 'Vespex' a *fipronil*-based wasp poison for a successful knock-down of wasps.

A strict protocol applies to the application of Vespex – the wasp's appetite for protein must be measured and meet a set threshold or the toxin is not permitted to be applied. For various reasons this threshold has



not been met in recent years due to heavy rains suppressing wasps, and possibly in 2018/19 the ongoing reduction in wasp numbers resulted from the previous years' operations.

This year in the Flora, wasps were conspicuously busy and becoming a nuisance. The threshold was easily met, so in early March DOC staff assisted by FOF volunteer Dean Carroll placed the poison out. Dean and Ivan tidied up the following week, noting a greatly reduced wasp presence. Satisfying work indeed!

The territory covered by this program extends down the Flora road from Saddle Creek through to Lower Junction, with side track coverage to Cloustons Mine, and just beyond Growler Shelter on the Salisbury Lodge route.



Dean Carroll at a Vespex bait station – *photo Ivan Rogers*

## Goat cull - Ian Cox, DOC Biodiversity Ranger

The Friends of Flora have been particularly pleased with the recent goat cull operations undertaken by DOC Motueka, having both ground and air focus. The ground hunting was delivered by Backcountry Contracting Ltd and Mt Campbell Communications, with Ian Cox, whom also worked with the aerial control Helicopters Nelson Ltd, and Coast to Coast Helicopters Tasman Ltd, teams. The results were particularly impressive -

### Ground control -

Cobb: 430 hours hunted = 67 goats.

Riuwaka South Branch: 87 hours hunted = 106 goats, 1 pig.

Grecian stream: 81 hours hunted = 37 goats, 1 pig.

Tableland: 48 hours hunted = 1 deer, 1 pig, 5 goats.

### Aerial Control -

Mt Arthur: 3 hours = 50 goats

Cobb: 2 hours = 15 goats

South Branch Riuwaka: 2 hours (with more planned) = 36 goats.

Many of our threatened plants face ongoing pressure from goat browsing and/or trampling. Goats are considered a major conservation threat due to the severe damage they can cause to a wide range of native

plant species, including those threatened with imminent extinction. They are particularly agile and can exploit places other animals cannot reach. In Kahurangi National Park, they often occupy bluff systems that may be last refuges for highly palatable plants, such as the *alpine Clematis*, covered earlier in this Newsletter. To be effective, goat control requires a combination of professional, co-ordinated aerial and ground-based hunting. It must be sustained and include control of goats over adjacent buffer areas to reduce the risk of reinvasion. Many thanks to Coxy and his crews for delivering on this.

## Operations update – Mike Malone, FOF Operations.

The extended summer conditions have enabled regular checking of the FOF traplines, together with a catch up on maintenance and calibration work. Rodent catches continue to remain generally low, with mustelid numbers similarly, from some previously higher breeding seasons. The quarterly Footprint tracking tunnels were completed last month - with the addition of a new monitoring line deeper into our trapped territory. A greater wasp presence was increasingly evident in fresh trap catches, the recent Vespex baiting being timely and greatly appreciated.

## Des memorial – Peter Adams

Des L died on the 8<sup>th</sup> February 2022 at home surrounded by family and friends after a short illness.

I first met Des at his house in Kumeu, Auckland back in about 2000. He was a typical kiwi bushman but with a heart of gold. The sort of guy to whom you would trust your life without hesitation.

Much of his early life was spent in Fiordland, working on huts, and guiding on the Greenstone and other trails. He came up to Motueka in 2008 and worked with Clare and I at The Resurgence for a couple of years - just when we were starting some serious discussions about whether a kiwi reintroduction project was something FOF felt capable of taking on.

Des was instrumental in helping to make the FOF roroa project a reality. In January 2010 he embarked on a 1250km walk from Collingwood to Te Waewae Bay to raise nearly \$10,000. This was a major factor in FOF getting support from DOC for the first GSK translocations – without it the kiwi project may never have happened – and in May 2010 Des was part of the small group of volunteers who flew into the Clark River to help DOC catch our first kiwis for translocating into the Flora.

He returned to Auckland to be closer to family, but his adventures continued - including kayaking the length of the Waikato River.

Des always loved the mountains of the South Island – and will be missed by us all.



## And also down memory lane...

Fred Mckee, a 95 year old Richmond resident, contacted us following our December 2021 newsletter, recalling his early – 15 year old – tramps up Mt Arthur, staying in the well segregated Flora Hut and sighting whio in the nearby stream.

‘...We used to carry our long wooden skis from the Graham Valley car park up to the ridge of Mt Arthur & spend the day skiing & spending a night or two at Flora or Balloon hut. One walk we did was right along the ridge via Hoary Head & other peaks- along to the Crusader. We ran out of time so decided to go down via the east face of Crusader & boy did we get bushed! The further down the face of Crusader the steeper it became. We slid down waterfalls hanging on to slippery bushes. The cliff face became vertical, but eventually we made it right down & back to our car - totally stuffed....’

It is great to see such a strong team of people involved with FOF and I am always pleased to get your newsletters. Best wishes, Fred.

## Thoughts from the Chair – Sandy Toy

What an incredible summer! I’m blown away by how much our dedicated team of volunteers has achieved. Team working and using monitoring data to inform management decisions are both central to FOF’s culture as is illustrated by the recent trapline extensions. Our biodiversity survey and monitoring programmes continue to demonstrate what a significant biodiversity hotspot we have and enjoy in the Flora/Wharepapa area. I was particularly excited to have been involved with the first survey of marble clematis for twenty years. This beautiful wee plant occurs in our patch and nowhere else in the world, and it seems to be doing well. Then we were delighted to have the support of lepidopterists Roger and Sarah Frost in rediscovering the elusive Flora tiger – the forest ringlet butterfly, unreported in our patch for more than 50 years. With all the troubles in the world, we are lucky to be able to escape to the Flora....

Recently our work was generously supported through a bequest from the Andy Dennis estate. Andy was a significant driver for the establishment of Kahurangi National Park, appreciating the uniqueness of our flora and fauna and early on recognising the potential loss of such species to our natural heritage. Our own work mirrors that foresight, and we greatly appreciate this contribution towards our operations.

Thank you to all our volunteers, supporters and our partners in DOC, for continuing to keep this place special.

We look forward to seeing you at our forthcoming AGM - being held 7pm Tuesday 17<sup>th</sup> May at the Cricket Pavilion, Pah St, Motueka. Our guest speaker, Kevin Hackwell, will be addressing us on the value of our native forests as carbon sinks.

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