

Newsletter

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Welcome to another comprehensive record of our activities, starting on the Mt Arthur Range tops -

Alpine Monitoring 2023 – Lesley Hadley and Martin Howard

The 2022/23 monitoring season of wētā, gecko and skinks in the alpine area is almost completed – the final footprint tracking cards will be collected in mid-April. The full report is still coming but here are few titbits from our casual observations:

The first and obvious standout is mice presence. The last time there was mouse tracking (due to a beech and tussock mast) was 3 years ago, followed by 2 years of no mice tracking. This year there has been a tussock mast - and again high mouse tracking.

Results of the alpine wētā, Deinacrida tibiospina, monitoring are interesting;

- the 50 FTT transect on Wharepapa ridge (which has been monitored since 2016) indicates low wetā presence especially in the lower altitude where previously numbers were highest.
- a new 25 FTT transect at higher altitude on Wharepapa ridge has low weta presence.
- continued good presence of weta in Horseshoe Basin.
- a new 25 FTT transect above Balloon hut showed very positive results of weta tracking.

The monitoring of gecko, *Woodwortha Mt Arthur*, and skink, *Oligosoma newmani*, has indicated very good results. Whilst gecko and skink footprints are easily identifiable, there is a wide range of invertebrates in the tussock whose footprints are easily confused. FOF has been undertaking night hunts over the last 2 summers to catch species, obtain footprints ("walk the card") and photograph species and footprints together to build up our reference library. We can now identify adult and nymph alpine wētā, ground wētā, cave wētā, carabid beetle, spiders and grasshoppers. But the "mystery beast" remains a mystery.

Maybe next summer a night hunt will uncover her ID.

Cave Weta - Ruedi Mosimann



Moth Extravaganza – Sandy Toy

Aotearoa has an extraordinary number of moth species – probably more than 2000. No-one knows the exact number. Many are tiny and are restricted to very specialised habitats, often in remote areas, so finding and identifying them is a challenge. FOF volunteers got an inkling of the scale of that challenge when we had the privilege of joining lepidopterist Sean Clancy for a moth survey. Twenty years ago, the late John Dugdale and Ian Millar identified 163 moth species, attracted to

light traps between the car park and Flora Hut. Sean wanted to see how the moth fauna had changed and to investigate the alpine moths. Insects see green, blue and near ultraviolet light very well, so a light trap made up of a very bright light bulb over a box filled with egg cartons on a white sheet is a great way of sampling nocturnal moths. The moths are attracted to the light, hide in the egg cartons and can be identified the following morning – very civilised. However, the need for a power source, warm, calm, dry nights and outstanding moth identification skills, make it a specialist endeavour. The first night at Flora Hut brought in a heap of moths. We soon learned that they are highly variable in colour, and while Manaaki Whenua's excellent



identification charts illustrate the moths with their wings outspread, a live moth with its' wings folded has patterns running the other way – very confusing! As Sean said, moth identification is not always obvious!

With a good weather forecast, the team headed up to Mt Arthur hut - easier said than done: there was the generator, the traps, the egg boxes, the pottles...Soon after we arrived the wind picked up. Not ideal, but we hunkered down and waited for the evening lull. Optimistically some of us headed up the ridge into the tussock to see what was out and about. Sheltering in the lee of the ridge we watched the mist and cloud tearing over the ridge line and swirling down into the valley below. After a couple of hours the rain started....time to head down. However, Martin spotted a micro moth scuttling out from under a rock in the tussock at 1500m. Sean identified the moth as *a very rarely recorded upland gelechid moth 'Hierodoris' insignis associated with the*



upland daisy genus Celmisia. A bit of investigation revealed that the moth is a long-running enigma, as indicated by the apostrophes around *'Hierodoris'*. The original 'type' specimen was collected from Mt Arthur Tableland. It was described by Alfred Philpott, at the Cawthron Institute in Nelson, in 1926. He provisionally placed it in the genus *Hierodoris* but noted that further specimens would need to be studied to confirm it. Sixty years then passed – as previously stated, it is rarely recorded! In 1988 John Dugdale revealed that it belonged to a completely different family of moths from other *Hierodoris* moths, so it cannot be a *Hierodoris*, but until its taxonomy is sorted, that's what it remains, albeit with apostrophes: *'Hierodoris'*. in 2005 Robert Hoare reviewed the *Hierodoris* genus and reiterated Dugdale's finding – our moth is in the wrong family. Fast forward another 18 years and the over-worked taxonomists have still not been able to assign the species to a genus in the correct family. Whatever its name, it's good to know that it is still at home among the daisies on the

Wharepapa ridge. Sadly, wind and rain are not good for bright light bulbs and they didn't survive the night even in a sheltered spot....Thanks Sean for opening our eyes to the wonder of moths and thanks to Robert Hoare - taxonomists like him, provide critical information for conservation decision makers.

The mark of the tangled scrub –Sandy Toy

On this occasion it wasn't just scratched legs. Fighting through a dense tangle of scratchy scrub on a steep slope, trying not to fall into a deep pool in the creek below, I swore loudly, confident that there was no company around for more than a kilometre to hear me. But hang on a second... it slowly dawned that the pesky scrub was in fact a rather special tree daisy, *Olearia quinquevulnera*. I

apologised to the shrubs for my bad manners, extricated myself from their gnarly embrace and confirmed that I had indeed been in the middle of a large patch of this shrub – it had characteristic zig-zag stems, and small, rounded leaves with five marks around the edge. Even better, it had flowered prolifically and had set seed. Several herbarium specimens had been collected from the Flora during the mid twentieth century but by 2023 it was known only from a single location in the area. It has a bizarre, disjunct distribution, occurring at three separate areas in the North Island, in Kahurangi and in the Hurunui in Canterbury. Each population is small and therefore vulnerable to chance extinction events. The species name quinquevulnera refers to the five marks around the outside of the leaf. The Flora is full of biodiversity surprises.



Photos – Sandy Toy

Wasp research in the Flora – Brodie Abel

Hi everyone, my name is Brodie Abel and I am a University of Otago Master's student.



I am lucky enough to be doing my research on the impacts of Vespula wasp predation in the Flora area this summer. Over the past few months, I have been working with the Friends of Flora to develop research that will aim to understand how wasps are impacting native invertebrates in the Flora. Naturally working with wasps can be hazardous work, so that is why you may have noticed a few warning signs and cage like structures placed near the tracks on your walk through the Flora recently. I hope by the end of my field season in April to have explored almost every beautiful nook and cranny of this place, and to come away with some concrete evidence that wasps detrimentally impact the special native invertebrates that you can find in the Flora. So, here's hoping the weather holds out long enough for me to collect some good data!

Finally, an enormous shout out and thank you to all of the FOF volunteers that have helped out so far with my project, I cannot thank you enough!

Camera Surveillance Project – Warren Kaneen

While carrying out surveillance of the kea nest in the park, we noted many pests in the area, the most concerning being two different cats. With this in mind, it was decided to set up a 12month project with the objective of identifying potential new threats to the Flora catchment, and investigate the abundance of current known threats starting around October 2022. Cameras have been placed on or near 5 trapping lines. As an attractant to the game cameras we are using the ZIP MotoLure which delivers a small amount of mayonnaise once every 24 hours.

As expected, the weka were quick to appreciate a free lunch and are regular visitors. As well as rats and stoats, we have also seen fallow deer, pigs, goats, hares, possum and disappointingly a hedgehog at around 1,100 metres. On the plus side we have not seen any cats to date. But along with pests, we have also had welcome visitors with one Roroa (Great Spotted Kiwi) and kea.

With reports of a cat in the Grecian and reduced sightings of Whio there as well, we are looking to relocate one of our cameras and use a modified mayo lure containing anchovies which is said to be more attractive to cats.

A special thanks to Gerald, Hamish and Martin for their help with this project.



A selection of visitors to the camera surveillance sites.

FOF Field Work – Mike Malone

The relatively low rat catch numbers over recent months were backed up by the 18/19th February 2023 Footprint Tracking Tunnel monitoring results. Mustelid/stoat catch numbers in contrast – both of juveniles and several obvious litters – have been noteworthy, and pleasing.

We primarily use eggs as the trapping bait, periodically supplemented by erayze (dried rabbit) which is susceptible to seasonal moisture deterioration, wasp infestation and is more costly. Consumers are now well aware that egg supplies and prices are under considerable pressure with no indication of an early improvement, making the crucial monthly bait replenishments that much more expensive - and particularly difficult to secure in the volumes we require. Hopefully alternative options – equally effective, economical and easily handled – will become available sometime soon. At the core of our predator monitoring is an extensive trap network which requires monthly checking by an enthusiastic and valued group of volunteers. Largely unseen is the maintenance work undertaken to ensure that the traps are calibrated correctly, the boxes are firmly sited and laid securely to catch, and off track lines are cleared and re-routed where necessary. Over recent years we have been reporting on a significant increase in this broad network to our monitored territory and species protection. The vast majority of this and survey work - also undertaken by a hardy core of volunteers - goes unreported, however one recent account is worthy of mention - a morning radio report from the Salisbury hut warden to the Nelson Visitor Centre advised of having seen lights on the Mt Arthur upper slopes around midnight....whom and why? Martin, still on the upper slopes, was able to report his presence there the previous night whilst undertaking monitoring work - showing the commitment of our volunteers and the benefit of carrying DOC radios!

Kea update - Chrissy Kaneen

Since our previous kea update there have been more visits to the kea nest, and viewing footage, one month providing a huge amount to process, with over 35 thousand photos and 2379 videos!

Although there was always hope of having more than one chick present, we are still happy to announce that the one chick seen on 4th of December has successfully fledged, leaving the nest around the 20th -25th February, with only the occasional visit back.

Some visitors to the nest were seen including a stoat that was about a metre and a half away watching the chick sitting outside the nest but then decides to run off - and, on a nicer note - we also had a visit from an unknown juvenile kea that was seen both with the female and the chick. Possibly this was last year's chick checking in.

With the chick not having a sibling to play with, mum became the playmate, and we have some good footage of their antics. This includes a video where the chick rolls down the slope after being playfully pushed by mum, which can be seen on our FOF Facebook page.

In a recent trip into the park, we were excited to see at least five kea flying high above, calling.

It's truly a joy to see these amazing birds calling this piece of paradise, home!



Kea play time....

FOFs 22nd AGM – Tuesday 16 May, Upper Moutere Community Centre.

Come and find out more about the Friends of Flora achievements. Everyone is welcome, not just active FOF volunteers. So, invite your friends and neighbours.

Our guest speaker this year will be **Alison Ballance** introducing her latest publication - '*Takahē* - *Bird of Dreams*'.

This is the title of her 30th book which is due to be published in early May, and is a companion volume to 'Kākāpō - Rescued from the brink of extinction', which won the 2011 Royal Society of New Zealand Science Book Prize - revised and reprinted in 2018. Alison Ballance is a zoologist, writer and broadcaster. In 2017 she was made a Member of the New Zealand Order of Merit (MNZM) for



services to natural history, film-making and broadcasting. She spent nearly 13 years presenting and producing Radio New Zealand's science and environment programme *Our Changing World*, and before that she directed and produced wildlife documentaries for NHNZ in Dunedin. Please come and welcome her to the FOF AGM - which will be advertised locally.

For enquiries on this new publication, go to - Takahē - Potton & Burton (pottonandburton.co.nz)

New Site for Kahurangi geckos – Ivan Rogers, DOC Biodiversity Ranger

Since December a survey of the open top of a peak adjacent to Wharepapa has been conducted to figure out what lizard species are present. There have been very occasional sightings of skinks up there but none captured or photographed - so no ID. Cid Wilkie and Jared Waters of Kumanu Environmental have been volunteering over the past few months, putting out footprint tracking tunnels, moving them around, and gathering the cards. The cards showed some skink tracking and a reasonable amount of gecko tracking. So on Sunday 5 March Cid and Jared put out some G-minnow traps (a fish trap often used for lizard surveying) and on Monday morning a team of five - Cid, Jared, Ivan, Anna Zyriny-Morgan – an MSC student from the University of Otago - and Dan Rooney, a visitor from Melbourne, went up to check the lizard traps. No lizards were caught but one mouse was - not unexpected as mouse tracking had been detected – so a hand search was the only way to go. On a site that had been searched several time with no results the extra eyes and hands got a better outcome – three live Kahurangi gecko (Woodworthia "Mt Arthur") one long-dead one together with five shed skins were found after 16 person hours of searching. From this work we can conclude that there is a reasonably healthy outlier population of Woodworthia on this peak. Whilst the skinks remain elusive, Anna is determined to revisit the site this month, or next, for another attempt at capture and ID.



One of the Kahurangi gecko

Ivan Rogers



A Meeting of Minds - I found Maryann, Bill, Sandy and Robin enjoying a catch up over lunch at Flora Hut last week, clearly reminiscing over the last couple of decades' achievements - and fixing more targets for the future...! *Gerald Bruce-Smith*

From the Chair – Sandy Toy

A busy summer for FOF is wrapping up with the arrival of the first snow of the season on Wharepapa.

It's been eye-opening working with Masters student Brodie Abel on the impact of wasps on invertebrates in the Flora. One morning last week we emerged from our tent above Deep Creek to discover wasps active at 3.7 C. Compounding that surprise, we found wasp nests above 1200 m.

The additional line of tracking tunnels installed by our alpine monitoring team on the Tableland is generating interesting data on this population of the Mt Arthur giant wētā in comparison with the population on the Wharepapa ridge. The tussock flowered prolifically this season generating heaps of seed – great tucker for mice. The rise in mouse tracking is worrying for this critically threatened wētā.

Our growing awareness of threats for which there are no management tools can be depressing. But seeing a flock of eight kaka circling overhead is uplifting evidence of the benefits provided by the ongoing mahi of FOF volunteers maintaining the trapping network- thank you all.

We look forward to seeing you at our AGM on Tuesday 16th May.