



Matakohē-Limestone Island Rangers' Report May 2018

Visitors, Volunteers, and Other Comings and Goings

- This month, Volunteer Wednesday was focussed on weeding, hitting moth plant as it appeared down the ski slope at the western end of the island, and Mexican devil weed along the coastal strip on the north side of the island. Another group weeded around the Cement Works ruins and re-nailed fence battens to ensure the fence remains an effective tool to keep the sheep in (as long as we have no more gate incidents!). Jono finished off spraying around all the bait stations. The growth is finally starting to slow, but it seems to have been an exceptionally long growing season for grass, weeds and natives alike. This is great news when it comes to the native plantings but has created a heap more work via the grass and weeds. We are grateful to have such a dedicated team of volunteers to try to keep ahead of this growth - we certainly couldn't do it ourselves.
 - We had a fun and productive day out with the hard-working staff from Dairy NZ, here doing a day's labour for the community. Moth plant sites at the Edge House ruins, the bottom of the ski slope at the western end of the island and below the pa on the southern access track were hit hard, including the recovery of dozens of pods from four or five metres up trees. Two large rubbish bags full of seedlings and pods were collected over the course of the morning and there was enough time for a quick tour of the ruins too. Thanks so much for your help Dairy NZ, you are welcome back any time. At times when we are controlling weeds, and moth plant in particular, we need to cut down the host tree to be able to access the pods. We avoid this where we can but have to take the collateral damage on the nose as the establishment of mature moth plants on the island would smother the native canopy, negating the many years of hard slog it has taken to create it.
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- A photograph showing five people standing on a dirt path outdoors. From left to right: a man in a blue shirt and sunglasses, a woman in a dark blue shirt and a wide-brimmed hat, a man in a green shirt and a blue hat, a man in a black shirt and sunglasses, and a woman in a black shirt and sunglasses. They are all looking towards the camera.
- We had Dai and Alicia from Northtec out with their first-year environmental management students to practice their telemetry skills. The two existing resident transmitted male kiwi were listened for, as well as a couple of dummy transmitters that Emma set up for the students to find. After a bit of a chat about how to interpret the chick timer data streams the students were let loose to track down the signals. We think they now all have an appreciation for how tricky this task can be in the field.
 - Freddie Tito and his elite gardening crew came over to the island on one Saturday morning to harvest the heritage kumara we have had growing up on the ridgeline since last November. The crop this year was much larger than the first, thanks to the rain and pukeko-proof fencing. Some of the kumara will be added to the hangi at the Onerahi Food Forest at Matariki, with the rest kept for planting at the end of the year. The kids enjoyed looking at a large native centipede that was living in one of the plots, and several different kinds of worms. We hope to expand the plots and have more kumara growing on the island again in November. Jacque Lowe from the Onerahi Orbit was also on hand to capture the harvest in a story, so Onerahi residents may see that in the coming weeks.



The Kumara Harvest

Flora and Fauna

Plants

Jono planted out the 60 native hibiscus he had been growing around the Manager's House ruins and the ranger station. These are settling in well and have begun to grow already, with some beginning to bud. He also sprayed all the bait station sites on the north face of the island.

As noted above, moth plant continues to be a problem on the island, with the nearest source being Rabbit Island to the west. FOMLI is looking at options for dealing with this problem area.

As noted in last month's report, we are not having any public or other planting days this year and we are planning on having a public weed bust and mouse bust over the school holidays in July instead. Keep an eye out for the details to come but at this stage we are looking at Sunday 8, 15 and 22 July, with one of those days as a backup in case of poor weather.

Kiwi

Emma took part in another successful kiwi round up on Motuora, with birds destined for Pataua North. The work was completed in good time and she managed to snatch a few hours sleep, unlike the previous round up. There was a good crop of 10 healthy young kiwi released, some of whom may end up pairing up with the Matakoho-Limestone Island raised kiwi released there last year. We have heard that Quincy the kiwi has



been keeping the locals awake at night with his incessant calling, so hopefully he can find an answer to his calls and create kiwi fluff balls this season. Some first-time kiwi dads don't manage the full 80 days of incubation and desert their eggs before hatch. Most species would have had some hatching action well within the three-month window, so we can't really blame these naïve dads for thinking something must have gone wrong and wandering off. They all get there in the end though, and most prove to be very stable and committed sitters.

Meanwhile on Matakoho-Limestone Island, Emma caught two kiwi earlier in the month, a one-year-old male and a two-and-a-half-year-old female. They were monitored via chick timer transmitters and re-caught again with Todd Hamilton's help, for the whakawaatea and release held on 8 May. It was lovely to have some friends from Ngunguru make it out to Onerahi to see the birds before they left, with a smaller turnout than usual (due to being a weekday morning) creating an intimate and personalised kiwi experience. Todd, Emma, Ngaire and the birds then went out to Matarau School where they met Edwin from Tanekaha CPCA for a well-received educational talk and kiwi showing, before the kiwi were released later that evening. These kiwi both came from nests at Rarewarewa, which is near to Tanekaha north-west of Whangarei, so it felt like we were returning the kiwi home. Everything went smoothly and all the parties working together to make these events happen, worked like a well-oiled machine once again.

Todd was working with Hugh Robertson when they made a surprise discovery of two chicks in an unknown nest north-west of Whangarei, so these two babies were released on to the island this month. Emma went to check on them several hours after dark to make sure they made it out of the penguin box they had been placed in temporarily. The box was empty, but just as she was leaving she spied one of the chicks not far away, making full use of its new home and having a feast on the plentiful invertebrates.

Petrel

We are pleased to report that oi/grey-faced petrel have been returning to the burrows over the last month. Four individual birds have been identified. All are previous returnees, three of whom have returned many times now, and the fourth is now returning for its second season. These returnees include the two who paired up last season and produced an egg so fingers crossed practice makes perfect. They are in the same burrow as last year so, so far so good.



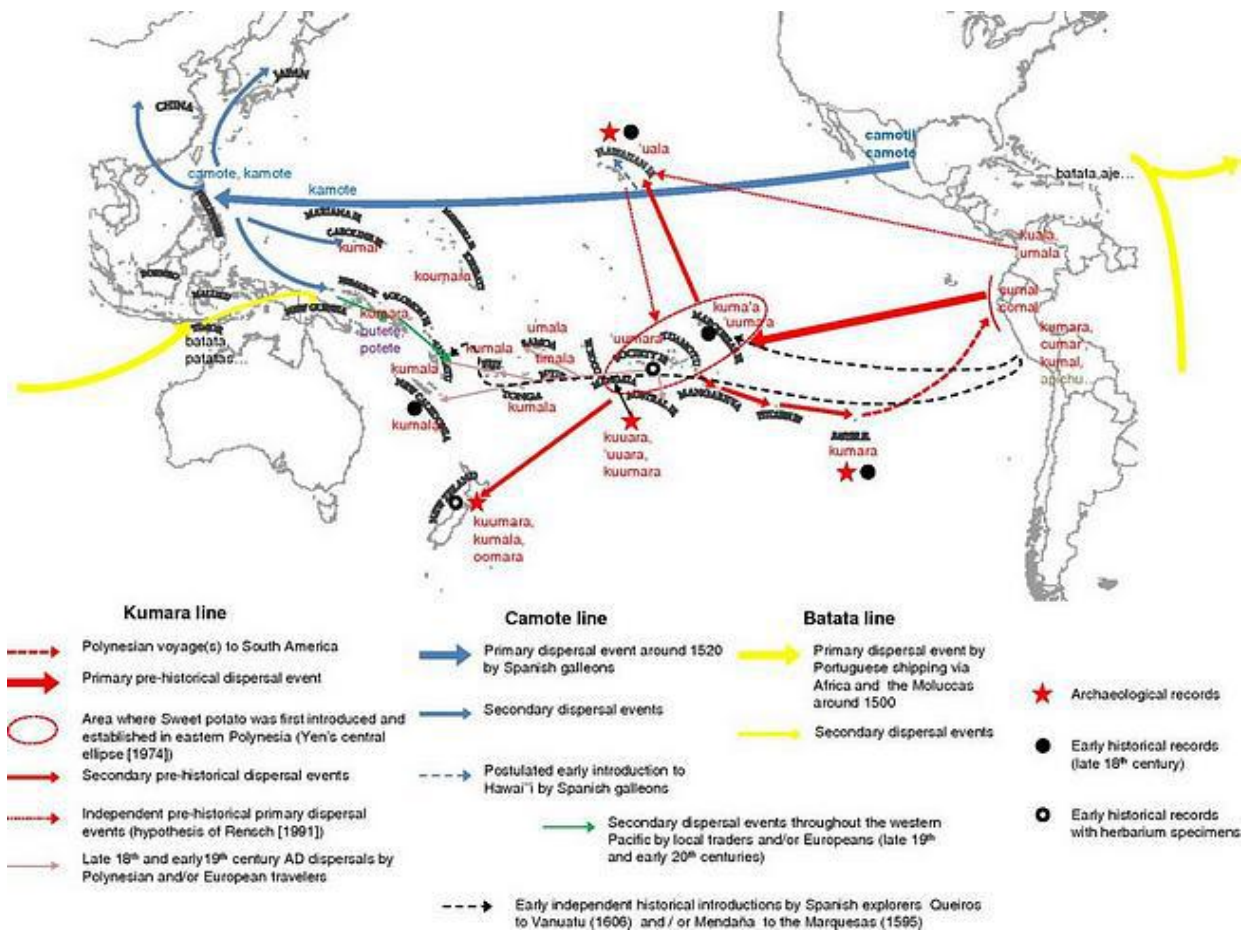
Interesting Invertebrates and Tasty Tubers

One of the interesting side effects of checking the petrel burrows at this time of year is that we get to see the other fauna that inhabit these dark and dank tunnels and chambers, namely the invertebrates. Anecdotally we have noticed an increase in both the number and the size of native giant centipedes (*Cormocephalus rubriceps*) using the burrows in the couple of years we have been on the island, we think some must be approaching the 20-25cm upper length limit of this species. Like other centipedes, they are predators and have forcipules 'poison-claws' to capture their prey. These can be used to deliver a poisonous bite to humans so we are not game to pick any up to measure them!

Like many of our other native and endemic species, the giant centipede is susceptible to predation by rats, and it is now uncommon to find full-sized individuals on the mainland. The gigantism seen in this species is similar to that observed in wetapunga/giant weta, whereby the absence of mammals caused the flightless invertebrates to evolve to occupy the niche generally filled by small ground-based mammals such as rats and mice.

The hutihuti and taputini heritage kumara cultivars are two of three pre-European introductions (the other being rekamaroa). They were never grown commercially and were largely replaced with other more productive varieties introduced by whalers, traders and settlers in the 19th century. The original introduction of the so-called kumara line of sweet potatoes into central eastern Polynesia occurred in the 13th century from the west coast of South America, via Polynesian voyagers. Later introductions of the Camote line of sweet potatoes from Central America into the western Pacific, and of the Batata line from the Caribbean eastwards via Europe were facilitated by European voyagers from the 15th century. This tripartite theory of sweet potato dispersal is borne out by archaeological, linguistic and genetic evidence.

Doug Yen of the Crop Research Division of the DSIR had collected sweet potato specimens from New Zealand and across the Pacific throughout the 1950s and 60s, selling germplasm to institutions in Japan and several other countries in 1969 when DSIR decided it could no longer maintain its extensive collections. In the 1980s the DSIR along with many other Crown agencies began to re-examine its relationship with Maori and the story of the lost kumara was brought to the attention of Maori during an international ethnobotany conference sponsored by the Commonwealth Science Council and the DSIR, in 1988. Supported in principle by the DSIR but funded by celebrity botanist David Bellamy in the face of political opposition, Del Wihongi and several others travelled to the Tsukuba National Agricultural Centre outside Tokyo and returned with examples of nine heritage cultivars in November 1988. They began growing and dispersing the kumara including the hutihuti and taputini from Te Wao Nui a Tane National Ethnobotanical Garden in Mangere, in 1990.



Tripartite theory of sweet potato dispersal. From Rousellier, et.al, 2013. Proceedings of the National Academy of Sciences February 5, 2013. Vol 110 (6) 2205-221

Pest Control

- With the pesky exception of mice, the island continues to be pest free, with no mustelids and only rodents caught in the buffers over the last few weeks.
- Emma put out track cards this month and the mouse incidence has ticked up a little from the last time. We are currently in discussion about how to tackle mice long-term.

Other Events

- This month we again made use of the services of Marine North when the steering on the barge seized. We were sad to hear that Marine North Jono has moved up to the Bay of Islands as we had always appreciated his prompt and professional services but look forward to getting to know Marine North Jason. We also had some help with a jammed PTO shaft from Bryant Tractors and valued their quick turnaround also. All island equipment is now up and running again, touch wood!
- We understand that a contract is close to being let for the replacement of the island pontoon. This may now happen by August.

Finally

- Don't forget Volunteer Wednesday, 6 June with pickup from the Onerahi Jetty at 9.00am as usual.
- Please circle 8, 15 and 22 July in your diaries and keep an eye out for updates about mouse and weed busts on the island, come the middle of the year.



Proudly supported by; Environmental Northland, Forest Floor Nursery, Harbour Marine Ltd, Marine North Ltd, Northpower, Northland Port Corp, Northland Regional Council, North Tugz, Onerahi Lions, Phoenix Boats, Red Bull Powder Co., Tawapou Nursery

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