SPRING 2018

Subantarctic Scribe

Conservation in New Zealand's subantarctic islands

Auckland Island looking north over Carnley Harbour. *Photo: Finlay Cox*

Welcome back

Welcome to another edition of the *Subantarctic Scribe* – and what a big one it is as we celebrate the outcome of the Million Dollar Mouse project, give a perspective on travel to the islands and relate a little of the islands' histories.

This year, we have a new face in our team. **Kristen Rodgers** has joined us as a Senior Ranger and will help guide the focus of the team and its resources.

We have had several great achievements in the subantarctic this season. The Antipodes Islands have been deemed mouse free, and planning for the Auckland Island pest eradication is now well underway, both of which are covered in this edition.

We have listened to feedback from readers of last year's edition of the *Subantarctic Scribe* and have included more information from those who are directly involved in the research.

We hope you enjoy this update. ■

Tourism in the subantarctic

The Department of Conservation (DOC) monitors tourism in the subantarctic in several different ways, most of which are paper-based. However, most will agree that there is nothing like seeing something first-hand to understand a situation.

One of the key methods we use to undertake monitoring in the subantarctic involves 'getting amongst it' and placing our staff on board tour vessels as government representatives. This allows us to directly witness the impacts tourists can have on the islands.

This also often provides some unique opportunities for DOC to get work done. For instance, this year I had my first foray into archaeology while removing a cross from a grave site on Campbell Island/Motu Ihupuku, the history of which is covered in another article later in this newsletter. However, no matter how much I felt like Indiana Jones – substituting snakes for sea lions – it can be challenging getting little pieces of work like this done, as weather and the cost of expeditions are major factors in prioritising work.

In the subantarctic, the government representative role also provides a means of recording compliance matters for both the tourists and policy documents such as our *Regional Coastal Plan: Kermadec and Subantarctic Islands*.

And for the New Zealand Government, the representative role does not stop at the subantarctic islands. Through the Ministry of Foreign Affairs and Trade (MFAT), the role extends as far south as you can travel by boat, onto the ice and the icy continent itself, Antarctica.

People undertaking this role also report observations of fishing boats, tour operators, conditions of wildlife and tourist behaviours. Furthermore, they answer questions about DOC's programmes and involvement in the subantarctic, and MFAT's involvement in things like the International Association of Antarctic Tour Operators (IAATO) and the Antarctic Treaty system.

Therefore, this diverse role requires a wide range of knowledge and experience. ■

By Joseph Roberts

BELOW Tourists visiting the world's loneliest tree at one of the visitor sites on Campbell Island/Motu Ihupuku. *Photo: Joseph Roberts*

Department of Conservation
Te Papa Atawhai

Seabird research on the Auckland Islands

We are involved in seabird conservation research in the Auckland Islands. We study albatrosses and petrels that are caught as bycatch in commercial fisheries and/or impacted by introduced mammals, such as rats and cats.

We ask questions like 'How many birds are there?', 'How many eggs are laid?' and 'What is their survival rate?'. Like a Statistics New Zealand census, we use the seabird equivalents of births, deaths and marriages to find out how populations are doing over time.

Seabirds earn their living at sea, so terrestrial threats, such as introduced mammalian predators, are only part of the story. In the marine world, they face many threats to their survival.

To identify risk areas, we're interested in finding out where albatrosses and petrels go while they're away at sea. To find this out, we ask 'Where do they go to feed when raising their chicks?', 'What parts of the ocean do they use during the wintering "rest" period?' and 'Where do they overlap with fishing operations?'.

The seabird hotspots of the Auckland Islands group are those islands that have always been free of mammalian predators: Adams and Disappointment islands. Adams Island is the southernmost island in the archipelago and home to Gibson's wandering albatrosses. The southern cliffs are also thought to be the New Zealand stronghold for light-mantled sooty albatrosses, but very little is known about these birds. Disappointment lies off the western cliffs of the main Auckland Island and, despite being only 4 km^2, is home to most of the world's white-capped albatrosses. It is also honeycombed with petrel and shearwater burrows, and is New Zealand's stronghold for white-chinned petrels.

On Adams Island, our base hut is tucked away in a sheltered bay on the north coast. The dominant trees that grow here are southern rātā, all twisted and bent from the wind, and this small forest shelters the hut. But we are rarely there – our work on Adams Island is mostly carried out on the windswept slopes and cliffs of the south side. The cliffs are quite inspiring, dropping 400–500 m in places into the Southern Ocean. The weather can arrive very quickly up there so we also have another shelter – a small hut about the size of a van.

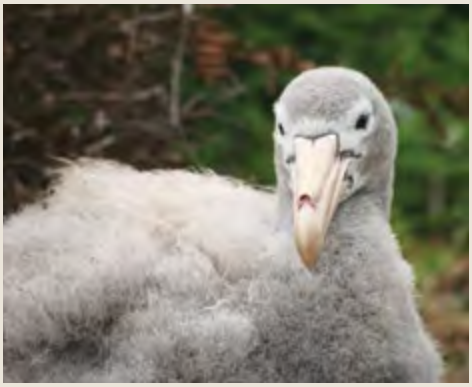
Life on Disappointment is very different. Our small tent is perched on a small ridge that has a flattish spot that is part of a muddy highway maintained by sea lions and penguins as they make their way up from the sea. There are no trees here, so we tuck the tent deep into the tussock to shelter from the wind.

Our work with the albatrosses is similar on both islands. In a windy study area high above the sea, we walk from nest to nest and check the birds and eggs. We can mostly stay at a distance and read legbands (or rings) with binoculars. We only have to handle an albatross if it needs a new legband or has brought a tracking device back from its travels.

Petrels cannot be monitored from a distance. These seabirds dig a long burrow in the ground and nest at the end. Therefore, to find out how many petrels there are, we need to first find their burrows by crawling around under and wading through lush megaherbs. We then need to find out who's home, which involves spending a lot of time lying flat on the ground with an arm deep in a muddy burrow.

Together, these pieces of information help us estimate how many breeding petrels there are on the island. Such population estimates can be valuable. White-chinned petrels, for example, are caught in huge numbers as bycatch in commercial fisheries, so population estimates help us to gauge the impact of fisheries on this species and what we can we do about it. ■

By Kalinka Rexer-Huber and Graham Parker



TOP Southern Royal Albatross flying, Auckland Islands. *Photo: Andrew Maloney*

MIDDLE Giant Petrel chick, Auckland Islands. *Photo: Andrew Maloney*

MIDDLE BELOW Sooty albatross chick. *Photo: Kalinka Rexer-Huber*

BELOW One of the huts on Adams Island. *Photo: Kalinka Rexer-Huber*

Duris' grave

Few people are as passionate about the subantarctic islands as Norm Judd. This Heritage New Zealand historian has spent a good portion of his life researching and exploring the important history of Campbell Island/Moku Ihupuku.

BEFORE The original cross bent over after years of being exposed to the elements. *Photo: Joseph Roberts*

AFTER The new cross in place at the grave site. *Photo: Kathryn Pemberton*

One of Norm's key areas of interest has been the cross and grave site of Paul Duris – a member of the French Navy who died on an expedition to observe the transit of Venus from Campbell Island in 1874.

A naval reservist at the time, Paul joined 13 expedition mates as one of three mechanics aboard the FRWS *Vire*, which departed Sydney in September 1874.

The *Vire* arrived at Perseverance Inlet with the expedition crew, infrastructure and supplies for an almost 3-month stay. An extensive set of gear was brought to the island, including pre-fabricated buildings, and animal pens with live food reserves such as pigs and sheep. However, things did not go according to plan. The area previously selected for their camp and equipment was not suitable – and to make matters worse, the vegetable garden had not survived and storms were a constant, damaging issue.

On 22 September, the ultimate tragedy struck – Paul Duris lost a fight with typhoid. It is noted in the expedition report by the expedition leader, Bouquet de la Grye, that Paul had been bedridden since departing Sydney on 2 September. He was buried near the site that was originally intended to be used for observation:

> *...we are burying him tonight on the headland chosen last year to make our observations. It is located vis-a-vis of Kervénus separated from us by the width of the bay. The point is the prettiest of the harbour, if the word pretty can be applied to Campbell.*
> *Expedition Leader, Bouquet de la Grye*

In what must have been a depressing blow to a difficult expedition, the day of the transit (9 December 1874) was cloudy. Skies did clear enough for the observers to witness part of the transit, but no useful measurements were made.

Three months and 19 days after arriving at Campbell Island, the expedition left (on 28 December 1874) not having achieved it's goal and leaving the body of a crew member behind.

While Duris' cross and grave site were lost for a time, the story does not end here. There were occasional first-hand accounts of the cross from the farmers who worked on the island between 1895 and 1931. However, not all of these reports lined up with the original description from the expedition or, for that matter, with each other.

Searching for the grave began in 1975. However, it was not until 1993 that Norm Judd found the grave site. While the farmers' accounts were useful, one photograph, taken on an expedition in 1907, proved invaluable. It showed skyline features that could help pinpoint a location. It also showed that the vegetation had changed dramatically between 1907 and 1993. Scrubby *Dracophyllum* had surrounded the grave site and grown to a height of 3–5 m, making orientation from ground level impossible.

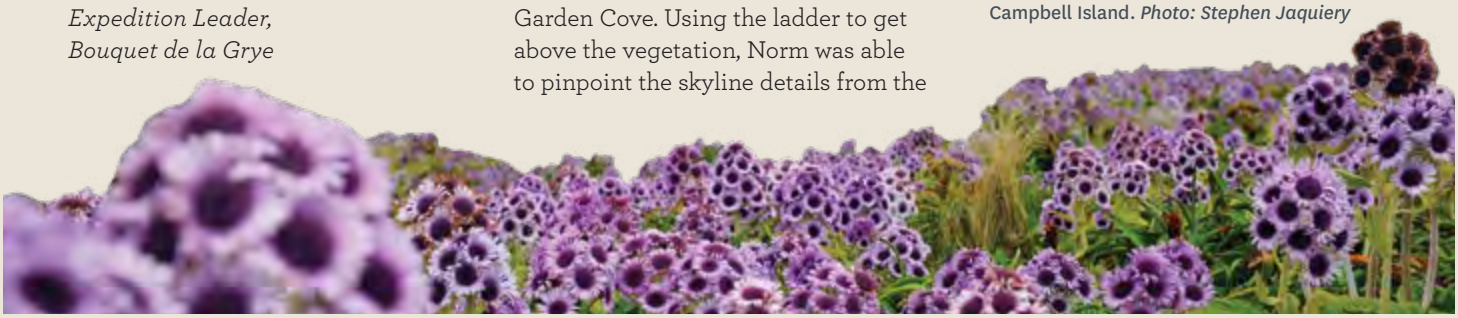
On 22 October 1993, Norm carried a 2.4-m-tall step ladder from the Metservice base to a track behind Garden Cove. Using the ladder to get above the vegetation, Norm was able to pinpoint the skyline details from the 1907 photo. Moving back from the track towards Duris Point through dense sea lion-infested scrub, and occasionally checking his orientation and skyline reference, Norm arrived at a point 5 m from the coast. Roughly 4 m to his right, Norm found a flat terrace that he was confident was the grave site.

The old cross was located and cleared. However, re-exposure to the elements caused it to become rusted and damaged, and in 2017 it was discovered that it was starting to collapse. Therefore, it was decided that a replacement was needed and that the original should be brought back to the mainland for metal conservation. A replica was made and donated by Forged and Crafted of Roxburgh New Zealand. On 11 March 2018, during a joint operation between DOC, Metservice New Zealand and the New Zealand Navy, and accompanied by Matthew Schmidt of Heritage New Zealand and Norm Judd, a ceremony was held to replace the old cross.

After 43 years of research and searching for the grave site and 24 years since its rediscovery, Norm has ensured that this grave is protected for many more years. The grave now stands as a permanent monument to the end of the perilous age of discovery in the New World. ■

Information supplied by Norm Judd, written by Joseph Roberts.

BELOW A field of *Pleurophyllum megaherb*, Campbell Island. *Photo: Stephen Jaquiery*



27 years of subantarctic albatross research

We started working on New Zealand wandering albatrosses way back in 1991, primarily because they were being caught on the massive number of longline hooks that were being set at that time to catch southern bluefin tuna.

No one had any idea whether this was a problem for the species as the size of the population was almost entirely unknown. However, scientists on Crozet Island in the South Atlantic Ocean, who had been studying the populations of wandering albatrosses there since the 1960s, reported that numbers had halved in 1987 due to fisheries bycatch. This made us concerned that the same might be happening in New Zealand but was being overlooked.

We set out rather naively to simply count the number of breeding pairs on Adams and Antipodes islands. However, these birds are solitary biennial nesters and sparsely distributed, making accurate nest counts difficult to achieve. Furthermore, both islands are big and difficult to get around, particularly Adams Island, where deep scrub and tussock make travelling slow and hide nests. As a result, despite huge efforts by four-person teams over several summers, we were unable to obtain precise estimates of the total numbers on the two islands. Therefore, we subsequently made counts of only representative parts of each island, choosing blocks that were the easiest to count accurately, and had a greater focus on measuring survival, productivity and recruitment.

This work involves one long summer trip during which we measure productivity and band the chicks that were produced during the breeding season just finishing. We record the bands of birds that are arriving to breed in the new season to measure adult survival, map their nests to measure breeding success, and attach and retrieve tags to follow the birds' movements at sea. Once all the new season's eggs are laid, we count the numbers of birds nesting in several other parts of the island to check that the population trends in the study areas are representative, and to estimate the total population size.

These birds are very long-lived (up to 60 years), don't start breeding until they're between 10 and 20 years old, and lay a single egg (at best) every second year. Therefore, assessing the population's health is complicated and it can take some time to separate long-term trends from short-term fluctuations. In the 1990s, both Gibson's and Antipodean wandering albatrosses were found to be recovering from the declines that had been caused by longline fishing around New Zealand before better fishing regulations came into place and longlining effort decreased.

However, the tide turned around 2005, with both populations plunging into steep declines due to smaller numbers attempting to breed, reduced breeding success and increased mortality. The Gibson's albatross population appears to have stabilised for now, but the Antipodean wandering albatross population is continuing to decline. The causes seem to be a mixture of changes to the oceans and increased longline fishing effort in international waters where there is little regulation of fishing methods.

LEFT The Antipodes Hut following a landslide, and the castaway depot that became a temporary hut. The main hut was repositioned and upgraded in time for the Million Dollar Mouse project. *Photo: Kath Walker*

BELOW Southern Royal Albatross. *Photo: Jo Hiscock DOC*

While the information we're trying to collect hasn't changed much over the years, collecting it has become much easier, thanks largely to improved technology. The biggest advance has been the availability of accurate, hand-held GPS units: instead of laboriously mapping and relocating nests with compass and tape measures, nest position, can now be recorded with the touch of a button. Sometimes it feels as though the GPS units have taken all the skill from the work – it used to be a major mission to find your way around on the alpine tops of Adams Island as it is so frequently covered with dense clag, but now all those tricks to safely navigate a route are no longer essential.

Equally valuable has been the vast improvement in weather forecasting or, more accurately, in the satellite technology that allows us to obtain weather forecasts. Weather in the subantarctic is incredibly changeable: there are usually several quick fronts in a given 24-hour period, so it's hard to avoid bad weather entirely. However, when we first started, we had no idea what the weather would be like each day, so we'd climb from camp for 2 hours to reach the albatrosses on the southern slopes of Adams Island, only to be engulfed in a storm on arrival and forced to return to camp, drenched, cold and without having achieved a thing. We'd then delay departure the next day, fearing a similar outcome, only to find it would have been fine enough to have done some work if only we'd set off earlier!

There was always a hut to live in on Antipodes Island but until very recently it had no heating or running water and leaked whenever it rained. After major repairs to facilitate the mouse eradication on the island, the hut now includes a closed-in clear-lite porch, which can give the strange impression of a tropical island thanks to its very un-subantarctic-like trapping of any sunshine.

Despite their grand appearance and interesting behaviour, Gibson's and Antipodean wandering albatrosses are far less well known than New Zealand's other iconic bird species, simply because they spend most of their lives at sea. Their numbers are declining through the impact of fisheries and because climate change is altering their marine environment – in other words, because of us. Research in the subantarctic during the brief interlude when the birds are on land to breed has helped greatly in identifying the problem, but more people need to know and care if there is to be a solution. ■

By Kath Walker and Graeme Elliott

The New Zealand sea lion/rāpoka Threat Management Plan

The New Zealand sea lion is an endemic, taonga species in New Zealand that is almost exclusively found in the subantarctic islands. It is one of the rarest sea lion species in the world due to its small population – currently under 12,000 individuals.

Archaeological records indicate that this species was once distributed all around New Zealand. However, the population is currently distributed in four main breeding areas: the Auckland Islands are home to the biggest breeding colony (around 68%), Campbell Island/Motu Ihupuku hosts around 30% of the population, and the remaining 2% are distributed in Stewart Island/Rakiura and the southern part of the South Island. 'Mum', a female sea lion from the Auckland Islands, gave birth to a pup on the New Zealand mainland in 1992, marking the start of the re-colonisation of sea lions on the New Zealand mainland.

In response to the continued decline of this Nationally Critical species and the third lowest pup count on record, DOC, Fisheries New Zealand and Ngāi Tahu (an iwi tribe in the South Island) were tasked with developing the New Zealand sea lion/rāpoka Threat Management Plan in 2014.

This management plan has two overarching goals:

- to halt the decline of the New Zealand sea lion population within 5 years
- to ensure the New Zealand sea lion population is stable or increasing within 20 years, with the ultimate goal of achieving a 'Not Threatened' status.

RIGHT Public report.

BELOW New Zealand sea lions covering Sandy Bay, Enderby Island. *Photo: Andrew Maloney*

The plan is structured into the following four workstreams.

- **Engagement:** An engagement campaign that facilitates a positive and accepted expansion of the range of sea lions will be coordinated and implemented.
- **Direct mitigation:** Actions to reduce the impacts of key threats to sea lions will be determined annually.
- **Targeted research:** Applied research that addresses the key threats to sea lions will be determined annually.
- **Evaluation:** Monitoring of the sea lion breeding population will be carried out to evaluate progress against the management plan objectives.

Auckland Islands
Every year a team of scientists travels to Enderby Island to undertake a pup count and tagging and to record any re-sightings. This information is fed into a demographic model to help us monitor the population in terms of pup numbers, the survival of pups and adult females, and reproductive rates. Outside this work, which focuses on a couple of weeks in January, a smaller team may be stationed on Enderby Island to undertake additional work.

During the last two summers, a research project to determine the factors that influence pup mortality as a result of the bacterium *Klebsiella pneumoniae* has been undertaken on Enderby Island. During these intensive field seasons, a wide range of samples were collected that are now being processed in the lab. We hope that the results of the analysis will lead to recommendations for actions to reduce disease-related pup mortality.

Campbell Island/Motu Ihupuku
The Campbell Island breeding colonies have been monitored less regularly. Therefore, a goal of the management plan is to improve the frequency of monitoring at this location, particularly considering the higher pup mortality here. This year, a team of four visited Campbell Island not only to monitor the population, but also to investigate pup behaviour and movements in relation to the mud holes using new technology, and to investigate all possible causes of death for pups at these locations. This information will improve our understanding of pup mortality on the island and will help inform future actions to reduce this.

The results of the monitoring trip have already helped inform a shorter second phase of research that was undertaken in March with the help of the New Zealand Navy. This trip involved an engineer, who was sponsored by Fulton Hogan, providing advice on practical solutions to the problem of pups dying from falling into holes, and a pilot was carried out to test the feasibility of using drones to monitor sea lions. This additional research and drone testing were supported through a collaboration with Deep Water Group.

What the future holds
The Threat Management Plan provides an overarching framework and goals to help the sea lion population recover. However, it is designed to be adaptive, in that the results of each field season will inform planning for the next year. The results of this first season have been reported back to the New Zealand Sea Lion Forum and Advisory Group, and officials are now working with Ngāi Tahu to finalise a plan for the 2018/19 year and look forward to 2019/20.

Based on the success of this last summer season, we hope to continue monitoring at all locations and to temporarily trial some solutions on Campbell Island prior to developing an implementation plan. Through the adaptive approach of the plan, we hope to continue working on sea lions in the subantarctic islands over the next few years, with a view to mitigating threats and helping the overall recovery of this species. ■

By Laura Boren and Enrique Pardo Diaz

Million Dollar Mouse

With the support of several partners, DOC attempted to eradicate mice from the Antipodes Island group in winter 2016. Monitoring to ascertain whether all mice had been successfully removed was planned for two mouse-breeding seasons after the eradication attempt, by which time any mice that had survived the baiting operation would have bred to a level where they could be reliably detected.

In late summer 2018, DOC led a monitoring trip in which rodent-detection dogs and static monitoring devices were used to search for mice across Antipodes Island. There was no sign of mice after 3 weeks of monitoring. The monitoring data were reviewed by DOC's Island Eradication Advisory Group (IEAG) and the project was declared a success by the Minister of Conservation on 21 March 2018.

This is a huge achievement for conservation in New Zealand. Over time, it is expected that the invertebrate fauna on Antipodes Island will recover to reflect the species abundance and diversity that have been recorded on Bollons Island and Archway Island, where no mice are present.

LEFT The Million Dollar Mouse monitoring team. *Photo: Finlay Cox.*

In addition to monitoring mice, researchers on this trip also measured the abundance and/or distribution of native indicator species. They observed an increase in avian and invertebrate species relative to the previous summers, which was likely due to the eradication of mice. Therefore, these populations are expected to further increase and stabilise with the recovery of food sources and a lack of competition from mice.

To read more about this monitoring trip and the Million Dollar Mouse project overall, including short clips of the action, check out the project's website: **www.milliondollarmouse.org.nz**. ■

By Finlay Cox

Auckland Island eradication project

The feasibility phase of the Auckland Island pest eradication project has been underway for nearly a year now. This is another year to go before final decisions are made on whether an eradication will proceed and, if so, which of the three pest species (pigs, cats and/or mice) will be targeted. Detailed operational planning will then commence, in conjunction with a budget bid and the sourcing of project partners.

We had some great news in June, when the Minister of Conservation announced that the project will receive $2 million in funding to complete our feasibility investigations, and detailed planning over the next few years if the project is accepted.

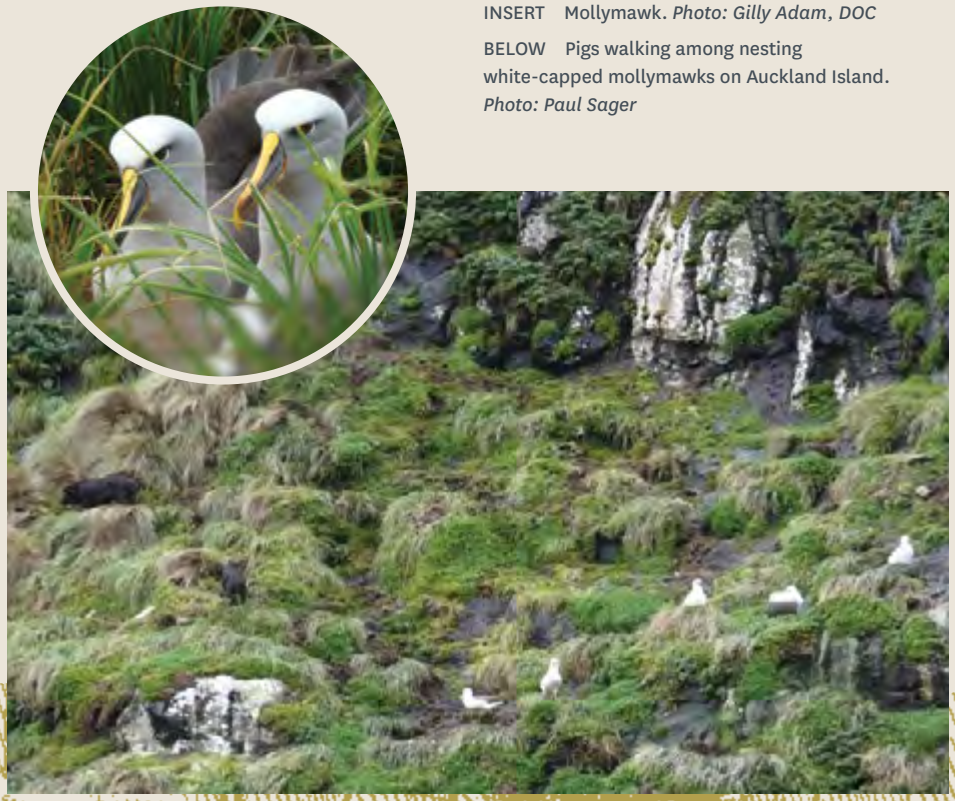
We have a very busy summer ahead, with plans for a variety of trial work on Auckland Island to fill significant gaps in our knowledge that became evident during the feasibility phase. In November, a small team will attempt to catch and attach GPS collars to a sample of up to 15 cats. This will enable us to estimate the home-range sizes and habitat preferences of cats on this island, which will be important for designing an eradication programme. Later in the summer, this marked sample of cats will be used to test a range of detection tools, including trail cameras, thermal imaging from a helicopter, and cat detection dogs, to determine which tools work best on the island and what combination of tools may be required over what period of time to detect all remaining cats on the island during an eradication.

Mice will be the focus of trial work planned on the Falla Peninsula on the east coast of the island. A non-toxic bait trial will simulate our proposed mouse eradication, whereby pre-feed mouse bait containing a fluorescent marker dye will be sown by helicopter across the 928-ha peninsula. Mice will then be trapped to determine what percentage have consumed the dyed bait. If the result is 100%, we can have some confidence that our trialled bait rate (which is much lower than has been used in previous eradications) can successfully eradicate mice on Auckland Island; if the result is less than 100%, we will have to re-evaluate our proposed methods.

A team of pig hunters with dogs will also travel to the island to trial the 'wall of death' ground hunting technique that has been used with great success to eradicate pests from islands around the world, including pigs on 29,000-ha Santa Cruz Island in the United States and red deer on Secretary Island in Fiordland. While the helicopter is on the island, the pig team will also trial aerial hunting of pigs assisted by thermal imaging technology. This technology has been used to great effect overseas and looks like a very promising option for detecting pigs, and possibly cats, in the thick vegetation that cloaks much of the island.

Teams will also be investigating potential sites for infrastructure on the island, cutting some trial tracks to determine how much effort will be required to establish a temporary track network, and searching for and documenting remnant seabird colonies and weed infestations. So, all in all, we have a very busy time ahead – we will keep you posted on how we progress with our efforts to restore Maukahuka to its former glory and finally have a pest-free New Zealand subantarctic! ■

By Stephen Horn



INSERT Mollymawk. *Photo: Gilly Adam, DOC*

BELOW Pigs walking among nesting white-capped mollymawks on Auckland Island. *Photo: Paul Sager*

Operation Endurance 2018

Operation Endurance is a multi-agency expedition to the subantarctic islands to undertake important works. It is often split into phases to accomplish different work targets.

Operation Endurance phase 2 began in February 2018, hot on the tail of the phase 1 Antipodes trip. Departing from Dunedin, two teams – an island-based team (to work on Enderby Island) and a ship-based team (to work on Auckland Island) – headed south on the HMNZS *Wellington*. After a smooth ride down, we arrived at Port Ross with fine weather and were able to get the teams ashore.

There were two large tasks for Enderby: installing a new roof on the historic Enderby boatshed, and digging up and repositioning the grey-water system. With the help of the ship-based team and navy personnel, we were able to achieve both tasks in a timely manner.

Leaving the island-based team with the sea lion researchers who'd spent the past 3 months on the island, the ship-based crew headed off down to main Auckland Island, completing work at Port Ross, Carnley Harbour and down the east side of the island. Sites visited included Ranui, Deas Head, Hardwicke, Terror Cove, Waterfall Hut, Tagua and other historic sites. Some work was also undertaken on Adams Island.

There was also an overnight trip to Campbell Island/Motu Ihupuku to deploy a special buoy for measuring ocean conditions.

Back at the Auckland Islands, a situation began to unfold. Tagua lookout was receiving the finishing touches of a paint job when the team was called back to the ship – there had been a medical incident on Antipodes Island and the naval vessel went to respond. Phase 2 had come to a dramatic end. Both teams were loaded back onto the ship and were soon en route to Antipodes Island. The patient was safely collected and we made good speed back to Bluff.

Operation Endurance phase 3 to Campbell Island departed from Bluff 2 days after returning from phase 2 and the medi-evac from Antipodes Island.

This final phase saw people from MetService, Heritage New Zealand, DOC and small research teams being involved in sea lion and albatross work.

This was a short phase, however, as the Southern Ocean weather hampered our plans. Nevertheless, 1.5 days were spent on station with teams going to various sites. One of the historic projects was to install the new replica cross on Duris' grave with help from Heritage New Zealand and Norm Judd. MetService and DOC also used the short time available to carry out some maintenance work around Beeman Base and the researchers visited the sites they needed to for their work. Some of this work involved an engineer looking at sea lion pup holes and data-logger removal from albatrosses. This phase was only 5 days long.

All in all, this was a successful year for Operation Endurance, completing work across three of the five subantarctic groups. ■

By Kathryn Pemberton

The team for the first phase of Operation Endurance 2018. *Photo: New Zealand Defence Force*

Thank you for taking the time to read this update and newsletter. We hope you found it interesting and informative.

If you would like more information on what you have read here or would like to know more about the subantarctic, please visit the DOC website (**www.doc.govt.nz**) and search for 'subantarctic'.

We look forward to hearing your comments and suggestions on what you would like to read about in the future.

No reira, noho ora mai
Hei konei ra
So, look after yourself
Goodbye for now

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