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RARE BITS

THE NEWSLETTER ABOUT THREATENED SPECIES WORK

This newsletter is produced primarily as a vehicle for information exchange between departmental staff involved in threatened species recovery and ecological restoration programmes. In recognition of wider interest, however, "Rare Bits" is also provided to non-departmental groups on request. The newsletter's informal style may occasionally lead to misunderstandings for some of those readers. Views expressed by the authors are not necessarily those of the Department of Conservation.

FEATURE ARTICLE

*From Pete McClelland,
Southern Islands Area Office*

Campbell teal returned home

After an absence of nearly 200 years, Campbell Island teal finally made it back to Campbell Island, when 50 were safely released on the island in September. After their rediscovery in 1975 on 26 ha Dent Island (approximately 3 km off the coast of the main island), 11 birds were brought back to the mainland in 1984 and 1990. The first breeding occurred at Mt Bruce in 1995, and by 1999 there were sufficient numbers to release 12 birds on to Whenua Hou / Codfish Island. These birds bred in their first year on Whenua Hou and were supplemented by another 12 captive birds the following year. At this time the eradication of rats from Campbell was still in the planning phase and the Whenua Hou population were a backup in case of a disaster on Dent.

Following the eradication of Norway rats from Campbell in 2001, the reintroduction of teal became a priority. When a check in 2003

found no sign of rats on Campbell, it was decided to go ahead with the reintroduction of the teal. A reintroduction plan was written by Richard Maloney and Philip Seddon, and recommended releases of approximately 50 birds for three years, with follow-up monitoring.

Mt Bruce and Peacock Springs produced 28 birds, which were supplemented with 22 Whenua Hou birds. The erysipelas scare following the death of three female kakapo put the transfer at risk, but following protocols advised by Brett Gartrell (Massey University) and Richard Jakob-Hoff (Auckland Zoo), the issue was overcome. Richard was involved in the transfer; feeding the birds in transit and carrying out sampling for baseline disease screening on Campbell.

The captive and wild birds were collected at Invercargill where they were loaded into individual purpose-built crates, and put on board the ship for the 40 hour trip to Campbell. The birds were all tubed before departure and 12 hourly during the trip (which was shorter than usual due to reasonably kind weather).

Once on Campbell, small individual pens were erected with a shelter and swimming bath. The birds were held in these pens, under the dedicated

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care of Helen Gummer, until they reached an acceptable and stable weight for release.

Birds were then released in groups at the selected sites in Perseverance Harbour. This occurred between 8-12 days after arriving at the island. Some birds appeared very predator naïve after release; this changed within 48 hours, with birds staying under dense cover.

All birds had transmitters attached, allowing most of them to be located every 2-3 days. While some stayed close to the release site, others dispersed over more than 5 km. More surprisingly, some went considerable distance up hill — in one case over 1 km up a steep stream to an altitude of 187 m. The trip ended with all birds having been monitored for at least 14 days post-release and all appearing to be doing well.

Another trip goes down in February to check survival and breeding and it is the results from this trip that will guide future management.

Thanks to everyone involved in the project, from those who brought the teal back, to all the staff at Mt Bruce who have worked so hard on this species. Thanks also to all those involved in the preparation for the reintroduction, and the team that were fortunate enough to be on hand when the release took place. A special thanks to Dr Murray Williams (Science & Research) who has been closely involved in this project since the rediscovery on Dent nearly 30 years ago.

Also of interest is that the Americans have just carried out a

successful transfer of 12 Laysan ducks from Laysan in the Hawaiian archipelago to Midway Atoll; this is a big step in safeguarding that critically endangered species. Information learnt from both transfers will be used for future waterfowl work internationally.

PS - the first sentence of this note is not technically correct as a single male teal had found its way to the main island from Dent, and had taken up residence in a 6 ft lake — a swim of approximately 20 km (and no I don't think he walked overland). This bird was first seen by Ian Turnbull (Institute of Geological and Nuclear Sciences) in April and was still alive and doing well in October. However basic biology tells you one male doesn't really count as a population.

CONSERVANCY NEWS

NORTHLAND

From Richard Parrish & Emma Neal

Hochstetter's frogs

Hochstetter's frogs (*Leiopelma hochstetteri*) are being translocated from a stream in the Brynderwyn Hills (40 km south of Whangarei) which is being infilled due to repair of State Highway 1.

Between 26 October and 7 November, we searched and found 28 frogs in the affected 100 m of the

stream. We were initially expecting a maximum of 10 frogs, so were pleasantly surprised to find so many from a severely degraded stream. More intensive search methods were used rather than the usual procedure of only lifting rocks.

Because the downstream stretches regularly get inundated with floods off the road, oil washing off and debris washing in, we have moved the frogs to other nearby (<500m) streams (all on the top side of the State Highway). The release sites have all been marked; preliminary results show that every frog released has frogged-off. Monitoring will be carried out downstream to see if the frogs there survive the works above them.

On top of the fill, a rock-lined concrete drainage ditch will be created, which we hope will appeal to the frogs. We will be monitoring to see if frogs migrate into the area at all, and hopefully we can tell if they are frogs returning home or whether they are frogs migrating up from down below.

We are very interested to see the results, as Transit NZ are planning other works on the hill and every single stream there is occupied by frogs. If our methods work, then we can do the same, if not, then we will have to look seriously at other options such as putting them into captivity or using them to establish a new population.

Pateke/brown teal

Outcome monitoring occurs for the Northland pateke recovery programme Mimiwhangata Coastal

Park; however an intensive predator control regime occurs in a larger coastal margin area from Whananaki north to Teal Bay. With the 2004 breeding season drawing to a close (November), we can report that there was only an average reproductive effort this year. The radio-tagged adult female sample suffered losses to dogs, mustelids and unknown causes in May, August and September; reducing the sample from 26 to 21 birds. There have been 28 breeding attempts from 27 pairs; of which 15 have a radio-tagged female.

It is still a little too early to evaluate overall brood survival from these breeding attempts; many of them are still making it through the 10 week phase until fledging, at which time they will be banded and 20 of them targeted for attaching transmitters. As a snapshot, five nests produced 32 chicks, with six of those surviving to fledging.

AUCKLAND

Bec Stanley and Thelma Wilson

Kermadec Islands

Purely in the interests of saying we got there first... on 18th October several DOC staff were hanging over the bow of MV Southern Salvour as it approached Raoul Island looking at the dolphins and humpback whales welcoming us to the island. The skipper had assured us the dolphins would pick up the ship a few

kilometres off Hutchies Bluff, which they did.

As for the species? Well they weren't common dolphins and they didn't really look like bottlenose either, so lots of photos were taken to see what the experts back in NZ thought. It would appear that they are Fraser's dolphin, never before recorded in NZ waters; but we were pipped at the post by the Air Force, who photographed them while out patrolling in early November.

While at Raoul Island, Richard Griffiths and Thelma Wilson spent two days on the Meyer Islands collecting DNA samples from kakariki in order to clarify if they differ from Macauley Island kakariki. With kiore eradication planned for Macauley Island next year, more information about the birds is required to resolve points raised in the resource consent process.

The recovery program of the endemic Raoul hebe (*Hebe breviracemosa*) is progressing well, with an increase in the population size from 1 plant (in 1997) to 80 wild adults (of a total of 116 wild plants) today. This increase is mainly the result of new discoveries of wild populations. In addition, there are 109 hebe planted at various sites on Raoul.

Kermadec groundsel (*Senecio kermadecensis*) is now arguably rarer than the hebe, as it only grows on the Meyer Islets offshore from Raoul. It once grew on Raoul itself, but appears to have been outcompeted probably by a Mexican daisy *Ageratum houstonianum*.

The Raoul endemic karo (*Pittosporum* aff. *crassifolium*) seems to have suffered a higher degree of habitat loss than most plants on Raoul, with the coastal habitats preferentially modified by settlers in the past. In addition it has been browsed by goats and its seed taken by rats. The recovery of this species seems very slow but we are hoping the removal of rats will help.

Fairy terns

Fairy terns have once again commenced nesting at Papakanui and Pakiri. Wardens and local volunteers are undertaking trapping to protect nesting birds. The local school pupils have produced signs to educate visitors about not disturbing the birds, and are actively taking an interest in what is happening on the beach.

WAIKATO

From Jason Roxburgh, Andrea Brandon & Pim de Monchy

Pateke

The pateke released at Port Charles in May are doing very well. Since the release we have lost three birds to vehicle kills, one to starvation, and two to predation; leaving 37 of the 43 released alive and well. We've found two unmonitored ducklings dead; one from predation, the other caught in a Fenn trap. There are several broods about, ranging from 1-8 weeks old, and at least another three nests on the go.

No cats have been caught for the last two months, and the cat control now covers the whole Port Charles catchment (nearly 3000 ha).

Moehau Kiwi Sanctuary

At Moehau Kiwi Sanctuary, 12 chicks hatched since 1 October. Four of those are Operation Nest Egg (ONE) birds which were released at four weeks of age. One chick was found dead from an unknown nest (cause of death unknown) and one has dropped a transmitter. All others are OK.

We are still trapping very low numbers of stoats and are looking forward to another good year for the kiwi. Ian Westbrooke (Southern Regional Science Centre) came to Hamilton recently to present his population model for kiwi, and together we came up with an estimate of 11-15% annual increase in the number of kiwi at Moehau. And the sun is shining!

New Zealand dotterel census

The October national NZ dotterel census was a great success on the Coromandel, which saw numbers increase from 176 in 1996 to 272 in 2004; an increase of 55%. The coverage of beaches has also widened, and the main flock site at Matarangi had over 100 NZ dotterel in the last flock counts.

Plants

The annual survey of the Nationally Critical greenhood orchid (*Linguella puberula*) was carried out in

November. In the Waikato Conservancy, plants are found at a small number of sites in the Kauaeranga Valley, inland from Thames. A total of 135 plants were found, 36 of which were flowering. This is an increase on the numbers of plants found at the same sites last year; 102 plants were found, of which 18 were flowering.

Quarterly monitoring of the Nationally Endangered coastal cress (*Lepidium oleraceum*) on an island near the Coromandel Harbour, detected a steady decline in numbers over the last two years; the total population now stands at 69. Two years ago the population reached its highest number of plants ever recorded on the island, when 93 plants were present. Ongoing monitoring will continue to determine whether the decrease is part of a natural population fluctuation, or whether active management is required to assist survival of the species at this site.

A new population of the Nationally Endangered *Hebe speciosa* was established by translocation last month at Te Toto Gorge Scenic Reserve, on the west coast of the Waikato Conservancy. Plants were sourced from the sole existing Waikato Area population which is located a little further down the coast on private land. Further plantings are planned to augment the new population over the next two years. We are monitoring the success of the initial plantings, which were placed in a range of microsites and subject to different ground treatments, to assess optimal conditions for future translocations at this site.

BAY OF PLENTY

From Paul Cashmore, Bridget Evans, Keith Owen & John Heaphy

Cooks scurvy grass

A recent check was made on the *Lepidium oleraceum* population on Karewa Island. The population on the island has spread further from seed sowing over past couple of years and appears to still be increasing in size; a good sized population is now present on the island after many years of only six plants surviving.

Mistletoe monitoring

In late September, staff spent three days in Whirinaki Forest Park monitoring existing mistletoe plants in the Rogers-Mangakahika-Moerangi areas of the park. Results of this foliar browse index (FBI) monitoring confirmed trends recorded in previous years; of 27 *Peraxilla colensoi* plants monitored regularly since 1999, 20 (74%) were dead, 2 (7%) were unhealthy (<50% foliage cover) and 3 (11%) were missing (experience strongly suggests these are dead or nearly dead). Only 2 (7%) of plants were still healthy (>50% foliage cover). This widely spread sample of *P. colensoi* shows a 15% average annual death rate over the 5 year monitoring period. This monitoring shows the ongoing decline of *P. colensoi* throughout the silver beech forest areas of the park where there is no possum control. The timing of monitoring differed

this year, occurring in September rather than in January as in past years. Furthermore, significantly higher rates of possum browse on live mistletoe plants were found when comparing the January 2002 and September 2004 survey (the only years that FBI data was available). Many monitored plants had also died over this period, so could not be used for this analysis. This appears to confirm that the causal agent of the decline recorded over the past 5 years is most likely to be possums browsing mistletoe plants, mainly during the winter months.

Mokoia Island mistletoe seed translocation

In September, several hundred more *Tupeia* seeds were planted along the sunny northern side of Mokoia Island on fivefinger trees, in the hope of establishing the species on the island.

A quick check on the *Ileostylus* seed planted in July revealed that some seed had disappeared from the branches, with a few seeds dry and most likely dead.

Mokaihaha Ecological Area

No pest control was carried out this breeding season. However an adult kokako census was completed in September to assess the success of pest control undertaken during the previous three years.

The most recent survey report, from the 2000/01 season concluded that 27 kokako were present in the operational area (848 ha). This year's survey showed that the population

had increased to 54 individual birds (23 pairs, seven singles and one sub-adult). The operation has now ceased.

Rotoehu Forest

An aerial 1080 poison operation using carrots took place over a 440 ha area of the Pongakawa Ecological Area in October as part of a wider operation undertaken by Kaingaroa Timberlands in adjacent pine plantations to control possums. Jeff Hudson has been employed to monitor the adult kokako population; results so far indicate that no birds have been affected.

Mokoia Island

Two of the four kiwi on Mokoia Island have dropped their transmitters, and will be re-caught in early 2005 to attach transmitters. The two that have been monitored are looking healthy and seem to be holding territories. We hope to release a kiwi chick or two on Waitangi Day 2005, if they can be sourced from Whirinaki Forest.

To date, kiwi surveying in the Rotorua Lakes Area has shown that kiwi are either absent or in very low numbers in this region, as no calls have been heard thus far.

New Zealand falcon

Richard Seaton (Massey University Phd student) is continuing his study of NZ falcon at Kaingaroa Forest. All of his last year's nest sites (21 nests) have been re-visited in an attempt to relocate last season's pairs. Many of the pairs have changed partners,

although with a number of unbanded birds it is difficult to establish just how many birds have changed pairings.

Currently there are 13 nests with eggs, all due to hatch in mid-November. One nest has already failed, being found with an infertile egg. Observations made during earlier visits noted that the female was being harassed by magpies, which may have caused the abandonment.

Two volunteers and staff are assisting Richard; their work centres around home-range and habitat monitoring using radio telemetry tracking tools, and will start once the juveniles have fledged. Richard has also set up bird count transects in different age classes of pines, subject to differing control regimes, to determine how this effects numbers of falcon avian prey species.

Matakana Island

Currently there are 38 pairs of Northern New Zealand dotterel being monitored on the island, with 36 eggs and 14 chicks.

Katipo spider survey

A survey is currently taking place along the coastal dune systems in the Conservancy. To date very few katipo spiders are being found; several were located on Matakana Island.

TONGARIRO/TAUPO

From Nic Etheridge & Nick Singers

Central North Island Whio Project

We are in full swing, monitoring 32 pairs and 21 single birds on the Whakapapa, Whanganui and Mangatepopo rivers, situated within Tongariro Forest. Pairs have started nesting and are either incubating eggs or have young chicks on the river. The season has been 2-3 weeks later this year; 17 pairs have been found nesting to date, however we expect to find more this month.

We are monitoring nine pairs and two single birds on the Whakapapa; surveys last year counted 10 pairs. Six of the currently monitored pairs have nests. One of these nests has recently been deserted or the female has been lost on the nest, this is unconfirmed at present. Egg shell fragments have been sent away in an attempt to understand what happened to the egg. The female has not been seen for sometime and it appears the male has adopted a paradise shelduck chick. The other five nests have yet to be located.

On the Mangatepopo we are monitoring nine pairs and five single birds; seven of these pairs are nesting. Four nests have been located to date. We are still searching for the other three. Of those four nests found, one nest has seven eggs, and three pairs have class one ducklings.

The Whanganui has 14 pairs and 14 singles. Of the birds we have been able to visit, four pairs are nesting, however we have yet to find actual nest sites.

Conservancy-wide whio distribution survey

We are currently in the final throws of planning a Conservancy-wide survey of whio, in order to establish if the population is increasing, stable or has declined regionally.

The key areas of the survey are the Kaimanawa's, Tongariro River and its tributaries, western and southern rivers flowing from Mt Ruapehu, Ngauruhoe and Tongariro. The Department is working with the Tongariro Natural History Society, a community group, who have a dedicated volunteer organising the logistics of the survey. The Department is providing local information, technical advice, undertaking surveys and is responsible for the Health & Safety component of the project.

Currently we have secured funding from DOC and Environment Waikato; however we are waiting on a response from a local pub charity which would make all the difference. In addition, we are supported by the Central North Island Blue Duck Trust, Enviroresearch Ltd, Chain and Rigging and the Symphony Group.

The survey will run from December to March, focusing on counting the number of individuals and measuring productivity. This data will be compared to that collected in the past. We hope to make the surveying a three yearly event, in order to

establish trends and identify other key populations to protect.

Plants

Threatened plant work has generally been quiet with only a small amount of work occurring. The Ruapehu Area biodiversity team spent a day in the Paramanawera Bog undertaking vegetation clearance to enhance the swamp greenhood orchid population there. At sites where orchids were found and marked two years ago, three 10 × 10 m plots were cleared, while three plots were left intact. This work has been initiated following the successful use of this method in increasing swamp greenhood orchid abundance at Tangiwai Bog. These plots will be monitored in summer and may be cleared again next winter depending on the regrowth.

With the help of the Tongariro Natural History Society, the Ruapehu team spent a day caging approximately 60+ dactylanthus plants in Tongariro Forest. Over 300 plants have been caged in this forest in the last 3 years.

The Tongariro Natural History Society has been busy building a small nursery to propagate threatened plants and to help restore threatened plant habitats. Many hundred seedling *Pittosporum turneri* were collected from beneath parent trees at Kuratau and are now growing in the nursery. These will be planted back at the site where a historic mill site occurred, but which is now tall broom and rank grass.

Annual health monitoring of the Kuratau, Otamangakau and Kappors

Road *Pittosporum turneri* populations was undertaken by Jo Meys, with help from Robyn Whymand and Ang Pagent. All populations are healthy, which is not surprising since possum numbers are still below 2% residual trap catch. Many plants at all populations are now heavily flowering. A historic *Pittosporum turneri* site (1947 from Rangataua) was searched by Petra Specht and Nick Singers; no *P. turneri* were found, only juvenile pokaka imitating its appearance. However, a wetland at this site contains abundant *Isolepis fluitans* growing in a small stream.

An incidental threatened plant discovery of *Ranunculus macropus* was made at the Waihaha wetland, west Taupo.

EAST COAST/HAWKE'S BAY

From Wendy Sullivan, Tamsin Ward-Smith, Dave King & Brian Dix

Kiwi

The Waikaremoana kiwi project is away to flying start this season, with nine monitored birds laying 17 eggs between them in their first clutches. Because of nest desertions, six kiwi eggs or chicks were being cared for at the Westshore Kiwi Facility in Napier. All are doing well, apart from one chick, which upon hatching was highly dysfunctional; it would not feed unless force-fed, and was hyperactive both day and night.

Unfortunately it died very young and in an anorexic state. In addition, one chick was preyed upon prior to it being brought into the fold of our 1500 ha stoat trapping area. However, the remaining 10 eggs or chicks that we know about are doing well, with five chicks running about happily in the forests of Puketukutuku Peninsula.

There have been five nesting attempts from kiwi pairs in Boundary Stream this season. Four of these nests were from "first time" pairs, but none have been successful so far. Two kiwi were killed in August by a ferret; one was an adult male who was killed in his nest containing two eggs (one fertile but died later, and one already dead). Both of these deaths were on the reserve perimeter.

Saddleback transfer

In late August 2004, 40 saddleback were captured on Cuvier Island for translocation to Boundary Stream Mainland Island, an 800 ha intensively managed reserve in Hawke's Bay. The birds were screened for disease on the island; unfortunately initial results were positive for salmonella. Due to the difficulty in testing and treating salmonella, which could take up to 30 days, the saddleback were transferred to Auckland Zoo. The retested samples returned positive for citrobacter, a common harmless bacteria which mimics salmonella.

The saddleback were then driven to Boundary Stream. Two males died through complications in transit. One male and one female were too sick to be released and kept in

captivity. The female recovered quickly and was released nine days later, while tests showed the male had campylobacter, tapeworms and aspergillosis. He is currently being rehabilitated at the Massey Rescue Centre.

The remaining 22 females and 14 males were released on 10th September. Ten birds had tail-mounted transmitters attached and were monitored weekly.

Two weeks after release, four transmitters saddleback were found dead following a week of extremely cold southerlies which brought snow to the higher parts of Boundary Stream. Necropsies of two birds found they died of aspergillosis, a common fungal disease that can become fatal when the bird is under stress. One bird had a broken neck, but mammalian predation was ruled out. The fourth bird was too decomposed to necropsy, but no obvious signs of predation were found.

A survey six weeks after release estimated 21 birds present, giving a 57% minimum survival rate. There are five known pairs that are courtship feeding, but none are known to have attempted to nest.

Kokako – Boundary Stream Mainland Island

Following three years of aviary confinement, the last two captive kokako pairs were released in August. All released birds have been monitored within the reserve, with none dispersing outside.

There are four known pairs, two juvenile females, and one un-paired female. There have been no further losses after an adult male and juvenile female were found dead in July, immediately after heavy snowfall, with signs consistent with predation/scavenging by a rat or stoat. The pairs have been monitored closely and two nests were located by mid-November — a month earlier than last breeding season when these birds were still in captive aviary conditions.

Kowhai-ngutu-kaka

The infestation on *Cliantbus maximus* reported in the last issue turned out not to be sawfly larvae; a huge relief. The problem was caused by a number of species which included the relatively common kowhai moth. Caterpillar samples which had been sent to two authorities for identification apparently did not include the single animal that was provisionally-identified here. The infected plants were dosed with insecticide and are now recovering.

New Zealand dotterel

Gisborne Area contributed to the national census, and found a marked increase in numbers. However, nest failures are still unacceptably high, with harriers and spur-winged plovers featuring highly as predators, in addition to the usual run of predators.

WELLINGTON

From Tony Silbery

Fish

Staff visited Lowes Bush Scenic Reserve to monitor the mudfish population in the reserve and survey some of the drains close by; fish were found in the reserve, but not in the drains. Monitoring using newly developed protocols will begin next year. A promising wetland in the eastern Wairarapa was searched without success, but another survey will be undertaken next year

Bats

Preparations are underway to capture pregnant short-tailed bats from the Tararua Ranges so that their offspring can form the basis of a new population on Kapiti Island.

Kokako

Monitoring of the birds released at Pukaha/Mount Bruce has commenced. The first territories have been mapped out and possum and ship rat numbers are at low densities, so we wait for the first nest reports (eagerly!).

Kiwi

Another release of three birds into Pukaha / Mount Bruce has been undertaken, to complement the five residents. The new birds are behaving in much the same way as those that were released last year. Monitoring of the first release shows

that the birds have still not moved more than a few hundred metres from the release sites and that over the past months all but one have developed distinct home ranges. Another release (a single male) is planned for December.

Plants

A very wet winter has held water levels high in most of the swamps, and made spring time monitoring of wetland species impossible without diving.

Olearia gardneri seed collected from cultivated plants has now germinated and the resulting plants will be ready for planting in autumn. This will be the first time that a "second generation" of *Olearia gardneri* has been produced; all other plants coming from seed taken directly from the wild.

The Dactylanthus Recovery Group held their meeting at Mount Bruce, and visited the Alfredton Dactylanthus site. Even their many keen and experienced eyes did not add new individuals to the total, which remains in single figures, with the species highly threatened.

Last but not least (not by a long shot!) - community fundraising and sponsorship have raised \$558,700 for the Pukaha project. So far kaka, kiwi and kokako have returned to Pukaha/Mount Bruce forest, and dactylanthus has been found growing naturally. All these will benefit greatly from the levels of pest control that the project has been able to achieve.

NELSON/MARLBOROUGH

From Mike Ogle, Cathy Jones, Ian Millar, Mike Aviss, Steve Cranwell & Peter Gaze

Ginkgo toothed whale

Clayton Ross found one of the rarest whales ever to wash up on our shores — a ginkgo toothed whale. Only 20-25 have ever been found worldwide; and this is only the second one to be found in New Zealand. The entire carcass, relatively fresh, was freighted whole to Wellington.

Invertebrates

Recent monitoring of plots shows *Rhytida oconnori*, a Nationally Endangered terrestrial snail, continues to decline and is in urgent need of protection from predators; the main culprit is likely to be rats. On the other hand, sustained possum control through aerial applications of 1080 is starting to have a very pronounced benefit for many *Powelliphanta* populations in Golden Bay.

A farm subdivision saw the Department gaining land encompassing all of Council Cave. The invertebrate values (including *Spelungula*) of the cave have been protected by fixing a gate to prevent public access.

Bryophytes

In October Shannel Courtney and Cathy Jones attended parts of the

John Child Bryophyte workshop in Golden Bay, to begin the process of getting up to speed with our threatened non-vascular plants.

Translocations

A year after approximately 80 tuatara were translocated from Stephens Island to Whakaterepapanui, we were able to check on some of these animals; most were in good condition with some adults having increased significantly in weight. This trip also saw the release elsewhere on the island of the 350 juvenile tuatara that had been raised from eggs at Victoria University and as youngsters at Nga Manu Sanctuary. Unless our prediction of what makes good tuatara habitat is horribly wrong, these animals will flourish on this island.

Half of the 40 Hamilton's frogs transferred from Stephens Island to Nukuwaiata in May have been recaptured; all of which were in good condition.

We aren't so sure about the success of a tit transfer to Maud Island; it's early days and they can be difficult!

Threatened plants

Inspection of *Pachycladon* "Chalk Range" recently showed plants looking healthy, with many increasing in size but no sign yet of flowers for this season. Cages fastened to the cliff face have survived the winter and are looking as good as new. Excitingly, there are a couple of new seedlings growing under them which have arrived there naturally. Attempts to seed the

species into other nooks and crannies have so far proved unsuccessful.

A survey for *Gingidia enysii* in Clarence Reserve was successful. This work has provided Brian Molloy with material to check DNA and ascertain whether the entity there is the same as that growing further south in Canterbury. Nearly 400 plants were counted in the limestone area where it had been sighted several years ago. When returning over the Kahutara Saddle from the Clarence, we saw good numbers of *Epilobium brevipes*, which is currently listed as Range Restricted. We had also found good numbers for this species in March in the upper and middle reaches of the Clinton River, so it may be less threatened than originally thought.

Black-fronted terns

Monitoring of black-fronted tern nesting success on the Wairau River began in early November. With the aid of a Science Advice funded project, efforts are being made to determine the fledgling success of this population.

Four colonies are being monitored; approximately 70 pairs in total. A high turnover of nests has been observed, with in excess of 150 monitored. Nest failures were due to a range of factors including predators and abandonment. Time lapse video will be used to gain some insight into the causes of nest disturbance. One of the four colonies is also receiving predator control and is being monitored to gauge if the trapping results in an increase in fledging success.

Pressures on braided river habitat are continuing to increase in Marlborough, with the proposal for a significant hydro scheme on the Wairau. Information obtained from this black-fronted tern monitoring will provide an important basis for determining the effects of such a scheme.

CANTERBURY

From Jack van Hal

Orange-fronted kakariki

The orange-fronted kakariki team are pleased to announce that breeding has commenced both in captivity and the wild. We are currently on a high, after a few rough winter months during which a number of the captive juveniles died. These special parakeets are certainly not easy to raise in captivity!

Following the last Rare Bits story and a couple of bird transfers to and from Te Anau and Christchurch, the first eggs were laid by Valentine and Arthur in Te Anau in late August. Unfortunately after four eggs were laid, Arthur mysteriously died and the eggs had to be artificially incubated at Burwood Bush. The "super mum" foster parent at Isaacs Wildlife Centre (Christchurch) fortunately came to the rescue again, and her eggs were swapped with the orange-fronted kakariki ones. But fate stepped in once more, and she abandoned the nest after three eggs hatched (one was infertile). The two

remaining chicks are subsequently being hand-reared by Darren Page, Isaacs' resident hand-rearing expert. After an initial slow start and a brief period of illness, the chicks are now doing well and gaining weight. If all goes well they should grow up into healthy adult birds.

Further breeding is also going on with two other pairs of orange-fronted kakariki at Isaacs. One pair (Windy-wings and Noah) have laid seven eggs and are now feeding six chicks; another pair (Dazza and Bindi) are incubating a currently unknown number of eggs. Let's keep our fingers crossed that they continue their good work and that both pairs manage to fledge all their chicks without further assistance. Egg and chick collection from the wild has been put on hold to give the captive birds an opportunity to breed and see what they can produce on their own.

Two nests have so far been located; one in the Hawdon Valley and one in the Hurunui. Both these nests are protected with tin wraps and a ring of Fenn traps at their base. It is quite early in season to be having nests already, especially at the chick stage. Further searches will continue and all nests found in the wild will get this same nest protection treatment.

With rat numbers on the rise, the Hawdon predator control regime has geared up a couple of notches. Staff have been busy putting out extra bait stations and adding extra bait bag lines to the valley, in the hope of curbing the rising rat numbers. A very intensive and busy time for all staff involved!

The orange-fronted kakariki team has recently acquired three temporary nest scouts for the summer season, after Petrina Duncan's departure in October. Searches for further nests will continue throughout the coming months, for as long as the parakeets continue breeding, and hopefully many more will be found and protected. If all goes really well, the captive breeding pairs will fledge all their chicks successfully and re-nest before summer's end.

WEST COAST

From Patrick Liddy & Chrissy Wickes

Haast tokoeka sanctuary

The 2004/05 Haast tokoeka breeding season is well underway and rather busy, with 10 chicks known to have hatched from 20 confirmed nesting attempts (some nests are still underway). There are seven chicks with transmitters on them being checked once a week. The other three chicks can be accounted for as follows: one Operation Nest Egg (ONE) chick and two which have died, possibly from predation.

At night, staff are using cameras set up at burrow entrances to watch for chicks to emerge from several nests; transmitters are to be attached to these chicks. Daytime breeding checks continue in order to detect any further breeding attempts. It is expected that all nesting will have finished by the end of January.

Tracking tunnel lines and trap catches suggest stoat numbers within the sanctuary are relatively low. However, the annual rise in stoat numbers is yet to occur and only time will tell whether the current trapping regime can keep predators to a low enough level this season to allow survival of sufficient chicks to sustain the population.

This year's ONE component of the project targeted five specific pairs. We hope these pairs will produce five viable eggs for transfer to the Kiwi and Birdlife Park in Queenstown. So far we have had mixed results. The first successful 'lifting' was of a chick which was taken to the park in early October. The second pair produced a healthy egg and this has been transferred to the park for hatching. The third pair bred in a very deep burrow and the egg could not be retrieved, instead it will be transferred when it has hatched. No signs of breeding have been detected from the fourth and fifth pairs.

This year Centre Island in Lake Te Anau was chosen as a crèche site for Haast tokoeka; the first chick was taken there in mid-November. The chick weighed 400 g and was described as feisty. Te Anau staff will monitor this bird and it will stay there until it is over 1 kg, at which time it will be big enough to defend itself against stoats in the Haast Tokoeka Sanctuary.

Okarito rowi

This breeding season nine rowi chicks have hatched in the Sanctuary and there are six nests still going, with possibly more to come

depending on whether many re-nest. Four of the chicks have been taken to Motuara Island in the Marlborough Sounds as part of Operation Nest Egg (ONE). This year five pairs have been selected for ONE and the plan is to take a maximum of five chicks up to Motuara Island. The chicks will then be returned to the Okarito Sanctuary once they reach over 1 kg. The five chicks in the sanctuary range from 4-6 weeks old. There has been no predation of chicks as yet and rat and stoat numbers are low compared to recent years.

OTAGO

From John Barkla

Catlins rat control

It's all go at the Operation Ark site in the Catlins. We received money for stoat control but while in the process of preparing an operation plan, issues concerning rats arose; an observed doubling of rat abundance occurred between the start and end of October. Additional funds were secured for rat control leading to a big planning effort for a poisoning operation in two discrete areas with highest mohua densities. A team is now on the ground implementing that plan and getting baits out.

Tenure review

This season's high country tenure review has kicked off with a survey of six properties on the Rock and Pillar Range. Despite gale force winds and several snow falls, many

exciting threatened species records were made. Most collections are still to be analysed, but on the plant-front we have confirmed records of *Myosurus minimus* ssp. *novae-zelandiae*, *Myosotis pygmaea* var. *glauca*, *Pachycladon cheesemanii*, *Carmichaelia crassicaule* and *Senecio dunedinensis*. The fish team report good numbers of *Galaxias depressiceps*, including records up to 1200 m just below melting snow banks! A find of moa bones were discovered at much lower altitudes.

Kauru longjaw galaxias

The fish team have also been out doing the required monitoring at seven permanent stations on the Kauru and Kakanui rivers. Numbers of fish seem consistent with that seen in previous years, but a full analysis has yet to be completed.

Staff are also doing preparatory work with the Otago Regional Council on a study to look at the impacts of moving a small section of river channel in order to prevent flood damage.

Pete Ravenscroft has been working at another longjaw site in a spring-fed stream adjacent to the Kauru River which is heavily impacted by cattle. He's liaising with the landowner to see what restorative actions can be taken.

Hunter Valley bird survey

The large braided riverbed of the Hunter Valley at the head of Lake Hawea was surveyed at the beginning of November by Wanaka Area and Conservancy Office staff. Five

surveys have been carried out since 1969, and it was last surveyed in 2000. There are mixed trends for the five indicator species (black-backed gull, banded dotterel, black-billed gull, South Island pied oystercatcher and black-fronted tern). Numbers of South Island pied oystercatchers showed quite a drop this survey compared to previous surveys. Banded dotterel numbers were down a little, but a large population is still present. Black-fronted terns continue to increase with a steady rise from 38 in 1969 to 186 this year. Black-backed gulls appear relatively stable. Black-billed gulls have declined dramatically from 581 in 1969 to just 12 in the last survey. This trend is also evident in the nearby Makarora catchment. Wrybill numbers were well down, but this may be an artefact of slightly reduced survey effort this year.

Operation Ark Wakatipu

Barry Lawrence from Wakatipu Area has been preparing a strategic plan for the stage 3 site in the Dart/Caples Valleys, where the aim is to provide protection for mohua and blue duck. A budget has been submitted for consideration.

***Pittosporum patulum* in the Young Range**

Wanaka Area and Conservancy Office staff took the opportunity recently to check out a record of *Pittosporum patulum* received from the Young Range between the Makarora and Hunter Valleys. This was confirmed and represents a western extension in its Otago range. It is otherwise

only recorded from the Dingle Valley in Otago.

SOUTHLAND

From Dave Crouchley, Brent Beaven, Sarah Thorne, Andrea Goodman, Kerri-Anne Edge & Brian Rance

Takahe Programme

The 2004/05 takahe breeding season is now underway. The resident breeding pairs at Burwood have nested and eggs are now being incubated. Some have already hatched, with three chicks so far. More eggs are expected to be laid in the next few weeks. The snow on the Murchison Mountains has been melting rapidly over the last couple of weeks, which is good for the takahe that will also be starting to nest there.

Kiwi

Kiwi monitoring in the stoat trapped and non-trapped blocks of the Murchison Mountains is progressing, with some chicks having now hatched and several birds still incubating. Last week the first sign of stoat predation was picked up with one, possibly two, chicks having been preyed upon in the non-trapped area.

Whio

The first of this season's whio ducklings have hatched in the

Operation Ark site; 10 ducklings have hatched from two broods in the Clinton and Arthur Valleys. A further three nests are currently being monitored in the Arthur and Cleddau and we are hoping that more will follow. At least two juveniles from last year are nesting.

Skink disease screening

Dr Brett Gartrell (Massey University) has spent four days on Stewart Island disease screening skinks. This is preliminary work toward a skink transfer to Ulva Island in January 2005. Ten common skinks were caught at the Old Sand Neck and screened. Brett has confirmed the presence of a new species of protozoa from two of the skinks.

Successful fernbird transfer

Thanks to sponsorship from the Ulva Island Trust and lots of hard work by DOC, a new population of Stewart Island fernbird/mātā have been established on Ulva Island.



A Stewart Island fernbird/mātā.
(Photo: Sarah Thorne, DOC)

Two DOC teams caught 30 fernbirds from around the freshwater area at Mason's Bay and transferred them by helicopter to Ulva Island. This is the fifth species to be transferred to

predator-free Ulva Island, and hopefully will result in a breeding population establishing on Ulva. Stewart Island fernbird/mātā are listed as Nationally Endangered; establishing safe island populations of this species will help guarantee its future on Stewart Island.



Ros Cole and Dave Agnew tagging a fernbird/mātā. (Photo: Sarah Thorne, DOC)

Recent plant surveys

A survey of additional gullies on the south-western slopes of the Blue Mountains failed to find any more *Carex inopinata*, however *Olearia fragrantissima*, *O. lineata* and *Tupeia antarctica* were all found. In the Pourakino Scenic Reserve, *Ranunculus ternatifolius*, *Coprosma wallii*, *Melicytus flexuosus*, *Olearia lineata* and *Peraxilla colensoi* were all recorded. In the Glenure Scenic Reserve *Carex inopinata*, *Olearia hectorii*, *O. fragrantissima* and *Coprosma wallii* were all found.

In addition, a check of a small *Carex* grown in cultivation appears to be *Carex inopinata*. Once these two new *Carex inopinata* plants have been confirmed, this will increase

the known sites for this species to nine sites.

***Gunnera hamiltonii* translocation**

Material from the two female plants from the Invercargill area have been translocated to Fortrose Spit. This translocation will improve the security of these populations by providing another site in a managed Crown Reserve.

Olearia seedling recruitment experiment

Plots have been set up as this year's continuation of the *Olearia* seedling recruitment experiment. *Olearia hectorii* has ripe seed at the moment (mid-November) so hopefully we will get some seedlings.

MCU

From Rob Suisted

Southern right whale

As everyone should know by now, we're trying hard to establish the population status of the southern right whales (SRWs) that visit the NZ mainland. The push has been on to obtain photo identification images and genetic biopsy samples to shed light on the relationships between the populations. If they are separate populations then we estimate that the 'NZ mainland' population contains less than 30 animals, and

only 4-11 of those are breeding females!

Last winter (2003) DOC staff obtained 12 biopsy samples from nine individuals, and 66 sightings and photos. This winter (2004) has been a flop in comparison; only one biopsy sample has been obtained, and only half as many whales sighted compared to 2003. In 2003, most sightings were in East Cape, Otago, Southland and the West Coast. In 2004 sightings seemed to focus on Nelson and Northland.

Auckland University (Nathalie Patenaude and Scott Baker) have carried out mitochondrial and microsatellite DNA investigations on the samples in comparison to the Auckland Island and Australian samples.

The nine mainland biopsy samples have been compared to the 265 known individuals (from a population estimate of 1000 whales) at the Auckland Islands, with no matches. The 30 odd photo identification images from the mainland have been compared to the 400+ photo identifications (from a population estimate of 1000 whales) taken from the Auckland Islands, and no matches have been found.

While this doesn't yet answer the question regarding population structure, we're slowly gathering the information that will. The continuing support from the public and DOC staff is vital in achieving this.