Number 50
September 2003

RARE BITS

THE NEWSLETTER ABOUT THREATENED SPECIES WORK

Contents

FEATURE ARTICLE

From Hilary Aikman, Wellington Conservancy.

A successful season for seabirds in the Chatham Islands

Taiko

For the first time since management began, the number of taiko fledglings moved into double figures this season. Ten chicks successfully fledged from 13 known breeding attempts. There were at least 29 burrows with some taiko activity recorded. Thirty-five cats were caught over the season and there were no incidents of predator interference at the burrows.

Hopes had been high for getting eleven fledglings away, but unfortunately one chick, that had been light throughout its development, was found weak and lethargic outside its burrow close to fledging. The chick died that night of renal failure, probably caused by dehydration, and aspiration pneumonia. We have not been able to determine the original causes of these problems. The chick's death set in train a complicated process of consultation and arrangements. After discussions with the local community and iwi, the chick was taken off the Chathams to be skinned at Te Papa and autopsied by Massey University. The autopsy was conducted as carefully as possible to avoid damage to the bones. The skin has been prepared as a mounted specimen that will soon be returned to the Chathams to be on display for a year, before going back to Te Papa for safe storage. The bird's soft tissues have been returned to the Chathams and will be buried there. With these elaborate arrangements, a specimen of great significance to iwi and the rest of the Chatham Island community, scientists and conservation managers, has been handled in a way that, while possibly not completely satisfying all parties, has allowed the major concerns of the parties involved to be met.

The trapping programme for the 2003/04 season is due to start at the end of August and we have high hopes for even more chicks in the new season. A telemetry operation is planned for Oct/Nov this year to search for new taiko burrows which would further boost the population.

Chatham petrel

Approximately 101 Chatham petrel chicks fledged this season (140 active burrows, 127 eggs laid, 105 chicks hatched). The exact number of chicks fledged is not known because there were a number of chicks still in their burrows, close to fledging, when the team left Rangatira Island. About 52 of the chicks fledged on Rangatira while another 49 were transferred to Pitt Island before fledging. The chicks were transferred before they emerged from their burrows for the first time. They were supplementary fed in their new artificial burrows on Pitt and all fledged successfully from there. This was the second Chatham petrel transfer to the 40 hectare predator-fenced portion of Ellen Elizabeth Preece Conservation Covenant on Pitt Island. Forty-one chicks were transferred last year, and a third transfer is planned for April 2004. It is hoped that the first chicks will begin to return to the site after January 2004.

The neoprene burrow-flaps, designed to discourage broad-billed prions from entering Chatham petrel burrows, continued to work well this season. Only one Chatham petrel chick death this year was attributed to prion interference. The flaps work by providing a visual and slight physical barrier to birds entering the burrow. The Chatham petrel adult, with a chick inside the burrow, will persist and push through the barrier. However, a prospecting prion is likely to be put off by the flap and look elsewhere for a new home, thus saving the Chatham petrel chick inside. The success of the flaps has the added benefits of reducing the labour requirements of the project, minimising the impacts on the environment from people checking burrows throughout the night (the old protection regime), and also substantially reducing the number of prions culled.

There were 305 adult Chatham petrels handled over the season (283 were recaptures, of which 20 had been banded as chicks). No telemetry effort to find new burrows was conducted this season because, with the use of artificial burrows and flaps, site fidelity has improved considerably and it has been possible to maintain the target of 100 managed burrows without conducting telemetry operations every season. A big telemetry effort, to fit in with good moon conditions and the expected return of larger numbers of known fledglings, is planned for 2005/06.

CONSERVANCY NEWS

NORTHLAND

From Emma Neill, Richard Parrish and Ian Stringer.

Pateke/brown teal

Rain, mud, spunky little ducks, mud, nests, mud, eggs, mud, ducklings, oh and mud. That summarises recent months at Mimiwhangata; the study site for the Northland pateke recovery programme. Currently (August) in the middle of the breeding season, less than half of the

sample radio-tagged females (*n*=29) have nested. A couple of females have lost young broods, others are raising just one or two through to fledging. It is far too early to give an indication of the success of the season, as more nests and broods are eagerly anticipated - perhaps when it stops raining.

Survival of all radio-tagged birds (*n*=39) are an outcome measure of intensive predator control. The trapping regime extends well beyond the study site; encompassing DOC estate and private land from Whananaki, north to Teal Bay. Flock counts carried out in February 2003 at traditional sites resulted in the highest number of birds recorded since 1992 - an astounding 300 birds were counted in one day.

A trial of Canadian-brand Holohil transmitters has been initiated in response to the poor performance of Sirtrack transmitters. An unacceptable number have failed well before their programmed "life", resulting in a frustrating reduction of information from monitoring. Now, if birds go missing from the area, it is equally likely that their transmitter has failed as it is they have dispersed. Indicator dog work is the only way to recover these birds.

Placostylus hongii on Matakohe / Limestone Island

On 13th August, we checked the *Placostylus hongii* translocated on to Matakohe/Limestone Island in August last year. Nine of the 10 remaining snails were found and all were alive. The area was extremely wet, making it difficult to locate snails with the harmonic radar (the microwaves it emits are absorbed by water), so it is possible that the snail we missed is still present. One newly hatched juvenile was found underneath a leaf on a karaka sapling, indicating the snails have bred. If the weather is suitable, we hope to do a thorough search for the snails and their progeny in late October - early November 2003.

AUCKLAND

From Bec Stanley.

Shore spurge (*Euphorbia glauca*), once widespread in the inner Hauraki Gulf, now remains only on Brown's Island. We planted 80 new shore spurges on Brown's this winter, all were grown from the seed of cuttings taken from the one remaining natural plant on the island. The project has been a propagation success story. As our one plant failed to flower and produce seed, we removed cuttings from it in 1999. This was a tough decision as the plant only had a few stems. But the gamble paid off, as they flowered profusely and set seed while in cultivation at the Auckland Regional Botanic Gardens.

The forth year of planting hosts of the regionally endangered mistletoe *Ileostylus micranthus* occurred on Arbor day this year at our Miranda roadside site. We planted over one thousand flax, manuka and Coprosma to restore the general habitat, as well as hundreds of host plants for the mistletoe. All plants are eco-sourced and all hosts are raised from cuttings of current mistletoe hosts.

A volunteer trip to Little Barrier has mapped a *Centipeda minima* var. *minima* site which extends 70 metres along a grassy mown track. The site is very wet and muddy, and although very modified, seems to replicate the habitat of the sites where it grows naturally on the mainland. On this trip the volunteers also trialled a North American monitoring method for dwarf mistletoe (*Korthalsella salicornioides*). Overseas, dwarf mistletoes in the same family as ours are regarded as pests of plantation forestry. We are investigating whether this methodology, used to rank 'infestations', will be transferable to our need to monitor these precious threatened plants.

WAIKATO

From Jason Roxburgh and Leigh Marshall.

Moehau Kiwi Sanctuary

The results at the end of the season at Moehau are: of the 18 kiwi chicks monitored, one died of natural causes, two transmitters/harnesses failed, and 14 chicks are known to still be alive. These results indicate a success rate of 78%. Five of these birds are presently over the target weight of 1 kg. All nine of last seasons chicks that survived to 1 kg are still on the go, wandering far and wide.

Pateke/brown teal

On 26 July 38 pateke were released at Port Charles, in the northeast Coromandel. This joint effort between DOC, Ducks Unlimited, the Brown Teal Conservation Trust and the local community includes large areas of cat and stoat control, and the release site is surrounded by the Moehau Kiwi Sanctuary predator control area. So far we have lost signal from two of the 38 transmitters, although the birds are still around. Four birds have been lost to predation: one likely to a dog, and the others to a cat(s).

Tuatara

Nine young tuatara were released on to Stanley Island (Mercury Group) and eleven to Cuvier Island in May and June. These were the captive bred progeny of adults that were removed from the islands before the rat eradication in the early 1990s.

Hochstetter's frog

Michael Crossland (Northern Region Frog Ecologist) is piloting a new monitoring technique for Hochstetter's frog in Northland and Auckland conservancies. Michael is recording the presence or absence of frogs on repeated visits to selected sites. The site-occupancy technique allows a probability of frog detection to be calculated and, if successful, will provide us with a robust technique for monitoring Hochstetter's frogs.

North Island robin

Staff at Pureora Field Centre are trialling distance sampling as a technique to monitor North Island robins. The technique has previously not been trialled on robins, and can only be used over winter as their behaviour in other seasons (i.e. coming to the observer) violates the assumptions of distance sampling. If the pilot is successful, we will be able to monitor annual fluctuations in robin numbers at a managed and relatively unmanaged site with minimal resources required.

New Zealand dotterel

An increase in the level of sponsorship from Newmont Gold mine at Waihi has facilitated the expansion of the NZ dotterel project on the Coromandel this season. There will be less of a focus on the Opoutere population this season, as results over the last few years suggest that the site may have reached carrying capacity. Instead, more dotterel nesting sites on the Coromandel will be receiving dotterel advocacy, monitoring and predator control.

BAY OF PLENTY

From Paul Cashmore, Keith Owen, John Heaphy, Andy Blick and Rod Warne.

Pittosporum turneri

Staff spent two days in the Pukahanui valley in southern Whirinaki re-monitoring *Pittosporum turneri*. Many of the monitored trees which are banded are showing increased foliage cover, although none have shown signs of forming adult foliage after being banded for five years. This visit however, one tree was found with some adult foliage while another semi-adult has been found on private land further south. The second day was spent on private land further south discussing management of a *P. turneri* population there with the new land manager who is keen to start managing and monitoring the population.

Mistletoe

There have been several interesting mistletoe discoveries in recent months. A large patch of *Ileostylus micranthus* has been found growing on several tawa trees in several locations on a farm at Kaharoa north of Rotorua. *Ileostylus* hasn't been recorded on tawa in the Rotorua District for many years. This find potentially gives us a lot more 'habitat' to search, with tawa being the predominant forest type in the Rotorua District.

Equally unusual is the report of *Ileostylus* on mangeao at Oropi, near Tauranga. This find is not only significant in that it is the first confirmed report of *Ileostylus* in the Tauranga Area, but also because it is the first time *Ileostylus* has been recorded on mangeao. The site was reported to DOC by Bay of Plenty Regional Council staff. When inspected, the *Ileostylus* was found on two large old trees in a paddock: at least nine possum browsed mistletoe were found on one tree, while the other tree (and mistletoe)

were nearly dead. To encourage host regeneration, DOC staff plan to band the hosts, while regional council staff will fence the area off.

The third mistletoe discovery occurred in Paradise Valley (near Rotorua), where at least 13 *Ileostylus* were recently found on a several Chilean flame trees in a paddock. Another two plants were also found on *Rhododendron* cultivars at a nearby rhodo nursery!!

Sicyos australis (mawhai)

A second population of *Sicyos australis* has been discovered on mainland Bay of Plenty. Following the rediscovery several years ago of a mainland population in a pine plantation at Otamarakau by a weed contractor, the same contractor has found another population just south of Te Teko on the edge of the Rangitaiki Plains. This population however is distant from the Otamarakau site. The vine appears to be scrambling over several hectares of blackberry, bracken and kikuyu and doing very well indeed. How it got there remains a mystery.

Picris burbidgei and *Pimelea tomentosa* at Orokawa Scenic Reserve

Bay of Plenty Biodiversity and Recreation staff recently combined with Waikato Biodiversity staff to survey the tracksides of Orokawa Scenic Reserve near Waihi beach, to assess the size of the *Picris burbidgei* population in the area. This elusive Nationally Endangered species had previously been seen by Avi Holzapfel (Waikato Conservancy) beside the tracks at several sites. Using his knowledge, we were able to locate three populations with a total of at least 106 rosettes and about five adult plants. While there, we were also able to quickly re-estimate the *Pimelea tomentosa* populations: approximately 86 plants were found, slightly down on the 104 counted in 1999. Recreation staff were shown the populations, and track maintenance issues were discussed to ensure the survival of both species, while at the same time allowing track work to occur.

Lepidium oleraceum

A recent visit to Karewa Island in June 2003 has shown that despite a dry summer, the *Lepidium oleraceum* is surviving well, with over 60 plants found at two sites.

Hochstetter's frog

A survey for Hochstetter's frog in selected sections of the Kaimai Ranges by Chris Smuts-Kennedy, Mark Cleghorn and Charlie Stewart took place in May and June 2003. The results of the survey extended the known range northwards in the Conservancy by six kilometres to the mouth of the Waitawheta River at the Karangahake Gorge. The distribution of frogs now extends from Karangahake Gorge for some 25 kilometres southwards on both sides of the ranges to the Aongatete River catchment. An outlier was found at Mangakiri Stream in the north east.

New Zealand dabchick

A study by researchers Ashleigh Bright, Joseph Waas and John Innes

on the effects of boats and human-made structures on NZ dabchick on the Rotorua lakes contracted to the Department, Environment Bay of Plenty and Rotorua District Council has provided us with much needed information on these aspects.

The work has shown that boats do appear to have a negative impact on dabchick behaviour by disturbance, and that the wash from boats impacts on dabchick nests. A positive correlation exists between the number of human-made structures and the number of chicks on some lakes: the structures provide shelter from predators and storm events and reducing harassment by other bird species. Recommendations include enforcing the existing laws limiting boat speeds to 5 knots within 200 metres of the shore especially during the critical breeding season (October-March), and maintaining emergent aquatic vegetation (used for nesting, feeding and protection) on the shoreline of lakes where most nesting occurs.

North Island brown kiwi releases

Moutohora (Whale Island)

In early May 2003 Tumanako, a male North Island brown kiwi chick, was released onto Moutohora to join two adult females released there in 2000. This was a combined Rainbow Springs, Environment Bay of Plenty, Bank of New Zealand Kiwi Recovery Trust, Ngati Awa, Forest & Bird, Whakatane District Council and DOC exercise.

Mokoia Island

A further release of three sub-adult North Island brown kiwi (Tutanekai, Hinemoa and Tiki) took place on Mokoia Island on 22 July 2003. The three birds (raised under the Operation Nest Egg programme at Rainbow Springs) were from Whirinaki Forest Park, and join Moana nui a kiwa, a wild-hatched male from Ohope Scenic Reserve. A very enthusiastic party made up of Te Arawa, Mokoia Island Trust Board members, Ngati Whare, Bank of New Zealand Kiwi Recovery Trust and DOC staff was in attendance. There are now three males and one female (Hinemoa) on Mokoia.

Ohope Scenic Reserve

Two juvenile North Island brown kiwi (Honu and Whakapono) were released into the reserve on 9 August 2003. These birds came from eggs collected from the reserve and were hatched and raised at Rainbow Springs. The release day was part of Conservation Week celebrations and involved over 60 people including Bank of New Zealand Kiwi Recovery Trust, Bank of New Zealand staff, Rainbow Springs, Ngati Awa, Environment Bay of Plenty, DOC, Forest & Bird, Whakatane District Council and the Whakatane community.

EAST COAST/HAWKE'S BAY

From Alan Lee and Dave King.

Kakabeak

With the help of community volunteers, approximately 300 kakabeak propagated from one of the Area's two known wild plants have now been planted into the Boundary Stream Mainland Island. Establishment has been slow, with almost total defoliation by hares contributing to the loss of around 90% of unprotected plants over the past 3 years. Though goats and deer are present in very low numbers they seem to be having little or no impact on the plants. Four different repellents have been trialled to deter hares but none have proven to be effective. As such, we have now resorted to caging individual kakabeak as they are planted. The cages consist of a couple of metres of chook netting wired into a circle and staked in place with a fence batten. A couple of number 8 wire pegs holding the netting down complete the setup. Approximately 50 planted kakabeak are now protected in this way, of which 80-90% are looking vibrant and healthy, with some in their second year almost over-topping their cages.

We think the naturally occurring wild plants at Shines Falls now number three, a vertical drop of 70 metres being a strong deterrent to closer inspection of the site. This season the largest plant produced a good quantity of seed, some of which has been put into storage. Seed from previous years has produced 60 seedlings from this parent plant, and we hope to plant these into the Mainland Island this winter.

Kiwi

Nesting has once again started on the Puketukutuku Peninsula and we look forward to another productive season. Unfortunately once again the spectre of pigs uprooting trapping tunnels has arisen, with one pig captured containing a large number of rats from our snap traps as well. Apart from dogging and snaring, if anyone has an idea of how to address the problem Dave King at Aniwaniwa would appreciate a call from you. (VPN 6725, direct dial 06 837 3805, email dking@doc.govt.nz)

Plant surveys

Quick surveys of threatened plants in the Aniwaniwa Area have reconfirmed the presence of swamp nettle (*Urtica linearifolia*) which although present in some numbers, look to be experiencing some deer browse. This will be tested by caging some plants.

A quick look at *Ileostylus micranthus* around the village of Kaitawa found some 40+ mistletoe plants in garden trees, with the surprise finding of one *Tupeia antarctica*. Finding more of this species will be the objective of some future weekend rambles.

Caging of kowhai ngutukaka plants against deer browse really works. Five year old cages constructed by the Waikaremoana Conservation

Corps on the Ngamoko ridge are overflowing with ngutukaka plants in great health. Flowering and seed set has occurred and these plants can now be used as seed source for further establishment of this beautiful plant.

WANGANUI

From Nic Peet, Graeme La Cock and Rosemary Miller.

Major moth magic at Mataroa

One of Taihape's best kept natural secrets has revealed itself as a haven for record-breaking numbers of winged insects – including a rare native moth that has remained hidden for more than 70 years. On a recent visit to the Department of Conservation's Paengaroa Mainland Island near Mataroa, northwest of Taihape, Landcare Research moth and butterfly expert Dr Robert Hoare uncovered 134 species of moths in one night - a New Zealand record.

"The previous record was 125 species in one night, recorded after many years of research in one area. So counting of 134 moth species on the third visit to Paengaroa is a really spectacular result", he said.

The recent survey at Paengaroa, which follows others in 2000 and 2001, takes the number of known moth and butterfly species living there to 195. "A list of almost 200 species from three visits is exceptional, and indicative of an extremely rich site," Dr Hoare said. "However, the list is far from complete and I am certain that a lot more would be found with a little more work."

The highlights were the discovery of a single *Tinea dicharacta* moth, believed to be the first specimen found in New Zealand since the 1920s, and a sighting of the rare *Pyrgotis transfixa* moth, which until now was only found in the Orongorongo Valley near Wellington.

'Tinea' dicharacta

Pyrgotis transfixa

"The other thing that's significant was the discovery of three species of copper butterflies together in one place. It's not unusual to find two, but to find three together is quite rare as one tends to live more in coastal areas," Dr Hoare said.

Adding to the find was the discovery of a *Pseudocoremia albafasciata* moth in the nearby Otaihape Reserve, which hadn't been seen since 1957. The moth comes from the looper family of caterpillars,

named so because they move in a looping motion instead of crawling.

Paengaroa is one of six mainland islands maintained by DOC and is significant because of its rare collection of divaricating plants. Divaricating plants have a scraggly appearance because of their profuse and tangled branches, which some scientists believe may have originally evolved as a defence against browsing moa.

Plants

During the recent Mainland Island hui, participants visited Paengaroa where they made an interesting find. Clumps of the climbing daisy *Brachyglottis sciadophila* - which for the last 15 years had only been found growing on the ground and had never flowered – were discovered growing and seeding in the forest canopy.

WELLINGTON

From Sally Thomas.

Kokako return to Mt Bruce

Kokako are once again flying free in the Mount Bruce Scenic Reserve, following the first-ever release of pairs to the mainland.

Two pairs of kokako and a large male named "Whakatere," after an ancestor of the donor iwi, Ngati Rereahu, were taken from Mangatutu ecological area in the Pureora Forest Park, a stronghold of the species, and released at the Mt Bruce Scenic Reserve.

Rereahu iwi from Te Kuiti handed over the birds to Rangitaane O Wairarapa at a ceremony at Mt Bruce attended by over 100 people. This is a first step towards re-establishing a new North Island population in the wild.

Kokako became extinct in the lower North Island some 60 years ago, with the last sighting reported by Mt Bruce takahe recovery pioneer Elwyn Welch in the mid-1940s.

Once wide-spread throughout the North Island, the species has now vanished from the southern part of its former range with just 1200 birds remaining. Over the past 15 years, remnant populations of kokako have been managed and have recovered to become viable.

DOC Biodiversity Ranger Tony Silbery said to restore kokako to its original geographic range, new populations have to be established in areas from which they have vanished. "Even where they are currently surviving, there are populations on the verge of extinction that need an infusion of new birds. We want to spread the population out more."

DOC bird specialist, Don Merton, who played a significant role in bringing the Chatham Island black robin and kakapo from the brink of extinction, spoke at the event.

"A major forest restoration programme has made it possible to release kokako and kiwi into the wild this year."

"This is particularly significant for New Zealand and overseas visitors because Pukaha/Mt Bruce will be one of the only accessible places on the New Zealand mainland where people might hear the call of the kaka, kokako and kiwi in the wild."

"This achievement is nationally significant because it exemplifies the work that DOC is doing to restore endangered species to the wild."

The Mount Bruce (Pukaha) restoration project, supported by local iwi, Rangitaane O Wairarapa, the National Wildlife Centre Trust and the Department of Conservation, is making it possible for kokako and other endangered species to thrive in their former home. The 942 hectare Mount Bruce Scenic Reserve is now criss-crossed by a network of trails that contain traps and bait stations needed to support the intensive pest control operation underway in the forest.

Greater Wellington Regional Council and horizons.mw have also laid traps and bait stations within 2700 hectares of private land surrounding the Mount Bruce Scenic Reserve to create a buffer zone. Some neighbouring landowners are also supporting the project by undertaking pest control on their own land.

Funding for the project has been achieved through proceeds from the 'sponsor a hectare' campaign and sales of the Pukaha – Songs from the Forest CD. These contributions and those from key sponsors, the community and the Department of Conservation have made the forest restoration project possible.

NELSON/MARLBOROUGH

From Peter Gaze, Tim Shaw and Shannel Courtney.

Peppercress, salt bush and other condiments

Conservation management of stubborn peppercress (*Lepidium banksii*) continues. A total of 53 nursery raised individuals have been planted along the Abel Tasman National Park this winter: 13 at Falls River, 11 at Nooky Cove and 29 on Tonga Island. Weeding continues at these and two Moutere Inlet sites to reduce light competition.

The peppercress and grey saltbush plantings in the Moutere Inlet are looking good despite, or perhaps because of, the cold dry winter. Several of the peppercress have been flowering and seeding through winter and numerous seedlings have cropped up. In our experience, it will only be a wet spring and summer that will allow them to establish though.

Another interesting outcome of the exotic grass weeding here is that healthy mats of the native spinach (*Tetragonia tetragonioides*; ranked as Sparse*)* have appeared. It looks as though this is the result of the release of a long-lived seed bank after the habitat has been opened up. The occurrence of this species is

very sporadic around the rest of the Conservancy's coastline.

Blue duck

Conservation efforts have kicked off with transmitters placed on three females of pairs located on the edge of Kahurangi National Park. The hope is to conduct an Operation-Nest-Egg-type experiment, where clutches will be borrowed from birds, raised in captivity and the chicks released back into protected habitat once they have fledged. The protected habitat in this instance is Flora Stream, and the protection involves in excess of 50 kilometres of stoat lines. In addition to the work in the Flora Stream, the habitat of the three pairs contributing the eggs will also be protected from stoats, with the hope that they will re-nest and successfully raise their second clutch. A mountain of stoat tunnels is being created, beech trees are becoming adorned with pink tags and there has been much fretting over maps and spreadsheets. It is hoped that the traps will be on the ground by the end of September. The project builds on an existing community project with a keen group of locals calling themselves "Friends of Flora".

With all of this it has been wonderful to receive advice and support from other conservancies, BRU and STAG as well as some much valued on-the-ground science transfer from SRU.

Dunes and coastal turf protection

The Nature Heritage Fund has recently purchased for the Department an enclave of land south of Kahurangi Point and adjoining the national park. This addition to the public estate has allowed for the protection of some of the least modified dune systems in the Nelson region. There is estimated to be more pingao here than the rest of Nelson's dunes put together, including Farewell Spit.

The tracts of coastal turf communities support a raft of nationally threatened species including the turf buttercup (*Ranunculus recens)*, pygmy forget-me-not (*Myosotis pygmaea)* and sand iris (*Libertia peregrinans).* Not least, the fringing dune forest is home to great-spotted kiwi and the Kahurangi Point snail (*Powelliphanta gilliesi kahurangica)* which is endemic to this area.

Frost flat finds

In June a survey was undertaken in the mid-Mangles catchment near Murchison to try and relocate a 1922 record of deciduous tree daisy (*Olearia hectorii*). Although this species was not found, Sandra Wotherspoon discovered numerous individuals of two other nationally threatened frost flat species – *Coprosma wallii* and *Melicytus flexuosus.* Similarly, an inspection of river flats and terraces to be converted to dairy in the lower Howard (a tributary of the Buller River) turned up a healthy population of both these species, as well as *Coprosma obconica.* Negotiation is underway with the Howard landowner for their legal protection.

Pest fish

The pest fish project for the Motueka Area is cranking up for its fourth season with the appointment of Simon Elkington and Ross Maley as the Area's biosecurity team. Four gambusia and two koi populations remain to be eradicated. The project will also include further survey and monitoring and a large dollop of advocacy work - lots of leaning on the fence post.

Black-fronted tern

The Wairau River provides breeding habitat for *c.*30% of all black-fronted tern, and hence plans for a run of the river power scheme raised concerns. Steve Cranwell will be following the fate of colonies this year to determine if they suffer the same predation pressure as the Waitaki birds, and to also gain a better insight into the implications of dryer nesting conditions on breeding success.

Research

It is that time of year when the Conservancy and universities are working together to refine research proposals. These proposals include: homing ability of native frogs, chemical communication in frogs, disease in tieke populations, the effects of inbreeding on island populations of robin, the role of scent in predation of reptiles, and aspects of island biogeography.

CANTERBURY

From Sjaan Charteris.

Freshwater fish

DOC staff from the Biodiversity Recovery Unit, Northland, Otago, Canterbury and Nelson/Marlborough conservancies recently descended on Twizel for the non-migratory galaxiid recovery group meeting. As part of the gathering Simon Elkington (Twizel Area Office) took the members in to the field to show them one of the wetlands where he found a new species of galaxiid in 2001, the bignose galaxias. This species is currently ranked as a Data Deficient threatened species and is known from only twelve sites in the upper Waitaki. The wetland is even more significant because lowland longjaw galaxias individuals (our only Nationally Critical threatened freshwater fish) have also been found there.

After getting the electrofishing machine in to action, several bignose galaxiids were picked up. Upon closer inspection the fish were found to be ripe, and larval fish were also obvious in the slow-flowing pools and backwaters. The presence of larval fish and ripe adults indicated that spawning sites must also be present. As spawning habitat is unknown, it was decided that everyone should get down on there hands and knees and turn over some rocks and search the aquatic plants in the stream. After several minutes of picking up and examining cobbles from the spring flowing into the wetland, a single egg was found on

the underside of one of the stones! Seven other eggs (all on separate stones) were then found in this section of the spring. The eggs found are thought to be bignose galaxias; however a genetic test is needed to confirm that they are not lowland longjaw eggs. Never the less, the discovery of spawned eggs for either species is a major leap forward in our understanding of the species. The confirmation of winter spawning over an extended period is also important for future management of wetlands in the upper Waitaki.

WEST COAST

From Don Neale and Glen Newton.

Hector's dolphin survey

A DOC-Otago University survey was completed to assess the seasonal offshore distribution of Hector's dolphin on the northern West Coast between Karamea and Ross. To allow for a comparison between summer and winter seasons, surveys were undertaken in February and July. The results are due to be written up later this year, and will be relevant to the identification of management requirements for the species relating to issues such as bycatch.

Whale sightings

The Conservancy has had an excellent response to the call for southern right whale sightings, with eight sightings reported so far this winter. Sightings of several other species have also been reported, including orca, rorquals and the first recorded blue whale on the West Coast since Julius von Haast took a beachcast one by horse and cart from Okarito beach in 1908 to its present resting place in the Canterbury Museum.

Fiordland crested penguin

A long-term study into the survivorship of tawaki (Fiordland crested penguin) in south Westland is beginning to show positive results. The mark-recapture technique is being utilised whereby individual birds are marked for identification, and subsequent marked and unmarked birds that are caught are recorded, enabling survivorship calculations to be made for the population.

Flipper bands were initially used in the study (1994-2001) at both the Jackson Head and Monro Beach colonies. Indications for this work were that adult survivorship figures were far lower than expected (70% in 1998), suggesting that bands are either detrimental to survival, or that they are falling off.

To test these theories, subcutaneous transponders were implanted into a control population of birds at Jackson Head (1998-present) to see if survivorship figures differed. Recent survivorship calculations (2003) using a sex-based model suggest that adult and chick survivorship is approximately 98% and 44% respectively. These figures are typical of survival in seabirds such as penguins and petrels. It appears that on average, birds with transponders

have a higher survivorship, suggesting that perhaps both theories are true.

OTAGO

From Bruce Mckinlay and John Barkla.

Yellow-eyed penguins

The Annual Symposium was held in early August, with about 40 people from the Catlins to North Otago coming together to hear how the past year had gone, and to listen to a number of presentations about the impacts of human activity on penguins. General reports around the Otago Peninsula indicate high numbers of juveniles, which might indicate good survival from last season.

Buff weka

We have just had a meeting with Roopu Kaitiaki to discuss the coming year's work programme. As a co-management project we regularly meet with members from the Runanga to reach joint agreement on aspects of the project. At this latest meeting we agreed on directions for a second translocation site and getting a protocol in place for the employment of seasonal staff.

Grande and Otago skinks

The Conservancy has received a draft report on the independent review managed by Rod Hitchmough (BRU) into this programme. We are now working through the recommendations and developing a response to these.

Mohua

We continue to have elevated numbers of mice in tracking tunnels and traps in the Catlins mohua areas. A number of rats have also turned up. As we did not have a beech seedfall event last autumn, the jury is out on what is happening and whether it will lead to a stoat eruption.

New discoveries from tenure review

Field inspection of 12 pastoral lease properties over the last summer turned up several exciting new species discoveries and extended our knowledge of the distribution of many others. At least 43 species of threatened plants were recorded including some ranked as 'Acutely Threatened'. Of particular note are new populations of *Hebe cupressoides* and *Olearia fimbriata* in the Lake Hawea district, *Carex inopinata* in the upper Clutha Valley, and *Olearia hectorii* with an understorey of scrambling broom *Carmichaelia kirkii* near Wanaka.

Two new species of spider were discovered near Lake Hawea and a major range extension recorded for a third species. New populations of eight species of Data Deficient spiders were discovered in the Richardson Mountains, along with new southern limits for two native bees, a spider and a beetle.

Populations of kea were discovered in the Cardrona Valley and in the Richardson Mountains. A new distributional limit for rifleman was found near Lawrence.

Native fish also featured, with several finds of non-migratory galaxiids. Two new locations for Dusky galaxias were discovered in the headwaters of the Waipori River. An undescribed species of galaxias (*Galaxias* sp. D) was recorded at two new locations south-east of Alexandra and also near Tarras.

Wanaka threatened plant garden

Stu Thorne from Wanaka Area has recently established a new garden at the Area Office/Visitor Centre to showcase some of the threatened plants of the district. The garden has already created a lot of interest, helped no doubt by a feature story in the Otago Daily Times. Stu plans to have each species labelled and an interpretation display highlighting a few of the most distinctive ones.

SOUTHLAND

From Andrea Goodman, Tom O'Connor, Eric Edwards, Malcolm Wylie, Phred Dobbins, Eamonn Ganley and Brian Rance.

Island transfers

The Te Anau biodiversity team recently spent two days at the Doubtful Islands in Lake Te Anau, putting out more stoat traps on Erin Island and the mainland. This work was in preparation for a tieke and tautouwai transfer to be undertaken in mid September. The transferred birds from Breaksea Island will be monitored by Sabrina Taylor, a PhD student from the University of Otago. The kiwi that were transferred to the Doubtful Islands last year were also checked during this trip.

Yellow-eyed penguin (Hoiho)

A cat research project is about to get underway on Rakiura (Stewart Island). The Yellow-eyed Penguin Trust has underwritten a year of cat control and research looking into the impacts of cats on yellow-eyed penguins. This will involve monitoring nests in treatment and non-treatment areas, controlling cats at selected breeding locations, and attaching radio transmitters to 10 cats. This is an exciting project achieved by the Trust and the Department of Conservation working in partnership.

Southern New Zealand dotterel (Tuturiwhatu)

The 2002/03 season has seen a slight decline in the southern New Zealand dotterel population: from 205 birds in 2002, to 192 in 2003. However, this years total is still on track to achieving the target of 250 birds by the year 2011 as set out in the New Zealand Dotterel Recovery Plan 2001–2011. Very high rat numbers and corresponding high cat numbers probably contributed to the decline in the dotterel population this year.

Caddis fly

John Ward (Canterbury Museum taxonomist) has identified a newly discovered genus of caddis. This discovery is based on a single male caught last summer by Eric Edwards on the upper slopes of Secretary Island, Fiordland. The genus belongs in the Hydrobiosidae family (a predominantly Gondwanian family) and according to John, seems to be closest to other genera in New Zealand and New Caledonia.

Hectors dolphin boat-based survey at Fortrose

Ros Cole, Pete Tyree and Alan Christie undertook a boat-based survey of the coastline from Fortrose to Bluff. Twenty-three Hector's dolphins were observed in a small stretch of coast from the Mataura River mouth along the coast to opposite Big Bend in the river. This presence/absence survey has confirmed that Hector's dolphins in Southland continue to utilise the inshore environment during winter. This is different behaviour to Hector's dolphins in Canterbury and will have implications for any future management. We now need to develop a long term programme to monitor Hector's dolphins in Southland.

Invertebrate monitoring on Rakiura

As part of a monitoring programme to determine the impacts of white-tail deer and possums on invertebrates on Rakiura (Stewart Island), a pitfall trap monitoring programme has been set up. Previous studies carried out in New Zealand indicate that deer can have an impact on ground dwelling invertebrates through altering available habitat and food types (litter-composition). Possums are direct predators of some invertebrates and significant foliage browsers of certain species. On Rakiura, Malcolm Wylie has set up a monitoring programme that will hopefully allow us to detect the impact, if any, of these introduced animals on ground-active invertebrates.

A series of 20 x 20 m deer exclosures were constructed last year along the north-eastern coast of Rakiura between Smoky Beach and Christmas Village. Nine pitfall traps have been placed in each of the three deer exclosures and three adjacent unfenced plots in both a treatment and non-treatment site. Ground-based possum control will be undertaken in the treatment site this coming financial year and then at three-yearly intervals. The pitfall traps will be left 'open' from August until April each year for the next five years, with samples being collected

every six weeks over this period. At this stage there are no plans to control rodents within the study sites. This monitoring is in conjunction with the tagged seedling measurements and litter fall collection at the sites.

Euphorbia glauca Mason Bay population monitoring update

Fifteen monitored plants are located throughout the active dune field: between Duck Creek and Martins Creek, at Mason Bay, Rakiura National Park.

This season, counts of dead or browsed stems were recorded as a measure of decline. Observations indicate that this once stable population is in a state of decline. Plants which in the past have had hundreds of live stems, now manage only a few live and several dead ones. In some cases the plant has gone. Results indicate that the number of stems for some plants has increased, but overall there has been a 50% reduction in live stems. At this rate plants can not be expected to survive much longer and active management will be required

A key issue will be identifying the primary agent of decline at Mason Bay. Some sort of exclosure may be required to determine what the primary browser is (i.e. possum and/or deer). This may determine if management is possible. We are also interested in knowing if environmental factors (i.e. stability of the sand) are contributing to the decline.

For future restoration projects we may need additional information on preferred habitats. While the transfers to Whenua Hou are thriving, two sets of transfers to Fortrose (Southland) have failed. Why is this? There are probably wider issues here relating to Euphorbia. Other people in the threatened plant network may be able to answer some of these questions.

These records continue to increase our knowledge of the national status of these plants.

Olearia survey in south Otago

A survey for threatened Olearia along the Kaihiku Range between Clinton and Wairepa area of south Otago was undertaken by Geoff Walls (contractor) and Aalbert Reburgen (Otago Regional Council). This survey was to build upon a few scattered records of *Olearia hectorii* and *O. fragrantissima*. Threatened Olearia were found at 17 of the 20 survey sites. *Olearia hectorii* (Vulnerable) was found at eight of the sites, *O. fimbriata* (Serious Decline) at two, *O. fragrantissima* (Sparse) at ten, and *O. lineata* (Sparse) at four sites. Other threatened plants encountered included fierce lancewood (six sites), *Tupeia antarctica* (five sites), *Melicytus flexuosus* (two sites), *Coprosma obconica* (two sites) and *Coprosma pedicellata* (one site). The survey resulted in many new records including some important populations of some species, most significant being a site with 95 *O. hectorii* (by far the largest in the

wider Catlins area) and the range extension for *O. fimbriata*.

SOUTHERN RIGHT WHALE UPDATE

From Rob Suisted and Nadine Gibbs.

Southern right whales (SRWs) may be in serious peril around mainland NZ, with possibly only a handful of breeding females left. This winter may be our last chance to gather vital information about their status - vital to inform marine farm management areas. This work has paramount importance and we need your full cooperation.

As reported in the June 2003 issue of Rare Bits, there is a national initiative underway to collect vital information on SRWs around the mainland New Zealand coasts this winter.

There has been intensive media and public interest in the project, with coverage in newspapers and on the TV1 and TV3 news. As a result of this high profile, there have been 29 reported sightings of SRWs this year, comprising 44 animals. It is likely that these comprise multiple sightings of the same animal(s) and should not be used as an indication of the number of individual whales seen. Over half of the sightings were reported in the East Coast/Hawke's Bay region, and were of mother and calf pairs. In addition, there have been five new historical (before 2003) sightings of SRWs reported.

As of the first week of August, we have collected eight photo id's and three biopsy samples. Two of the biopsy samples have been from reproductive female whales, and one sample from a calf. All of these samples have been from whales in the East Coast/Hawke's Bay Conservancy. Another biopsy on an adult around the Otago Peninsula could not be recovered.

Thanks to Science & Research, New Plymouth Area Office, University of Auckland, and the International Whaling Commission, we now have six Paxarm biopsy guns at SRW hot spots around the country. This will give us a greater opportunity to be on site and obtain a biopsy sample from these whales.

Weather has been the main limiting factor for staff not being able to get on the water and obtain further samples; as well as sightings not being called in immediately and the whale disappearing before we are able to get out and investigate. It is very important for the information to be reported immediately so we have the chance to collect this vital information.

SRWs can be easily identified by the lack of a dorsal fin, pattern of white callosities on their head, v-shaped blow, and mostly black colouration. Adults average 14-15 metres in length and newborn calves between 4.5-6 metres.

If anyone sees, or hears of a SRW sighting please report it immediately to your local DOC office, call 0800 DOC HOTline (0800 362 468), or contact Rob Suisted (DOC Central Region) on (04) 494 1467, or rsuisted@doc.govt.nz.