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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.

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FEATURE ARTICLE

*From Lyndon Perriman,
Taiaroa Head Nature Reserve*

Taiaroa Head

For almost 50 years there has been daily predator trapping at Taiaroa Head, on the Otago Peninsula. The benefits of such a long term investment can be seen today, with over 10,000 seabirds now using this distinctive headland as a breeding site. Predator trapping was initially done solely for the protection of northern royal albatross. This trapping has helped make the headland unique for a number of reasons; foremost as the southern hemisphere's only mainland breeding site for any albatross species.

Taiaroa Head also has the largest mainland population of sooty shearwaters, with over 2,000 burrows located on the headland. Most known historic sites on the Otago Peninsula for sooty shearwaters are now locally extinct.

Over 80% of known blue penguin burrows on the Otago Peninsula are located within 2 km of the headland and it is very likely that predator control plays a major role in their protection.

Taiaroa Head is the only mainland breeding site for Stewart Island shags and along with little and spotted shags, the cormorants now number over 2,000 birds.

Because the area is a nature reserve, few people venture onto the headland; this coupled with predator trapping, has meant that other species use Taiaroa Head as a secure area to nest or roost. We have seen evidence of this recently, with royal spoonbills beginning to breed on the headland in 2002.

Rodent poisoning is protecting rare plants and reducing predation of seabird eggs, resulting in flourishing flora and fauna. For example, *Lepidium* species are thriving and the number of red-billed gulls has increased from around 200 pairs in 1994 to 1,100 pairs in 2004.

By removing thistles within the albatross nesting area, we have seen a dramatic reduction of hatching albatross chicks becoming fly-blown. Since the thistles were vigorously targeted three seasons ago, the number of flies caught in fly traps over the summer period is significantly lower and there have been no fly-blown related deaths since.

Earlier this year a weasel was caught in a trap at Taiaroa Head, this is only the second one caught on the headland. These two weasels are the only ones known to have been caught on the Peninsula.

Last summer a joint predator trapping programme was conducted over land 4-5 km from the tip of the Peninsula by DOC, Yellow-eyed penguin trust, Dunedin City Council, Ngai Tahu, Koriko Karetai Trust, Otago Peninsula Trust and other local land owners. Fewer predators were caught within the nature reserve compared to previous seasons.

For the 2003/04 season, 12 albatross chicks hatched from 15 eggs laid. Four chicks subsequently died; some of these chicks were supplementary fed. Autopsies of these chicks by Massey staff have shown that their diet lacked sufficient calcium. Massey is in the process of analyzing the nutritional components of proventricular oil that is obtained from sooty shearwaters and has been used in supplementary feeding of albatross chicks at Taiaroa Head for almost 20 years. From what we have learnt so far from the deaths of this season's chicks, Massey will be able to provide us with much better guidelines for the nutritional requirements of albatrosses.

The new albatross season has already swung into gear, with the first bird arriving back in the middle of a snowstorm on 16 August 2004. The birds that will be breeding this year fledged a record 27 chicks in the 2002/03 season, so we are anticipating another busy season at Taiaroa Head.



Albatross chick being weighed
(Photo: Nicola Vallance).

CONSERVANCY NEWS

NORTHLAND

From Richard Parrish

New Zealand dotterel

Northland, like most northern North Island Conservancies, is gearing up for the massive census of this species. Four previous censuses have shown us that 50-60% of NZ dotterels occur in the Northland Conservancy, so there are a lot for us to count (c.800). The central date set for the census is the weekend of 16th and 17th October. It is impossible for us to cover the whole Northland coastline in two days, so we will be staggering our effort over the preceding and following week. All of the four Areas are making it a Staff Day activity so that everybody gets a 'day at the beach'. Ornithological Society members are being teamed up with DOC staff as much as possible to lend their bird identifications skills.

Invertebrates

A survey of Bream Head for paua slugs (*Schizoglossa worthyae*) and large ground beetles (*Mecodema* spp) was carried out for us by Fred Brook in September. He found paua slugs only at the eastern end of the main Bream Head ridge between 200–400 m. However, they were not uncommon in this zone. Two nests of 11 and 16 eggs respectively were found in fine gravel and covered by fallen leaves. This species has a disjunct distribution occurring at Bream Head, a single animal known from Glenbervie Forest and old records from Broadwood up in the Hokianga. It is next found in the Coromandel and then nowhere else. In the same area, *Mecodema* cf. *M. spiniferum* was found in a slightly smaller altitude range of 220–360 m. *Mecodema* cf. *M. curvidens* also occurred in the same area, but extended right to the western end of the reserve and almost exclusively on the southern faces of the main ridge.

AUCKLAND

From Phil Brown & Rosalie Stamp

Tomtits

During April, 32 tomtits were taken from the Hunua Ranges and released on Tiritiri Matangi Island. Interestingly, one of the transferred tomtits was found in June back in his territory in the Hunua ranges. The distance in a straight line from Tiritiri to Hunua is 63 km. No other

birds have appeared back at their territories and it is to be hoped that no more will appear back there; the tomtit population are much safer on the predator-free island of Tiri than the Hunua Ranges.

Senecio scaberulus

Senecio scaberulus is a Nationally Endangered plant which isn't much to look at, is easily mistaken for a weed, is hard to distinguish from *Senecio hispidulus* (a hybridising threat) and is lumbered with the unexciting name of fireweed. But we're going to try and save it anyway! At the recent New Zealand Plant Conservation Network meeting, a couple of workshops included questions about how to manage this little herb. Some really good ideas came up, including: trying to get it to become a weed in the nurseries on islands where it's grown before; or trying to drown out any hybrids by saturating an area with *S. scaberulus*. Although nobody oooh'd or aaah'd at the tray of non-descript seedlings we had, we'll soon be putting them to good use in the field!

Euphorbia glauca

The ongoing story of the last remaining *Euphorbia glauca* in Auckland Area took another turn this year. It's been seen flowering for the first time ever and had set a little seed when later checked. The plant itself is doing very well on its cliff, but it looked so lonely that over the last couple of seasons we've been planting more *Euphorbia* grown at the Botanic Gardens from material from the original lonely plant.

Although the plantings have been troubled by garden snails and drought, some of them have flourished. A further 120 were planted this season by staff from the Botanic Gardens and the DOC Auckland Area Office. We're hoping that our plantings will be able to reproduce this season and set up a self-sustaining population.

WAIKATO

From Jason Roxburgh & Pim de Monchy

Pateke

Welcome to Rebekah Caldwell, who has taken over the monitoring from Tomas. Rebekah and husband Colin own a large farm at Port Charles, which many of the Pateke use as habitat.

In the first month post-release, four birds lost their transmitters through the weak link in the new harnesses failing. This seems to be due to the wrong thread type being used, which has been rectified. No more harnesses have failed, and four birds are still being seen regularly at the release site, so all are alive and well. Three birds have been killed so far this season; two to vehicle strikes, and one to apparent starvation (wing fat analysis showed no wing fat) although it was found minus its head. Either this bird died from starvation and was scavenged, or was caught due to being slow from starvation.

Three release/release pairs and two release/wild pairs are almost certainly breeding. About 50% of the remaining birds have either paired but are not showing signs of nesting yet, or are showing courting behaviour at the release site. We also suspect there are several wild/wild pairs nesting.

Kiwi

Moehau Kiwi Sanctuary (MKS) is progressing well with about 10 males suspected nesting (early August). Exciting news here is the Moehau Environment Group's work - this active community group is currently installing about 600 stoat traps over 6,000 ha immediately adjacent to the southern boundary of MKS. We hope they stop all stoats from entering the Moehau area. The total area trapped will be about 25,000 ha by the end of 2004!

Thirty-five kiwi chicks or juveniles were caught during the 2003/04 breeding season. At present, 15 of the 26 known fate birds are still alive, with only a couple still under 1,000 g. Call count monitoring during May-June revealed a mean hourly rate of 3.2, compared with 2.5 over the last two years. Stoat catch rates have declined again at Moehau, with only 113 caught during 2003/04 (1,723 traps), compared with 383 in 2001/02 (1,000 traps) and 299 in 2002/03 (1,500 traps).

Sixty-four percent of the chicks caught in 2001/02 are still alive (cf. 75% survival to 1,000 g; n = 11 known fate birds), and 85% of the 2002/03 cohort are still alive (cf. 100% survival to 1,000 g; n = 13 known fate birds). One of our birds

(Kahiwi) was caught in November last year as a 1,480 g sub-adult. He or she has since travelled over 30 km across roads and the main range, and is now in Kennedy Bay.

BAY OF PLENTY

From Paul Cashmore

Mistletoe

There have been several different bits of mistletoe work undertaken around the Rotorua Lakes over the winter months. Staff have visited a farm at Kaharoa (north of Rotorua) where *Ileostylus* was noted last year. All the bush remnants on the property were visited, and three separate patches of *Ileostylus* were found. The three patches total more than 115 plants, all hosting on mature tawa, an unusual host. The landowner was happy to have the largest patch of over 100 plants fenced off. DOC has provided fencing materials and will plant future mistletoe host trees at the site to ensure the long-term survival of the population.

Several more *Ileostylus* plants have been discovered at Okareka within DOC reserves. The reserves are currently being actively managed by the Rotorua Botanical Society and Forest & Bird, who are into a second year of plant and animal pest control in conjunction with DOC and Environment BoP. The focus of this work is on protecting the significant *Tupeia* populations. Finding further *Ileostylus* in these areas, in addition

to the large populations of *Tupeia*, further strengthens the justifications for undertaking the community restoration programmes already occurring in these areas. Staff have also done some maintenance of existing aluminium bands protecting mistletoe trees around Blue Lake and Okareka

A further 20+ *Ileostylus* plants have also been found near Lake Rotoehu by DOC staff.

Mawhai (*Sicyos* aff. *australis*)

In last few months, staff have made two visits to Moutoki Island, part of the Rurima group off the coast near Whakatane. One of the many tasks was to check on the status of the only natural population of mawhai (*Sicyos* aff. *australis*) on the island. When visited, the population appeared to be healthy with 19 adults and two juvenile plants found scrambling over vegetation near the coastline.

Mokoia Island

Several hundred further seeds of *Ileostylus* have been put onto several host trees on Mokoia Island by volunteer John Hobbs. Seed was available on the mainland and it is several years since there has been an attempt to establish *Ileostylus* on the island with recent focus being on *Tupeia*.

Moutohora (Whale Island)

Staff have just returned from the annual monitoring and planting programme on the island. Monitoring

has shown mixed success. Recent plantings of species such as sand tussock (*Austrofestuca littoralis*), mawhai (*Sicyos* aff. *australis*), Cook's scurvy grass (*Lepidium oleraceum*), *Pimelea arenaria* and *P. tomentosa* are starting to show some promise as we better understand their habitat requirements on the island. On the flipside, the heavy rainfall events in July which caused severe flooding in the Eastern Bay of Plenty also impacted on Moutohora. Many slips have cascaded down parts of the island's cliffs, burying most of the threatened plants planted in these environments.

EAST COAST/HAWKE'S BAY

From Bruce Dix

Lepidium oleraceum

More than 70 plants were planted on Whangaokena (East Island) as part of the restoration project there. More than two thirds of them have survived and grown, and many have flowered. Some plants perished in a slip during the heavy rains of this winter, while the causes of death of the remainder plants are uncertain. Fiona Kemp (Coordinator of the "Scurvy Translocation") is more than pleased with this result, which should realise the project's goal of a self-sustaining population of Cook's scurvy grass on Whangaokena by 2006.

Mahia kiwi

Staff and a possum contractor got quite a surprise recently, when a kiwi was found trapped in Mahia Peninsula Scenic Reserve. Kiwi were thought to have been extinct here for more than 50 years; a number of previous surveys had failed to reveal any sign of kiwi. The captured kiwi, an adult female, was sent to Massey University Vet School for treatment but unfortunately died after surgery. She had recently laid an egg and was resorbing another, but it is unknown whether there is a male sitting on a fertile egg. Following the capture, we renegotiated with the contractor to change to raised sets.

We plan to conduct a more thorough survey when the weather improves. Potential exists for a kiwi and predator management project, involving the local community.

New Zealand dotterel

In the Gisborne Area, the NZ dotterel appears to be responding positively to predator control on their nesting beaches, according to our long-term monitoring project. A census conducted in 1997 found 47 birds between Opotiki and the eastern part of Hawke's Bay. We plan to repeat the census on 16th and 17th October this year; our counts suggest that we will exceed that figure in the Gisborne Area alone.

North Island weka and kiwi

At Whinray Scenic Reserve we have almost completed the deployment of our new stoat tunnels and DOC 200 traps, additional to the Fenns. The

season's first stoat has already been caught. All our monitored birds are present and correct and we anticipate a good year ahead.

Kakabeak

Graeme Atkins brought in samples of his roadside conservation plantings of kakabeak; they had been decimated within a period of two weeks. The culprits appear to be larvae of the willow sawfly, and if so, this threatened plant is in further trouble on the East Coast. Samples of the insect and leaf damage have been sent to two authorities for positive identification.

WANGANUI

From Nic Peet, Graeme La Cock & Rosemary Miller

Bank of New Zealand Kiwi Recovery

The Conservancy is working closely with the Taranaki Kiwi Trust (TKT) to conserve kiwi in Egmont National Park. A 6,000 hectare stoat trapping operation is in place and funding has been provided to the TKT to start a Bank of New Zealand Kiwi Recovery Operation Nest Egg (ONE) project to boost the kiwi population under protection. To date nine males have been fitted with transmitters; three birds on private property at Purangi and six birds in collaboration with the Bushy Park Trust in the Waitotara Valley. The plan is to release up to 10 juveniles in Egmont National Park

this season, should the ONE work be successful.

Whio

The monitored population on the Manganui-a-te-ao has changed significantly since last season. In 2003, 22 pairs in a 10 km study stretch of river made 19 nesting attempts. This year the population of territorial adults has declined to 12 pairs and as yet no nesting attempts have been made. Reasons for this change are unclear.

Sixteen captive-bred whio were released in Egmont National Park in August as part of an ongoing programme to test translocation techniques for the species and establish a new secure population in the site. The release was delayed from March to allow river invertebrate populations to recover following February's devastating floods. The birds were older and heavier than in previous releases and proved very mobile, some birds travelling over 10 km in the week after release.

WELLINGTON

From John Sawyer

Plants of conservation concern

A new edition of the Conservancy's plant conservation strategy (excluding the Chatham Islands) has now been published. This includes a list of the 173 nationally and 254

regionally threatened and uncommon vascular plant species. It also identifies a preliminary list of 20 threatened plant communities. The strategy provides goals, outcome targets and objectives for the plant programme for the next 6 years.

The Conservancy has also published a recovery action plan for the 30 threatened plants of the Chatham Islands. This report was written by Geoff Walls with assistance from Departmental staff on the Chatham Islands and at Conservancy office. It identifies the actions required to protect and monitor all populations of threatened vascular plants on the Chathams.

NELSON/MARLBOROUGH

From Shannel Courtney, Roger Gaskell, Mike Aviss, Genevieve Taylor, Gavin Udy, Mike Ogle & Martin Rutledge

Native fish happenings

With the help of BRU funding, we are embarking on an exciting project to set up a new population of brown mudfish at Puponga near Farewell Spit. Currently there is only one known mudfish population in the entire Conservancy, confined to a small part of nearby Mangarakau wetland. The population is vulnerable and genetically distinct from brown mudfish elsewhere. The aim is to translocate Mangarakau mudfish fry to a Puponga wetland. Before release, they will be given a

head start by being "fattened up" in a specially set up tank.

Despite less than ideal habitat, banded kokopu and threatened giant kokopu have recently been recorded from some Nelson City streams. Banded kokopu were found in a small stretch upstream of about 2 km of underground culverting. The tenacity of the young fish to surmount such obstacles is amazing.

From the depths

In late August a 300 kg giant squid was retrieved with some difficulty from the far end of Farewell Spit, just as the tide was starting to pull it out again. It is the largest giant squid ever retrieved and is intended to go on display in future. The main difficulty was getting a freezer large enough to accommodate it. Eventually we sent it off to Auckland in a truck-and-freezer unit.

A southern right whale was spotted by a fisherman in early September. Two staff went out in a boat with no luck. We followed up with a fixed wing search and found it just as our budgeted time was running out. The boat was then directed to it, but due to a rough sea we are not yet sure of the quality of the photos for identification.

Takapourewa restoration

With the last of the sheep recently removed from Stephens Island, this is the first time the island has been stock-free in over 100 years. This fully commits the remaining 15 ha of farmed areas to the restoration programme, which is now over 10

years old. In that time, about 14 ha of farmland has been replanted in natives, all sourced from, and grown on, the island. The nursery produces 10,000 plants each year; most of them are ngaio, taupata, kohuhu, tauhinu and wharariki. They are planted during two 7 day trips each winter, where volunteers brave the elements to each get 5,000 trees planted in the time available. Most of the remainder of the 150 ha island is heavily burrowed seabird nesting habitat, which is being left to slowly revegetate itself.

Pygmy button

The annual monitoring of pygmy button (*Leptinella nana*) in the Rai Valley was completed in August. The monitoring showed that since the drought of 2000/01, range and vigour of the plant seems to have reduced; however, there is still a healthy viable population in the valley, the stronghold for the species. Drought obviously gives pygmy button a competitive advantage over exotic weeds. The best sites are those on hummocky landforms grazed by sheep, but with a deciduous forest canopy over top. Pygmy button needs filtered light, which is currently provided at the best sites by willow trees; in the past this would have been provided by kowhai, ribbonwood, lacebark and kanuka. In future, it is hoped that we will be able to restore some areas back to native canopy in collaboration with farmers currently grazing the river bank.

Dappled coprosma survey

A four day August survey of limestone substrates in the Wairoa catchment for *Coprosma virescens* revealed only two plants. Prior to the survey, we knew of only one population in the Nelson region, last seen in the early 1990s in Pig Valley. They have subsequently disappeared, falling victim to barberry spraying. The survival of these two plants nearby is a minor miracle given the species' palatability and the prevalence of goats throughout its habitat. Material collected from the two plants will enable local stock to be raised for sale in nurseries and for replanting in protected locations in Pig Valley, thereby averting its imminent regional extinction.

Whio update

Following the March release of 10 whio into the Flora catchment, six have died from apparent starvation. Due to their poor condition, the remaining four birds were taken back into captivity until spring. The starvation problem is possibly due to too little food being available and poorly developed feeding behaviour in the captive-raised birds. Interestingly, despite low invertebrate numbers recorded in a recent survey of the Flora, wild whio are currently surviving there. Changes to husbandry are also being looked at to help improve feeding behaviours developed during captivity.

In the Wangapeka, the four wild hatched juveniles from last season are doing well. A juvenile female from this clutch has recently paired with an adult male who is a new

arrival in the area. The study of whoio juvenile dispersal is ongoing, and to date has shown juveniles dispersing up to 6 km from their natal territory.

Whoio nest monitoring for the 2004/05 season is due to start soon. Two pairs will be monitored, and their first clutches harvested for captive rearing. The aim is to secure another 10 whoio juveniles for release early next year.

Kaka refit

Breeding success of South Island kaka is being monitored in the Rotoiti Nature Recovery Project area, to test the effectiveness of mustelid trapping operations in protecting kaka there. Nests are located by monitoring transmittered adult females. Due to transmission failure of some units in the field and the need to maintain a sample of birds for future monitoring, work was undertaken during the season to re-capture and refit new transmitters on all adult female birds. Eight of nine birds with working transmitters were re-captured, old transmitters were removed and new transmitters attached. This follows on from the 1999-2000 work where four of four adult females were re-captured and re-transmittered. Techniques differed from initial capture and required considerably more effort. It is possible to remove transmitters from kaka at the end of the project, provided working transmitters are maintained on all sample birds.

CANTERBURY

From Anita Spencer & Nikki Wells

White-flipped penguins

Work to protect white-flipped penguin in Canterbury has been leading to some excellent results. The penguins are recognised as a sub-species of little blue penguins, and are endemic to Canterbury, breeding only on Banks Peninsula and Motunau Island. A survey by DOC staff of the coastline of Banks Peninsula in 2001/02 led to an estimated total mainland population of 5,800 birds, with another 3,200 on Motunau Island. However monitoring of some of the mainland colonies by researcher Chris Challies revealed an overall loss in the number of pairs of 83% over 19 years, and estimated the present population is only 10% of its pre-human size.

For the last three years DOC ranger Robin Burleigh at Akaroa has been trapping around the largest penguin colonies at Flea and Stony Bays and monitoring penguins during breeding and moulting. The landowners at the bays had been trapping predators within the colonies for many years but predation had still been occurring on a regular basis. Since the DOC trap line was set up, which is back from the colony running along the ridgelines, there have been only two proven instances of predation, both on chicks in burrows. The fledging rate this year was 1.33, the highest in the three years. This November DOC staff will resurvey both colonies and signs are

good that the numbers of penguins will finally be on the increase (at this site at least).

Kaki

In September 2004, 57 sub-adult kaki were released into the wild as three groups consisting of 18, 19 and 20 birds. Each group was released at different locations in the Mackenzie Basin, the first two groups on 8 September and the latter group four days later. The birds quickly settled in and most were still at the release sites in the following week. They will be provided with supplementary food for the next month or so to make the change of lifestyle less abrupt and hopefully increase their chances of survival in the wild.

WEST COAST

From Fiona Bockett & Henk Stengs

Mistletoe decline and possum diet

The Conservancy monitoring team has been measuring scarlet mistletoe condition at sites with colonising and pre-peak possum populations in south Westland. Results show declines in mistletoe populations which appear to be following the possum invasion front (in areas without current possum control). Some areas to the south of Jackson's Bay are only now being colonised by possums, and they seem to have very good populations of scarlet mistletoe (estimated to be around 36 per

hectare at last count). Because there has been some doubt that possum impacts are directly causing this mistletoe decline, we decided to collect possum gut samples from these newly colonised areas. This would help confirm the link between rising possum populations and the decline of mistletoes in the south Westland area.

Twenty-six possum stomachs were collected from possums trapped during surveillance monitoring between October and December 2003 from the Hope, Spoon and Gorge River catchments. The layer separation method (Sweetapple & Nugent 1998) was used to determine the individual food types eaten. Analysis was carried out by Peter Sweetapple (Landcare Research, Lincoln).

The results were what we suspected (Table 1): mistletoe was the most dominant food item eaten (32.09%), and 16 of the 24 possums had evidence of mistletoe foliage in their stomachs. These results reflect the abundance of mistletoe within the Hope, Gorge and Spoon catchments and confirm its high preference as a food item by colonising possums.

Muehlenbeckia australis (21.11%) and fuchsia (14.65%) were the next most commonly eaten food items, similar to previous studies on the diets of pre-peak possum populations. Pokaka (*Elaeocarpus bookerianus*) fruit and fuchsia flowers also made up a high proportion of the diet at 10.42% and 6.297% respectively. A relatively small number of food types dominated the diet, with the foliage of common staple foods such as

kamahi absent from possum stomachs (this may reflect time of year with many other foods available).

These recent diet results give further evidence of the key threat that possums pose to beech mistletoe and add support to the conclusion that possums are a major factor behind the rapid declines recently observed within south Westland forests. Our challenge now is to keep possum densities at low levels within these last areas where mistletoe is still common. The plan is to carry out an intensive possum control programme over the Hope Catchment to try and keep possums below 5% RTCI. The Gorge and Spoon are to have less intensive possum control.

Table 1: Mean % dry weights of food types contributing to >1% of possum diet from the Hope, Gorge and Spoon catchments, south Westland (n=26). Foods contributing <1% include bark, litter, moss, roots, wood, *Blechnum penna-marina*, *Elaeocarpus bookerianus*, *Melicytus ramiflorus*, *Mycelis muralis* (foliage & flower), *Myrsine divaricata*, *Notofagus cliffortioides*, unidentified flowers, fruit and leaf and invertebrates. Data refers to foliage unless otherwise stated.

Food type	% of diet	Stomachs recorded in
Beech mistletoe	32.09	16
<i>Muehlenbeckia australis</i>	21.11	18
<i>Fuchsia excorticata</i>	14.65	11
<i>Elaeocarpus bookerianus</i> (fruit)	10.42	5
<i>Fuchsia excorticata</i> (flower)	6.927	8
Mixed herbs	2.996	8
<i>Aristotelia serrata</i>	1.998	2
<i>Schefflera digitata</i> (fruit)	1.974	1
<i>Rubus cissoides</i>	1.607	4
<i>Weinmannia racemosa</i> (flower)	1.193	1

Maruia Valley threatened plant restoration

The first of several exclosure fences in the upper Maruia Valley which are both stock and hare proof have been completed. The aim is to use these as sites for re-establishment and/or increasing the populations of two threatened plants - *Coprosma wallii* and *Melicytus flexuosus*. A third species (matagouri) will also be replanted in these sites.

The upper Maruia valley, while within the West Coast Conservancy, shares some biophysical characteristics with those of adjoining Canterbury and nearby Nelson-Marlborough Conservancies. For example it is has a drier climate (by West Coast standards), greater extremes of temperature and there is a population of matagouri present; a species characteristic of dry inland South Island areas.

Matagouri, *C. wallii* and *M. flexuosus* have become rare in the northern West Coast because of the affects of land clearance, cattle grazing and browsing by hares. It is also difficult for these species to re-establish themselves without active management due to competition with introduced grasses. Seed has been sent to the nursery in Motukaraka and we should be ready to plant the germinated seedlings during the spring of 2005. Weed control and "companion planting" of other compatible species (such as kanuka) will be part of this work for several years, until the seedlings reach a size sufficient to ensure their survival.

Powelliphanta snail surveys

Surveys between 2001-2004 at four sites along the Paparoa Range near Greymouth and one at Kirwans Hill near Reefton have been completed. A comparison with data obtained from three of the sites where previous surveys had been undertaken showed that numbers have decreased. An analysis of empty and damaged shells showed that mortality resulted from predation by song thrush, rat and possum. Populations at the other two sites were also considered to be low and damaged shells were again found. Of special interest is confirmation that snails collected at two, possibly three, of the sites are new species. Options for management need to be considered.

OTAGO

From Bruce McKinlay & John Barkla

New botanist

We welcome Mike Thorsen to the team having poached him from East Coast / Hawke's Bay Conservancy. Mike brings a wealth of threatened plant skills that will be put to good use to further advance the work going on in Otago.

Simplicia laxa

Six years of monitoring *Simplicia laxa* at Castle Rock on the Old Man Range has shown continued decline in cover within those parts of the site where stock have had access.

This is in contrast to an area from which stock were excluded in 1997, which has maintained a good cover of *Simplicia*. As a result, Central Otago Area staff have now fenced in order to exclude stock from all important parts of the rock.

Mistletoe talks

Dunedin audiences have been hearing plenty about mistletoes over the winter, with two talks discussing the many issues mistletoes face and generally raising their profile. Dunedin City has at least four species in the Town Belt and it comes as a surprise to city residents to learn that mistletoes are not so common elsewhere in the country.

Bioweb

Considerable progress has been made in getting a huge backlog of threatened plant records onto the Bioweb database. We now have particularly good coverage of some of the large and important groups such as the tree daisies. With luck, other groups will be tidied up before the next field season.

Grand and Otago skinks

James Reardon (ex Landcare) has joined the team as Programme Manager Grand and Otago skinks. James is very experienced with a range of herpetological species and is now getting to grips with working with through the DOC system and getting some traction on the ground for these two species. The recently appointed Recovery Group has met and started to grapple with the

issues presented by the Review completed last year.

BioAssests in Coastal

The big news here is that after many years of providing leadership to a wide and varied portfolio of threatened species in Coastal Otago, Dean Nelson has made the big jump to become PM BioAssets in Twizel.

Operation Ark

A great deal of effort has been put into getting our draft operational plan for the Catlins completed. Cheryl Pullar led the way with bringing the various bits together for sending up the line to Kingsley Timpson and his team who are undertaking the peer review.

At the same time, SRO has sprung funds to deal with the stoat irruption predicted in the core mohua habitat this summer. Graeme Loh and Robin Thomas are now finding contractors and laying out lines for tracks so we can get the infrastructure in place well before the stoats are about this summer.

Dart mohua

Barry Lawrence reports that although it was a good beech flowering year in the Dart, there has been very little seed. He is also getting some rats turning up in the Fenn trap lines even though they are not appearing in the tracking tunnels.

SOUTHLAND

From Andrea Goodman, Brent Beaven, Ros Cole, Sarah Thorne & Jamie Stewart

Ulva Island marine reserve

On 4 June, Conservation Minister Chris Carter visited Southland Conservancy to announce the Ulva Island / Te Wharawhara Marine Reserve. This was part of a joint celebration with the Minister of Fisheries, who announced New Zealand's third Maitaitai Reserve - Te Whaka a Te Wera. The event was particularly significant, as it is the first time a marine reserve and maitaitai have co-existed in the same area in New Zealand.

The new marine reserve is centred on Ulva Island near the entrance to Paterson Inlet, and covers three areas. In total it encompasses an area of 1,075 hectares, and includes 12 km of coastline. It is the first marine reserve along Stewart Island's coastline, and has taken over 11 years of hard work to designate.

Paterson Inlet is the only accessible, rock walled inlet in New Zealand that has remained largely surrounded by natural vegetation; protecting it from silt caused by erosion, fertiliser run-off and other effects of land development. It contains a diverse range of rich marine habitats, including more than 270 species of seaweed, making it one of the most diverse seaweed communities in New Zealand. It is also one of the few places in the world where primitive shellfish called brachiopods

dominate the shallow seabed at divable depths.

Dolphins in Te Waewae Bay

Erin Green has come to the end of her photo identification work with Hector's dolphin in Te Waewae Bay. To date Erin has taken over 2,000 photos; enabling us to confidently identify 50-60 individual dolphins by the marks on their dorsal fins. The resightings of these known animals in the photo work is allowing us to build a picture of how the dolphins use the bay. Mothers with calves appear to use the more sheltered western end of Te Waewae around Blowholes beaches and Port Craig, although this has yet to be confirmed during the analysis.

Judy Rodda (Otago University PhD student) will be continuing research with Hector's dolphin in Te Waewae Bay, looking at population structure, numbers and threats, and continuing to assess how dolphins utilise the bay during the year. Some of the dolphins are heavily scarred, including one that may have injuries at the base of its tail relating to propeller strike.

Southern New Zealand dotterel breeding season

The Southern New Zealand dotterel population has increased from 60 birds in 1993, to 200 in 2004 (see Figure 1). A population target of 250 by the year 2011 is set out in the New Zealand Dotterel Recovery Plan 2001-11; this year's total is still on track to achieving this goal. This population growth rate is a direct result of the continuing cat control

in the five main dotterel breeding areas.

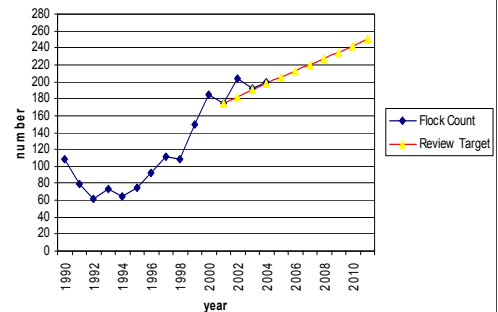


Figure 1: The results of annual population counts since 1990. Target levels set by the Dotterel recovery plan are also shown.

Subantarctic islands

The subantarctic team is busy planning for the new season. It looks like being a busy one particularly on Campbell Island with Visitor Assets, Campbell Island teal and albatross debanding teams set to brave the Furious Fifties in transit to our most southerly island.

One project likely to proceed is a palaeoecological investigation by Richard Holdaway (Canterbury University) on Campbell Island. Richard will be seeking to identify the historical bird fauna of Campbell Island, which will provide guidance for future reintroduction plans.

Campbell Island teal return home

The release of 50 Campbell Island teal back onto Campbell Island is being carried out as this goes to print. Approximately half the birds are "wild-bred" from Whenua Hou (Codfish Island), where they were released in 2000 as a holding

measure pending the removal of the rats from Campbell. The other half are from Mt Bruce and Peacock Springs. The birds will be held on Campbell for approximately two weeks while they regain any weight lost during the transfer, then monitored for two weeks post-release. They will also be monitored in February to check for survival and breeding to compare the two source populations (i.e. does a wild-wild transfer have a greater chance of success than a captive-wild transfer).

It appears however, that one bird couldn't wait for the reintroduction and swam across to the main Campbell Island from 26 hectare Dent Island - their sole natural refuge. This would have either been a 2 km swim and a long walk, or nearly 20 km swim if it went around the coast, which is the more likely route. The lone male was seen at the edge of a lake by Dr Ian Turnbull (Institute of Geological and Nuclear Sciences) during a recent geological expedition to the island.

This feat has only just come to DOC's notice, as the party believed that the reintroduction had already taken place and that seeing a teal on the island now wasn't a big issue. This male is likely to be looking for a mate and it bodes well for the project as it shows that the birds will survive. Hopefully this teal will mate with one of the released birds to increase the gene pool.

BRU

OSNZ atlas scheme

From Graeme Taylor & Leigh Bull

The Ornithological Society of New Zealand atlas scheme is drawing to an end, and there are still a few squares that haven't yet been visited. Please contact either Graeme gtaylor@doc.govt.nz or Leigh lsbull@doc.govt.nz for an electronic or hard copy of the map indicating the squares that haven't been visited, or for recording sheets.

The atlas project has RGM level support, so if anyone is passing through these remote unvisited squares before 28 February 2005, it would be great if they could fill in an atlas sheet and return it to Graeme. All sheets must be received by 31 March 2005.

Graeme Taylor
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WELLINGTON

Threatened Plants

From Andrew Townsend

Conservancy botanists recently held their biennial meeting in Gisborne. This was a great chance to catch up on what everyone is working on and hear about what issues they are grappling with. Threatened plant monitoring techniques were high on the agenda, as was developing a

national threatened plant strategy and working out how to progress a habitat or ecosystem approach to species recovery.

Weeds are one of the greatest threats to our natural ecosystems. One of the things we are looking at is developing “clever” ways to control weeds where threatened plants or animals occur. This has been through the use of selective herbicides which are specifically targeted to kill either grasses or flat weeds, or by applying herbicide to only the target plant (e.g., with a Weedwand™). We also want to investigate using materials (such as old woollen carpet underlay) to smother weeds and create a seedbed, as this might have application to threatened plants on forest margins and gaps.

Other areas being worked on include assisting with survey and inventory for threatened plants, providing advice on translocation projects and the island biosecurity SOP.

NEXT ISSUE DEADLINE:

A reminder for contributions will be sent out on 8 November 2004, with all contributions required by 22 November 2004.