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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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## CONSERVANCY NEWS

### NORTHLAND

*From Karen Riddell, Lisa Forester, Tom Herbert, Nigel Miller, and Andrea Booth*

#### **Threatened plants**

An historic plant find was made in March by Scott Candy of the Kerikeri-Waipoua Area Office when he found *Dactylanthus* in Puketi Forest. He was monitoring for a possum control operation at the time. There have never been records of the rare root parasite from Puketi, although it was collected by woodrose collectors in the contiguous Omahuta Forest, where its pollen had also been found in short-tailed bat droppings. *Dactylanthus* was collected in Northland up to around 30 years ago, but this is the first time a botanical record has been made of this cryptic plant since around 1900. The nearest extant *Dactylanthus* population is on Little Barrier Island. Twenty-seven cages have been constructed around the majority of the Puketi population to protect the plants from possums, but still allowing short-tailed bats to pass through to pollinate the flowers. Many of the plants are still flowering. The grid search of the site of the newly found *Ackama* species in the Waima Range has been completed. A total of 545 individuals have been counted within the bounds of the site which measures only 250 x 200 m. Several of the trees have produced panicles of flowers similar to those of its closest relative makamaka (*Ackama rosifolia*).

Future surveys will move further afield from the current known locality.

Another attempt is being made to grow *Asplenium pauperequitum* from the Poor Knights Islands by spore. This critically endangered fern has previously proved too difficult to grow in cultivation, so iwi and two fern experts collected a small amount of material from bluffs on Tawhiti Rahi to have another try. The tiny fern was thought to be having a bumper year owing to the wet summer, but unfortunately the sites that were visited are all suffering once more from serious dieback. An aphid sample and unhealthy shining spleenwort samples were taken back for analysis. Staff will need to go back to check more of the sites to ascertain if the dieback is widespread.

#### **Trounson kiwi**

Chick survivorship in Trounson mainland island for the year 2000-2001 stands at 64% (n=14). This is comparable to survivorship over the last few years: 30% in 1996-97 and 1997-98, 58% in 1998-99, and 69-85% in 1999-2000. The upward trend and flattening off period coincides with the fine tuning of our predator control, and possibly also with carrying capacity factors. Survivorship in Trounson may stabilise around 60-70%, although it may peak as high as 80% in



**Department of Conservation**  
*Te Papa Atawhai*

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non stoat plague years under the current predator control regime. Of the surviving kiwi chicks, 78% are over 1000 gm and are 8 months old. Four chicks were lost to predators early in the season, and we have had one tx failure.

Since October 1997 we have had six kiwi returned to Trounson as part of Operation Nest Egg: one was found dead in 1999 at 12 months old, cause unknown but suspected to be a mustelid; one had a tx failure at 14 months old; two have left Trounson, and one of these birds was found 20 km into Waipoua forest.

The remaining two birds are still living in Trounson.

### ***Brown teal***

About a month ago, seven captive-reared brown teal were released at a small flock site near Whananaki. About five wild teal were present around the time of the release, and it was hoped that the released birds would assimilate into the wild population. Predator control had been in place for several months by the time of release, and supplementary food was provided. A month on and six of the seven are still alive. The one death is suspected to have been harrier predation, because no other sign was evident on the skeleton.

After initially being pushed out by the resident birds, two birds, a male and a female, have rejoined the flock and are looking much more settled. The other birds remain close to adjoining feeding areas.

### ***Argentine ants***

Argentine ants have recently been found at both of the DOC offices in Whangarei. New records of this exotic ant have been turning up all around town, and it is unfortunate that both offices are within infected areas. The ants have now been eradicated from both sites, but there is always a risk of the ants moving back in

from the surrounding properties. A quarantine plan for Argentine ants has been written. It covers monitoring techniques for all DOC offices and quarantine protocols to ensure the ants aren't transferred to offshore islands or mainland reserves.

## AUCKLAND

### ***from Rebecca Stanely***

Our *Lepidium flexicaule* transfer to Rangitoto has been a little less than successful with 100 out of 150 plants still alive (66%) after 3 months, but only 5 out of 150 plants still alive (3.3%), after 10 months. Rangitoto is a harsh environment, and this translocation was always going to be a challenge. We are optimistic that seedlings may emerge in spring because of evidence the plants flowered before they died.

*Austrofestuca littoralis* (sand tussock) has been located at Pakiri Beach on Auckland's mainland. It's the first time we have seen this tussock on the mainland for 100 years. Luckily the tussock is now within a fenced off area that the local landowners are looking after. The chances of this species surviving and prospering at Pakiri are now greatly enhanced. Sand tussock was once widespread on the Auckland mainland, and also the Inner Hauraki Gulf Islands, but has disappeared from these sites in the last 100 years. The last known record on our mainland was in 1902, when a botanist located the sand tussock at Te Henga, on the Waitakere Coast.

### ***Hebe breviracemosa update***

In 1997 we knew of only one remaining individual of the endemic Raoul Island *Hebe* (*Hebe breviracemosa*) - and it had been the only known plant since 1983. Prior to that (it gets worse) the plant was

thought extinct after Oliver observed in the early 1900s that it had almost been eradicated by goats. Well, the goats then were culled, but it seemed the *Hebe* had become so very rare that the one individual seemed to be all we had.

Three weed teams have successfully raised cuttings and replanted them in the wild, and there are currently 23 cutting raised individuals, alive and well at various places on Raoul. Under one of these cuttings are 20 seedlings which is the first example of wild regeneration under a cutting. We also have three new wild locations, totalling 10 adults and 41 seedlings, all in very steep bluff and ravine areas. So the future's looking brighter than ever before for the Raoul Island *Hebe*. There's room for improvement however. Each year seed and cuttings are raised in the nursery on Raoul, yet few plants establish in the wild. We need to know more about the plant's habitat as well as its regeneration ecology.

Surveys, monitoring as well as research on the rare forget-me-not *Myosotis petiolata* var. *pansa* have been ongoing. The entire Waitakere and Waikato coastline has been surveyed, with the help of contractor Cameron Kilgour, and the plant has been rediscovered at its southern limit in North Taranaki. Lowland/coastal forget-me-nots such as this species are threatened by habitat destruction, over collection and weed invasion.

Our mawhai (*Sicyos australis*) at Otuataua Stonefields is still there - a victory for this spiny climber - which is now the poster species for the botanical values of the reserve in a brochure produced on Otuataua by the Manukau City Council. It's been deliberately sprayed and eaten by stock in the past, and is now competing madly with moth

plant, but we are hoping its luck is starting to turn.

## WAIKATO

### *Native frogs*

*from Chris Smuts-Kennedy*

In a newly created position, funded by the Biodiversity Strategy, Nadia Webster will be conducting research into developing and improving population-monitoring methods for Archey's and Hochstetter's frogs in the upper North Island. This work will involve collecting all frog records in the Northern Region, conducting baseline surveys and monitoring for disease in native and adjacent exotic frog populations. Nadia will be contacting the relevant people and would also be interested to know of any other frog research being carried out in this area.

Hauraki Area

*from Jason Roxburgh*

### *Middle Island tusked weta*

Late last year Middle Island tusked weta were transferred from captivity (bred by Chris Winks at Landcare) to on Red Mercury and Double Islands. Ian Stringer and team have used harmonic radar transponders and radio transmitters to follow them around on Red Mercury Island. This led to several interesting discoveries, including eggs laid in the wild, and males doing the rounds of several females' underground chambers in successive nights.

### *Kiwi*

- *Moehau Kiwi Zone*

Phase 1 of the predator control programme is operating at Moehau. The first 4000 ha are underway with stoats appearing in traps from the first day of opening. Five adult kiwi have been

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caught for monitoring, and we hope to get 15 over the next few weeks.

- *Whenuakite*

Our newest kiwi protection site has 500 of the total 1500 ha so far under predator control, with the remainder to be completed in the next 6 months. Waikato Regional Council and Kiwi Recovery Group have funded a baseline kiwi survey, which is now underway. Community support for this project is very strong (about half the area is on private land), resulting in the formation of the Whenuakite Kiwi Care Group to manage the project.

- *Project Kiwi-Kuaotunu (from Lance Dew, Project Kiwi project manager)*

All the chicks are doing well although we lost contact with one soon after release from the enclosure. The smallest chick has grown from 220-410 gm. The older ex-enclosure chicks are nearing the 800-gm mark, and all the wild monitored chicks have exceeded 800 gm. We have only monitored one chick loss to predation this season.

We have been monitoring three young kiwi since 1997, part of an original group of six (three of which we have lost contact with). In the past year all three appear to have paired and are living in the project area.

The annual transmitter change for some of the adult kiwi began a month earlier to coincide with their capture for blood sampling by the Kiwi Recovery Group for DNA work. Project Kiwi staff took Maryann Burbidge to the kiwi, and she sucked their blood and took feather samples. Local iwi (Ngati Hei) were involved in the sampling. The birds sampled were in mediocre shape, looking worse for wear because they were in the middle of a heavy moult. This is normally the only time of the year we come into contact with or handle the adults.

We have been contacted by several other kiwi projects intending to follow Project Kiwi's lead and invest in kiwi chick enclosures. One is due to be constructed very soon.

Summary of stoat catch this summer:

November	1
December	24
January	17
February	10
March	7
April	3
<b>Total</b>	<b>62</b>

A 2-day meeting to review our strategic plan was held on 3 and 4 April. The review panel consisted of Ray Pierce (KRG), Pete Shaw (DOC), Darren Peters (DOC), John McLennan (KRG), Josh Kemp (DOC), Jason Roxburgh (DOC) and Lance Dew (PK). The programme was facilitated by Willie Shaw (who is preparing the plan) from Wildland Consultants. Landowners David Simpson and Warwick and Annie Wilson also attended. The next phase of the project review is an overhaul of the management and structure of the organisation. Wildlands are also facilitating this aspect.

### ***NZ dotterel***

It was not a good season for NZ dotterel on the Coromandel. At our main management site at Opoutere, only six chicks successfully fledged (usually 16-20). The rest of the peninsula suffered similarly owing to a combination of successive easterly storms in November, and higher than usual egg predation. At Opoutere, only six chicks fledged from 133 eggs laid!

### ***NZ dotterel monitoring Opotiki***

#### ***Area***

The NZ dotterel (*Charadrius aquilonius*), also given the Maori name Tuturiwhatu-pukunui, are endemic shorebirds currently considered to be threatened. There are two populations of NZ dotterel nationally; the East Coast

Hawkes Bay populations are part of the northern population. The northern population is estimated to be about 1452 birds. The decline of the NZ dotterel has been brought about by a combination of breeding habitat degradation, introduced predators and possibly shooting.

The outcomes of this project are to increase NZ dotterel breeding success, increase chick survival and protect important habitat. This would in turn increase the size of the NZ dotterel population, which would encourage expansion of its current breeding range. Three main breeding sites were monitored in the Opotiki Area: Waiotahi Spit, Waioweka river mouth and the Waiaua Spit. These sites held a total of 24 resident birds, (11 paired birds and two single birds). There were two pair at Waiotahi, three pair at Waioweka, six pair at Waiaua and two singles. There are also NZ dotterel found at the Whangaparoa river mouth (two pair), but they are not monitored to the same extent as the previously mentioned sites. This is a total of 28 birds comprising 13 pairs and 2 single birds.

A total of 16 nesting attempts were made by 11 monitored pairs with 22 chicks known to have hatched from 51 eggs this season. Fourteen of the 22 chicks were fledged (63%) by nine successful breeding pairs. One pair at Waioweka managed to fledge all three chicks on their first attempt. Three pairs fledged two chicks each and the remaining six successful pairs one chick each. All but three pairs managed to fledge chicks on their first nesting attempt. Two pairs were unable to rear any chicks even after making a second and third attempt, in both of these cases it is thought that both these pairs were female/female pairings. One chick was successfully fledged at the Waiotahi Spit site, four chicks fledged

from Waioweka site and nine chicks fledged at the Waiaua. This is three more chicks than last season, and represents one of the best breeding seasons known to date for these three breeding sites. This result can be attributed to successful predator control, community support and favourable weather conditions.

The three monitoring sites are extensively protected through predator trapping to enhance chick survival. Key predators were removed during the season through trapping, shooting, and poisoning. Thirty-two mustelids, 41 hedgehogs, 15 rats and 15 black backed gulls were killed during the season. Regular monitoring of the NZ dotterel population was a means of assessing the affects of predator control, breeding success and chick survival. There was also increased advocacy and public awareness through liaison, signage, newspaper articles and greater staff presence at the breeding sites.

Two banded birds were seen at these sites during the course of the breeding season. One banded bird had set up residence and bred successfully at Waiaua (OG-MB) the other banded bird (RM-RB Waiaua 1997) was seen wandering at Waiaua. A banded bird was also reported as seen at Ohiwa (BO-M).

## **BAY OF PLENTY**

*from Paul Cashmore and Keith Owen*

### ***Release of Kiwi chicks: Moutohora***

A kiwi chick and an egg were recovered from Ohope Scenic Reserve near Whakatane last November and were raised on at Rainbow Springs in Rotorua. The egg hatched and both chicks are female. As part of the restoration project for Whakatane kiwi the two chicks were released on Moutohora (Whale Island) in mid April. A release ceremony took

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place with Ngati Awa and the media on the island. This release will establish new and strengthen existing relationships in our partnership management on Moutohora. Surveys for other kiwi in local Whakatane reserves will hopefully allow additional kiwi to be released onto the island. There will be ongoing kiwi management at Ohope Scenic Reserve, and in the medium term progeny from Moutohora will be returned to the reserve.

### ***Rorippa divaricata***

In March, staff returned to Mokoia Island to monitor *Rorippa divaricata* plantings that were established in 1999. Only three surviving plants from 245 plants established were found, although the majority of these set seed before dying off last winter so we hope that further plants will re-establish. In February staff also checked the Blue Lake *Rorippa* plantings, which were re-established at the site in 1998. Eight plants are still present therefore the population appears to be self-sustaining at this site.

Some significant new *Rorippa* populations have been discovered in the last few months. The most significant discovery is at Ottawa Scenic Reserve near Te Puke where several plants were found growing in a clearing over summer. This is the first site found in the conservancy outside the Rotorua lakes area and suggests other sites in coastal Bay of Plenty may exist.

Also more plants are still being found in Lake Okataina Scenic Reserve – however, well away from the lake. A keen local botanical society member has found that *Rorippa* plants are present on recent pumice slips throughout the reserve. This alters our thoughts on the local habitats of this species.

### ***Mistletoes***

The whereabouts of a *Korthalsella salicornioides* population on the edge of Lake Okataina has finally been confirmed. The population of over 100 plants is highly localised to small kanuka trees covering an area approximately 30 x 30 m near the lake edge. Unfortunately the Eastern Okataina walkway passes through the middle of the population, and with no options to realign the track vegetation has been carefully trimmed to keep the track clear.

This year is an excellent fruiting season for *Ileostylus micranthus* at our Lake Ngahewa site where hosts were banded and planted several years ago in an attempt to maintain the ailing population. Fruit was abundant so staff were able to plant seed on some of the planted hosts and also across the road in Rainbow Mountain Scenic Reserve where plants have previously grown. It was pleasing to see the birds had beaten us to it – several host tree lucerne plants had mistletoe seed already stuck to branches.

### ***Pterostylis micromega***

In late February a site was searched at the Lower Kaituna Wildlife Management Reserve for *Pterostylis micromega*, which was last seen there in 1983. Unfortunately, water levels were higher than normal following recent rain, and no plants were located. The wetland habitat has changed greatly since the original discovery with much more water present and no grazing. While this management regime has greatly improved the functioning and quality of the wetland it may not have been so favourable for the orchid.

### ***Austrofestuca littoralis***

A polytechnic student has resurveyed the *Austrofestuca littoralis* population on the Papamoa dunes over the past summer.

This research shows a decline in the population size since the last survey several years ago. The main causes were erosion of some of the dune areas by tidal influences and trampling of plants by vehicles on the dune systems – especially quad bikes and motorbikes. This is a serious threat to the dune systems, which DOC has little control over in this area.

### ***Dactylanthus***

This season flower monitoring was undertaken at Te Kopia Scenic Reserve and at the Waione site in Whirinaki Forest Park. At Te Kopia, where most plants are caged, flowering was average with little sign of animal activity. At Waione, where only a few plants are caged, flowering was monitored to see what effect the previous winter's 1080 operation would have on flowering success. With significant flower damage occurring as expected, a trapper was employed, and nine possums were removed from the area, four of which had bracts present in their stomachs. This possum cull enabled some of the later developing flowers to survive.

Some survey work was also undertaken. An old report from Maungawhakangama in the Tarawera valley was checked, but the location could not be pinpointed sufficiently to relocate the original plant. Further searches are planned. On the Mamaku plateau a possum gut survey occurred in late March in several reserves where *Dactylanthus* was thought to be present. Although several possum stomachs were investigated for staining none contained *Dactylanthus* flowers.

## WANGANUI

*from Graeme La Cock and  
Rosemary Miller*

### ***Staff movements***

We'd better up date you on the latest comings and goings.

Sadly Tim, our terrestrial animal link, has left us for more diverse pastures (sorry, definitely not pastures - I think that was part of the problem). He's planning to do a PhD in Brisbane. Thanks for the support while you were here, Tim, and good luck over there.

Astrid Dijkgraaf has been appointed CAS. Congratulations and good luck. Her PhD will be finished shortly. Now we just need to replace her.

Norm Marsh (programme manager for threatened species in Wanganui AO) has joined a regional council. Jim Campbell has been offered his job. Good luck and well done Jim.

### ***Army country threatened plants***

We monitored the *Ranunculus recens* and some of the *Myosotis glauca* plots. The *R. recens* is hanging onto its one locality, but numbers are down a bit. We also planted out 13 plants grown by Robyn Smith at Percy's Reserve. (She also managed to raise about 180 *Sebaea ovata* from seed. Where would we be without her?)

We found one new patch of *Myosotis glauca* - a huge population of about 35 plants. We even found a couple of new plants about 10 m away from one of our other monitoring sites.

There was evidence of some horse activity at the *R. recens* site, but the *M. glauca* sites appeared to be unaffected.

### ***Urtica linearifolia***

Jim Campbell and Fiona Wilson found a good patch at Lake Kaitoke during an inspection of a new road site.

### ***Myosotis petiolata var. pansa***

Bec Stanley and Heath Priest rediscovered this rare *Myosotis* on

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Whitecliffs, over 20 years since Colin Ogle and Tony Druce had found it there. You can visit our patch any time, Bec. Thank you.

### ***Pimelea "Turakina"***

Contract research seems to indicate that this is a good species. Even more exciting was the news that a plant from Castlecliff (Wanganui by the sea) is probably the same as *P. "Turakina"*. The Castlecliff site was rediscovered with the help of the Wellington Botanical Society on their Easter field trip.

### ***NZ dotterel***

Thanks to Bryan Williams and his signs we've managed to get a fledgling at a beach near New Plymouth.

### ***Kiwi survey***

A range of conservancy, area office staff and volunteers undertook the great kiwi survey in Waitotara CA. A call rate of 2 per hour was recorded. Early estimates based on individuals heard seem to indicate a population of 110 to 160 in the 16 km<sup>2</sup> surveyed. Call rates are similar to call rates at Autuhia where Don Ravine recorded eight birds per 100 ha.

This result indicates that it should be possible to obtain a sufficient sample size to test in situ management. For large tracts of back country this could be a feasible alternative to the captive bred programmes currently being undertaken.

### ***Short-jawed kokopu***

A Massey student has discovered 15 spawning nests in Katikara. The secret seems to be patience and sitting and watching.

## WELLINGTON

*from Mike Thorsen and Denise*

### ***Fastier***

Work for this season is starting to wind-down, with Chatham petrel the only project still continuing. The petrels have had their best breeding season in the

management project's history. The first few of the 92 chicks hatched have now fledged. Neoprene burrow-flaps placed over the burrow entrance have proven very effective at dramatically reducing the level of interference from broad-billed prions. A sound system that continuously plays Chatham petrel calls during the night has been installed to try and form a new colony elsewhere. So far one pair has been attracted to this site. Some chicks have also been transferred to this new colony site ('Swamp City') to test translocation methods.

Black robins had a good season on Mangere with 22 pairs fledging 20 chicks (compared with 23 pairs fledging nine chicks last year) and 177 birds known on Rangatira with similar productivity to previous seasons.

Nine of the 15 shore plovers transferred to Mangere in January were still present in April. There is some movement of these birds, possibly to Pitt Island. A further transfer of up to a further 20 birds is planned for next season.

## NELSON/MALBOURGH

### ***Plant bits***

*from Shannel Courtney*

A recently brought-to-light 1882 herbarium specimen of the endangered twig daisy (*Olearia polita*) from the Wangapeka Plains sparked a survey to try and determine whether the tree still occurred there. A 3-day scout culminated with the discovery of a 500-strong population of twig daisy on private land. This is the second known site for the twig daisy, the other being the Glenhope area where there are about 1300 individuals, half of which are also on private land. The icing on the cake was the additional rediscovery of the nationally vulnerable bloodwood (*Coprosma wallii*), which hadn't been



recorded from the area for a similar period of time.

A Cook's scurvy grass census of the outer Pelorus Sound islands has confirmed that it is present on 6 of the 15 islands and islets visited. This year's exceptional drought has killed most plants though, and major population recruitment is necessary to re-instate numbers. New populations of Cook Strait bristle tussock (*Rytidosperma petrosum*) and the guano-loving muttonbird groundsel (*Senecio sterquilinus*) were also discovered, reinforcing the importance of these small predator-free islands as thriving sea-bird ecosystems.

A small team of weed and threatened plant surveyors have been employed over the last 2 months to map and document weeds in the Rai River between Blenheim and Nelson. This is stage one of a weed programme to improve the habitat quality of the riparian communities supporting the critically endangered pygmy button (*Leptinella nana*). The survey also included keeping an eye out for more populations of pygmy button. The upshot was 58 new populations of the daisy, including one, which covered a total of c.2000 m<sup>2</sup>. This has trebled the known area of occupancy for this species and possibly reduced its conservation threat category from critical to endangered.

Monitoring of the limestone greenhood (*Pterostylis porrecta*) was undertaken in the Aniseed Valley this autumn to see whether pollination had been successful over the summer. There was a dramatic failure of seed set last year. Although only half the number of orchids emerged this time around, three-quarters had developed capsules to maturity. It is becoming apparent that high light requirements are implicated in successful pollination for this species.

The worst drought on record has had a few unlikely benefits. It provided us with the opportunity to check the ephemeral wetlands around Lake Henderson in Kahurangi National Park with ease. They are ordinarily submerged. A census of three of our least known plants, *Craspedia* "Henderson" (only known from this lake), *Ranunculus* "Burgoo" and *Hypsella* "Burgoo", was possible, and their conservation status was assessed. Weeds, especially oval sedge, appears to have been brought in by waterfowl from the Cobb Valley, and are threatening the upper turfs, which is where most of the *Hypsella* grows. Results of the latest monitoring of the ephemeral turfs at Sedgemere in Molesworth indicates that oval sedge is also increasing here, threatening the only habitat of *Craspedia* "tarn" and several other threatened species.

Another unnamed plant, the red-throated eyebright, was resurveyed this February. We feared it had been lost when it failed to show last year. The annual is only known from one site on the Southern Arthur Range. We were relieved to find 22 plants this time, raising the likelihood that this species can survive solely as a seed bank for some seasons.

A survey for shovel mint (*Scutellaria novae-zelandiae*) along the Tinline River in the Pelorus catchment was successful in discovering several new but small populations. Habitat degradation by cattle is a significant threat, but the species appeared to be standing up to the drought very well.

Another drought survivor is *Carex inopinata*, in the Wairau Valley, which has escaped being smothered by a mass leaf fall of rohutu, the main canopy tree. It is not sure yet whether rohutu will recover from the drought, but canopy loss has profound implications for the management of the *Carex*.

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Jan Clayton-Greene has been wowing South Marlborough locals in her role as rural advocate. Her talks about the threatened plants and animals of South Marlborough have been very well received and have led to the reporting of new localities for several species, especially wiggy bush (*Muehlenbeckia astonii*).

### **Fish: *Gambusia* eradication**

Sixteen of the 17 known populations of *Gambusia* (mosquito fish) have been eradicated in Tasman District using the fish poison rotenone. Eradication at these sites appears to have been successful. If *Gambusia* are still present in low numbers however, they will be difficult to detect. Consequently the ponds will continue to be monitored for several months. Plans to eradicate the final population have been put on hold owing to rising water levels and cold temperatures, which hinder the use of rotenone. Funding has recently been approved for a South Island survey for *Gambusia* and koi carp.

## WEST COAST

*from Tom Belton, Rodney Phillips, Jo Crofton*

### **Wekakura Point survey**

On a recent ecological survey in the Wekakura management unit between the Heaphy River and Kahurangi Point two plant species were found outside the previously known geographical range on the West Coast. Rodney Phillips found hangehange (*Geniostoma rupestre*), and Tom Belton found kohia (*Passiflora tetrandra*). Both were found south of previous West Coast records.

### **New records for *Powelliphanta annectens* and *P. o'connori***

A recent survey has found *Powelliphanta annectens* in the lower Karamea River below the confluence with the Ugly.

Previously it had only been found in the Oparara Basin and the western slopes of the Gunner Downs. During the same survey *P. o'connori* was also found at a new site near Virgin Creek below Karamea Gorge. *P. o'connori* are present upstream in the Kakapo catchment, and it is thought that this colony may have been established by individuals washed downstream from the main population.

### **Okarito brown kiwi**

Twenty-seven breeding pairs are actively monitored. At the end of the previous breeding season three non-producing pairs were dropped off the breeding success monitoring list, and their transmitters were removed. A further two pairs of non-breeders were retained because of other interests: one was a trio and the other has produced eggs in previous seasons. These pairs were monitored whenever practicable.

Thirty-seven eggs were detected, and hatch dates ranged from 9/9/00 to 27/2/01. One egg came from a new bird caught in February as part of the programme to expand the number of breeding pairs by 20.

Twenty-one chicks were produced, and all have been taken to sanctuary at Motuara Island.

There was a period of high egg mortality for eggs detected between late August/end of September. The cause of mortality is unknown, but the losses occurred during a period of poor weather including lightning storms.

The female of pair C was hit by a car and was badly injured and eventually died. The night after the accident was reported the burrow entrance was video taped to ensure incubation was taking place, however, the female was handed in by a member of the public the following morning, so the egg was removed and successfully incubated in

captivity. The female suffered fractures to both femurs but was still able to walk. The pair was sitting on an egg that was estimated to be between 8 and 22 days old. Normally eggs are taken for incubation when at least 40 days old. Two eggs were detected late in season, after end of January. Both hatched in the wild, and the last chick was removed on 1 March. Normally the Okarito breeding season is finished by the end of December.

#### ***Operation Nest Egg (ONE) kiwi***

Fourteen of the previous season's juveniles were birds released in Okarito Forest in two batches. Of the first eight released on 11 October one subsequently died of a suspected beating by another bird. These birds were released near five juveniles from 1999/2000 (previous) year's release.

The second release of six on 6 December has been successful so far. They were released on a ridge where a largely unsuccessful early release of captive raised, non-Motuara birds had occurred. All 2000/01 birds have dispersed widely, far more widely than previously released juveniles and have travelled through known adult territories. On 2 April, one was found camped up with a wild, unbanded bird, which was summarily banded but did not have a transmitter attached and has never been seen again. This mystery bird was an old bird with bill measurement in the grey area just under 100 mm. This bird will be followed up with a catching trip to the area.

Of other ONE birds, a male, Inca, paired up with a wild bird and successfully incubated an egg.

No other breeding activity with the other ONE birds has occurred although several have formed 'pairs', some with wild birds.

ONE birds in Okarito Forest now total 29.

#### ***Motuara Island sanctuary***

Of the 21 chicks released, three are dead, one transmitter has dropped, and three are missing. Release back to Okarito is planned for January 2002. Some positive disease screens delayed planned releases until clear screens were obtained.

#### ***Wild juveniles***

The two wild juveniles from 1998, which were in Okarito Forest when aerial 1080 for possum control was sown, are doing well. One is still with the parents, who have since produced three eggs and the other has moved off at least 2 km from her parents' territory. Both chicks are female.

### **OTAGO**

#### ***from Bruce McKinlay***

#### ***Wakatipu Islands***

Dawn Palmer from Wakatipu Office reports that recent checks of traps on Pig, Pigeon and Tree Islands in Lake Wakatipu revealed four stoats. At about the same time the traps along the lakeshore caught 13 stoats.

#### ***Sphagnum moths***

Biodiversity funding allowed the establishment of an entomological position to be shared between Canterbury and Otago. Alison Evans is now undertaking this work and recently came down for 3 weeks of searching for *Heloxycanus patricki*, a moth that lives in sphagnum bog and which emerges as an adult in the late autumn. Searches on the Rock and Pillars and Lammermoor Ranges revealed good numbers.

#### ***Taiaroa Head trapping effort analysis***

For Bruce McKinlay, analysing 9 years of trap data from Taiaroa Head is very time consuming. An interesting part of the project is the use of GIS printouts to identify where on the headland we are being successful with trap effort.

### ***Mobua distribution***

Graeme Loh has also been analysing past field efforts with respect to mohua distribution in the Catlins. He has been able to look at changes in 1000 m<sup>2</sup> occupied before and after a mast event, and has shown that for this site only one or two m<sup>2</sup> dropped out by having birds present before the mast but not after.

### ***Yellow-eyed penguin habitat protection***

Cheryl Pullar has been involved in preliminary discussions with a landowner about the protection of another small yellow-eyed penguin habitat in the Catlins.

### ***Rare beetle distribution***

Steven Pawson, a student from Lincoln, has recently completed the first year of a study into the distribution and status of the Category B Carabid beetle *Oregus inaequalis*. This animal, which has only ever been known from Dunedin, appears now to have a distribution related to the volcanic hills around the northern edge of Dunedin City.

### ***Rare small-leaved tree daisies***

Botanical contractor Geoff Walls has completed the Otago survey component of his contract, and as a result we have much better knowledge of the status of threatened *Olearia*. Highlights include a new *Olearia hectorii* site close to Dunedin, confirmation of *O. hectorii*, *O. fimbriata* and *O. fragrantissima* together at one site in the Matukituki Valley, and a huge *O. fragrantissima* population in the lower Taieri Gorge.

Cheryl Pullar in Owaka has been planting out *Olearia hectorii* grown from seed by the Dunedin Botanic Gardens. With landowner and local school support, about 100 plants have been put into a recently fenced area close to the Owaka River. Cheryl is comparing growth rates under a range of weed suppression/pest

protection methods. A highlight of a recent visit was the discovery of 15 natural seedlings that had established in areas blanket sprayed last spring to knock out the grass. Further work will hopefully lead to a useful seedling establishment technique.

### ***Inland saline sites***

Mike Tubbs from Central Otago Area has been working with AgResearch scientists to battle the latest weed - *Plantago coronopus* - threatening these important ecosystems. It's become very invasive at many sites and threatens to wipe out many of the special plants. Biodiversity funding is facilitating a multi-year research programme to test a range of herbicides, some of which we hope will prove effective control agents.

### ***Coastal Lepidiums***

Sites containing *Lepidium oleraceum* and *L. tenuicaule* around the Otago coast are getting their annual check-up. Graham Loh is also using the visits as an opportunity to support two research programmes on Lepidiums. One is looking at soil nutrient levels and the other at genetic diversity in *L. oleraceum*. A new site for *L. tenuicaule* was found during a Kiwi Conservation Club trip to the coast near Taieri Mouth. Further survey is required to better define the population size along this stretch of coast.

### ***Meetings***

In addition to all the above, it has been a time of meetings and workshops. It was particularly good to catch up with our equivalents from around the country in early May at the Recovery Group leaders workshop in Wellington.

## OTHER BITS

### ***Recovery Group Leaders Workshop***

A threatened species recovery group leader workshop was held in Wellington between 8 and 10 May 2001. Approximately 32 recovery group leaders attended, representing threatened bird, plant, reptile, amphibian, invertebrate and fish species around the country.

The group crunched national issues facing threatened species management and developed solutions to address particular issues. Key solutions included:

- complementing the recently developed species threat classification

system with tools for priority setting and integration with business planning,

- strengthening communication pathways and clarifying accountabilities between the line and recovery programmes.

The workshop participants saw genetic and taxonomic research as strategically important to underpin recovery programmes. One of the major positive outcomes of the workshop was strengthening the networks between species recovery group leaders. Thanks go to the organisers, facilitators, speakers and participants for a productive workshop.

*Rare Bits* is issued four times a year by the Biodiversity Recovery Unit (BRU), Department of Conservation, Wellington.

Copy deadline for the next issue is **24 August 2001**.

Articles about threatened species management issues are welcome from anyone. Send them to the Editor, *Rare Bits*, BRU, Department of Conservation, PO Box 10-420, Wellington, in Word, on a floppy disk, or as an Email attachment (internet mail: [smoconnor@doc.govt.nz](mailto:smoconnor@doc.govt.nz)).

Please follow these word limits: Conservancy News 800 words, Restoration Resumé 500 words, Island Roundup 1000 words, Other Bits 900 words, Feature Article 800 words.

Articles should be clean (ie, free of any formatting) and any graphs or figures should be saved as TIF files.

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