

# Miranda News

Journal Of the Miranda Naturalists' Trust

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## Welcome home

A Shore Plover, extinct on mainland NZ for 140 years, has taken up residence at Miranda

What other rare species live on the coast? Find out at the thousand-species bioblitz

Why our chenier plain attracts global interest



From  
the  
editor



## Creating a better place for NZ's wildlife

The focus of this issue is on habitat and, in particular, on how to make the Miranda coastal strip a better place not just for our waders but also for the likes of Bittern and Banded Rail, native lizards and invertebrates, plants and fungi.

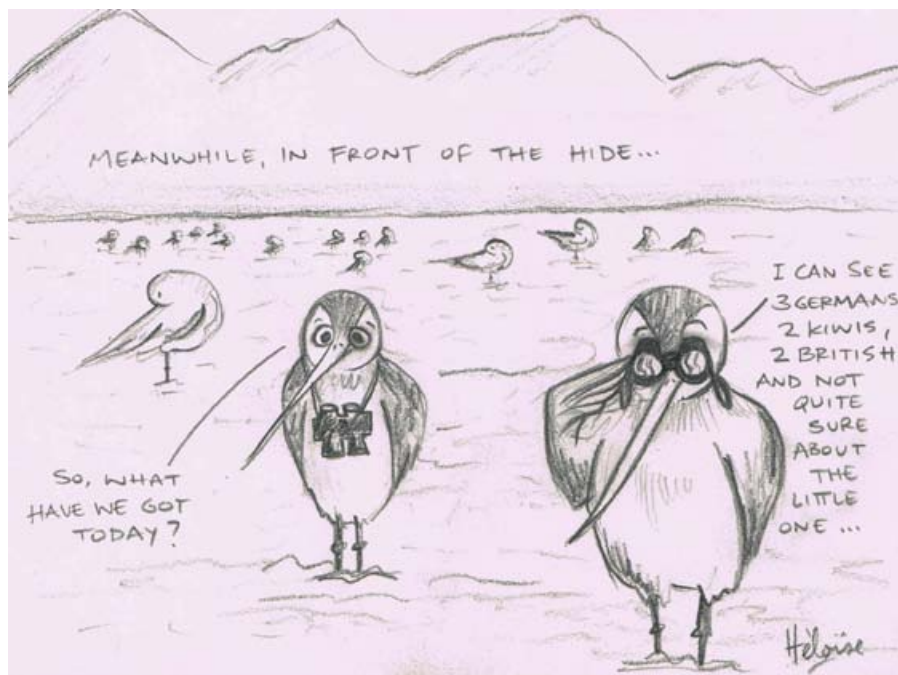
It has all been sparked off by an offer for the trust to take over full management of the Findlay Reserve where the hides are.

That has opened up the possibility of developing a land management plan which might cover not just the reserve but also the adjoining blocks owned by the Dalton family and the Department of Conservation. Already there are visions of creating more ponds, perhaps with islands for Banded Rail, encouraging the growth of saltmarsh and replacing grasses and fennel with native vegetation.

And that, in turn, has led to the idea of a bioblitz, an intensive biological survey of the area, to find out exactly what species are living there right now. As Peter Maddison, who came up with the idea, says: the more we know about what's there the better we'll be at managing it.

A bioblitz sounds like great fun, a chance to participate in catching moths, sieving mud, netting waterways, searching vegetation and taking whatever you find to a panel of experts to find out what it is. All with the knowledge that in the process you're helping make Miranda an even more special place for people to visit and for wildlife to live. Don't miss out.

Jim Eagles



Cartoon / Héloïse Gauvin

## The United Nations of birding

How did a young French woman who holds a Scottish degree and speaks English with an Irish accent end up introducing birds from Alaska to visitors to Miranda? **Héloïse Gauvin** explains

When you look for work and are up for a bit of travelling the Google search bar quickly becomes one of your best friends. This is how one evening in Galway, on the West coast of Ireland, a French graduate in Ecotourism from Edinburgh's Napier University, in Scotland, found out about the Miranda Shorebird Centre and became very excited about the possibility of working there.

Three months after applying for the long-term volunteer position, I was on a plane to New Zealand, and a few days later I was standing in the south hide on Miranda shore at high tide in perfect evening light with Keith Woodley pointing out the features of a juvenile Bar-tailed Godwit foraging only a few meters away. This would be my office from November to February. Since then I've been at the hide every day around high tide, learning something new every time I've looked through the scope, keeping records of species present, their behaviour and distribution.

I've also been welcoming human visitors from all around the world, both curious travellers and keen



birders, sharing the telescope and using a field guide and the little knowledge I've gained in the past few weeks to make identifications . . . as well as sharing a lot of jokes and life stories.

I've also been assisting Kristelle Wi in her great work dealing with school groups and predators (slightly different methods apply) which have both considerable importance for the future of the birds of Miranda.

In the time I have left I hope to see you at the hides.

Front cover: Shore Plover at Miranda.

Back cover: Sharp-tailed and Curlew Sandpipers.

Photo / Ian Southey

Photos / Jim Eagles, Héloïse Gauvin



# Black-billed gull chicks on the shellbank

A dozen Black-billed Gull chicks have been fledged on the shellbank this summer, the first for a few years, which is encouraging news for what Keith Woodley describes in *Sharing the Margins* as “one of the most endangered gull species in the world”.

Black-bills, whose stronghold is the southern South Island, were reported in Miranda in 1968 and initially had little problem raising chicks.

They arrived in the course of a dramatic expansion north, prompted by the transformation of forests into pastoral farmland, a habitat which suited their lifestyle.

Unfortunately their decline, due to a combination of more intensive farming, rampant weed growth, extraction of water and gravel from rivers, predation and pressure from humans has been equally dramatic.

OSNZ surveys at the major breeding colonies on the Waiau, Aparima, Maitara and Oreti rivers have recorded an 83 per cent decline in gull numbers between the 1970s and the 1990s. As a result the gull’s status with the International Conservation Union has gone from “Least Concern” in 1994 to “Vulnerable” in 2000 and “Endangered” in 2005.

Adding to the black-bills’ woes is the fact that as mere gulls they are not generally highly valued. There have been regular reports of mass killings of the gulls as a result of vehicles being driven through colonies, shooting sprees and vandalism.

Just before Christmas 51 chicks at the big Ashley River nesting site were stoned to death. The month before a four wheel drive was driven through the Ashburton River site squashing eggs and nests.

Even at Miranda they don’t always get the sympathy they deserve. Just last month a pair of eager photographers ignored the signs and the outrage of the birds and walked down the shellbank through the middle of the nests.

The success of the small colony this year has presumably been assisted by the success of the programme to control four-legged predators. But other dangers remain. Keith saw one of this season’s chicks taken by a harrier hawk and suspects others may have gone the same way.

His chapter on Black-Billed Gulls



Black-billed gull chicks

Photo / Schmechf’s Photostream

concludes, “Strange as it may seem, the current trajectory within the population, and the lack of management

targeting this species, mean it is in greater danger of extinction than the kakapo.”

## Now in residence at Miranda

Joining the throngs of Bar-tailed Godwit and Red Knot at Miranda this summer are a good sprinkling of other tundra-breeding birds like Pacific Golden Plover, Turnstones and Sharp-tailed Sandpipers.

The Marsh Sandpiper and two Curlew Sandpipers seen for much of last year still linger, while a Greater Sand Plover, relatively rare at Miranda, turned up in late December.

Another end of year arrival caused much puzzlement before being confirmed as a very scrawny Asiatic Black-tailed Godwit.

The other notable sighting was a male NZ Shore Plover that turned up before Christmas. Its colour bands revealed it to be a young bird released on Motutapu.

Out on the shell bank a small Black-billed Gull colony set up shop with some White-fronted Terns, Variable Oystercatchers and NZ Dotterels, and produced a few chicks. One of the oystercatcher pairs was also seen in mid-January caring for two chicks.

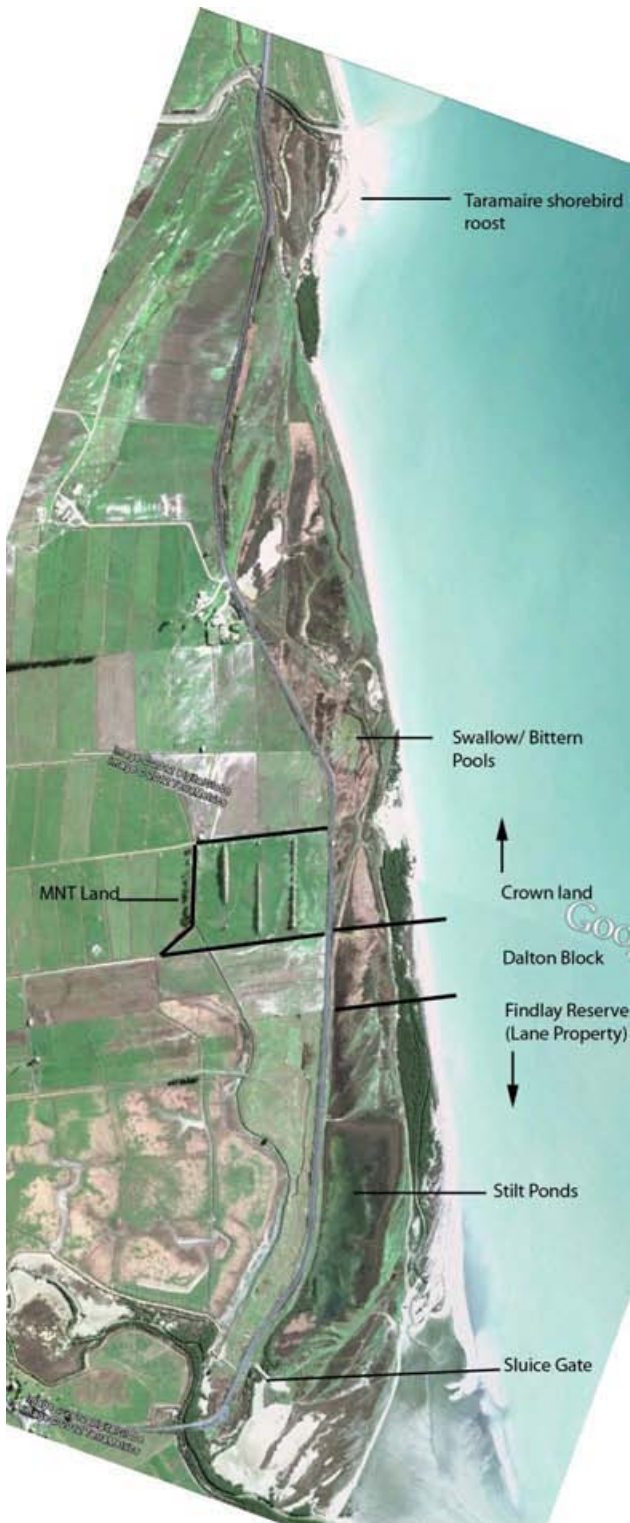
The proud parents had to contend with an increasing press of birds jostling together for space on a shell bank much diminished by king tides.

<b>Arctic Migrants</b>	
Bar-tailed Godwit	4500
Black-tailed Godwit	1
Red Knot	1100
Whimbrel	1
Turnstone	19
Sharp-tailed Sandpiper	11
Marsh Sandpiper	1
Pacific Golden Plover	42
Curlew Sandpiper	2
Greater Sand Plover	1
<b>New Zealand Species</b>	
NZ Shore Plover	1
Wrybill	1800
NZ Dotterel	
Banded Dotterel	16
SI Pied Oystercatcher	1900
Variable Oystercatcher	
White-fronted Tern	
Caspian Tern	
Black-billed Gull	
Pied Stilt	
Royal Spoonbill	7
Banded Rail	
Bittern	





**BUILDING A VISION** (clockwise from top): Keith Woodley shows MNT council members and expert advisers around the Findlay Reserve; checking out what lives in the ponds; a flower of the pretty little Sea Primrose (*Samolus repens*) is discovered in the salt meadow; Google Earth view of the Miranda coastline including the Department of Conservation land at Taramaire, the Dalton block, the MNT property on the landward side of the road and the Findlay Reserve.





# Exciting chance to rehabilitate the Miranda coastal strip

MNT has been given an opportunity to take over the full management of the Findlay Reserve and develop a conservation plan for the whole coastal strip. **Jim Eagles** reports on developments

The coastal strip at Miranda which includes the Shorebird Centre's hides could be transformed over the next few years to provide a better roost for the waders and encourage other native species including birds, plants, fish, lizards and invertebrates to flourish.

The catalyst for this development is an offer from the Lane family for the Miranda Naturalists' Trust to take over the grazing lease of the 25ha Findlay Reserve, where the hides are, from midway through this year.

That has opened up the possibility of the reserve – and possibly the adjoining blocks owned by the Dalton family and the Department of Conservation – being managed to maximise the conservation potential.

Those who have visited the hides recently may have noticed that reduced grazing pressure and variations in the water level in the ponds have already led to significant changes including the demise of some encroaching mangroves and sarcocornia around the ponds and the expansion of several low-lying native plants.

In addition the trust's predator control programme seems to have encouraged successful nesting by bittern, banded rail, black-billed gull, white-fronted tern and NZ dotterel.

What might the trust be able to achieve as a result of a carefully co-ordinated management plan for the whole coastal strip?

To try to answer that question council member Eila Lawton was appointed to convene a meeting last November which brought together representatives of the trust, DoC, the Queen Elizabeth II Trust, Environment Waikato and several environmental experts.

The discussion saw a number of sometimes competing points raised, including:

\*The chenier plain which runs from Miranda up to Whakatiwai is probably the finest example of its type in the

world (see article page 8)

\*The salt marsh at the reserve is said to be the best in the Waikato.

\*The Findlay Reserve with its ponds and shellbanks is the most important roost for migratory shorebirds on the Firth of Thames.

\*The coastal strip is home not only to waders but many other important species including lizards, land birds, plants and invertebrates.

\*Simply removing the cattle will probably only lead to an explosion of exotic plants.

\*Planting trees, which is often the focal point of habitat restoration projects, might in this case only serve to interrupt flight paths and sightlines and make the area less attractive as a roost for waders.

\*The Stilt Ponds clearly play a crucial role in the life of the waders but



Project leader Eila Lawton checks the plants in the Findlay reserve

## A vision for a balanced habitat

**Eila Lawton, MNT council member**

I know Miranda is mostly about shorebirds, but I have always held on to the Miranda Naturalists' Trust designation, and believed that birds do best in a healthy and balanced environment.

What has MNT done to look after the environment that "our" birds come back to each year? Little more than pulling weeds (and some native plants!) to keep the shellbank and the Stilt Ponds clear and working to minimise human disturbance.

I think it is really exciting that we are now exploring how we can improve the habitat for the waders, resident birds, and other native wildlife in our place. Maybe we can manipulate water levels and allow the plants of the saltmarsh and salt meadow to expand. I notice this year that there are quite beautiful spreads of Samolus (sea primrose) and Selliera (halfstar) where grazing pressure has eased in low-lying areas that have been flooded by heavy rains over the last couple of years. There's a lovely patch of the fairly rare Mimulus (Maori musk) where the Sarcocornia (glasswort) was drowned east of the Stilt Ponds. That's the right sort of low-growing stuff for the birds to feel safe in and good places for native invertebrates.

Perhaps we could have more ponds, with good pohuehue-covered islets providing cover and food for banded rail and invertebrates

What can we plant to create good habitat for the bittern that have actually bred on site this last year? Can we create areas of bare shell or stone for lizards to bask in once more? If we had flax instead of fennel, could we tempt tui back? A grove of native trees for the spoonbill and the kotuku to roost in, rather than the macrocarpa or whatever that tree is they use now?

little is known about how they operate or what food sources they contain.

\*On-going sedimentation, erosion and land subsidence, plus movements in currents, weather patterns and sea levels, mean the coastal strip is constantly changing.

But from all the divergent views Eila and trust chair Gillian Vaughan were able to craft an overall vision for what the trust should aim to achieve:

**To maintain and enhance the coastline habitat from Miranda to the Taramaire bird roosts.**

To achieve that the trust should:

a. **Maintain safe roosting habitat around the high tide bird roosts on a long term basis, having due regard for the dynamic nature of this environment**


b. **Maintain and enhance/extend existing salt-marsh vegetation.**

c. **In various appropriate areas between the Taramaire and Miranda roosts, establish or enhance a mosaic of habitats that will encourage wader breeding, banded rail and bittern extension, lizards, invertebrates and the re-introduction of fernbird and any other appropriate native bird species.**

As the next step towards making that vision a reality Gillian Vaughan is approaching DoC, Environment Waikato and the Dalton family about a formal agreement to co-operate in any land management plan for the coastal strip between the Taramaire and Miranda/Pukorokoro Streams.

Immediate past-chair David Lawrie, a surveyor, is collating information on the contour of the reserve plus Firth of Thames sedimentation, land subsidence and sea levels.

Entomologist and conservationist Peter Maddison is organizing a bio-blitz from 6am to midnight on February 28, bringing together a range of experts and plenty of keen volunteers in order to identify just what species do live in the coastal strip.

The trust is also seeking feedback from members, and any other interested parties, on the management plan. Please send your thoughts to: [elawton@actrix.co.nz](mailto:elawton@actrix.co.nz). 



The Miranda Field Course provided a foretaste of BioBlitz action.

## How many species live

The Thousand Species Challenge - a bioblitz aimed at finding what species share the coast with the migratory birds - is coming up later this month

Miranda is world famous for its migratory birds but what other exciting species might live along that stretch of coastline? And how should the area best be managed to maximise its conservation value?

To answer those questions the Miranda Naturalists' Trust is planning to hold a bioblitz - called the Thousand Species Challenge - aimed at identifying every living thing in the strip of coastal land between the Taramaire and Miranda/Pukorokoro Streams.

From 6am to midnight on February 28, volunteers will be sieving the soil, combing the vegetation, trapping insects, testing the streams, checking the ponds, netting the skies, searching

the shellbanks, sampling the mud flats and fishing the seas for living things.

As well as members of the trust the volunteers will include students from EcoQuest, pupils from local schools, Kaiaua Boating Club, local residents, members of Forest & Bird and anyone else interested in conservation.

A team of experts will be on hand with magnifying glasses and microscopes to identify what is brought in.

Organiser Peter Maddison says he already has commitments to attend from experts in bacteria and algae (including those in plankton), marine life (from marine worms to shellfish to fish), spiders, beetles, moths, plants and the animals and parasites that live

## What happens if we stop grazing

With the management of the Findlay Reserve being reviewed it is worth recalling the result of a 28 year experiment to exclude cattle grazing from a part of the property.

In 1984 the Miranda Naturalists' Trust Council resolved to fence off a plot of damp, open, grazed estuarine wetland to see how the vegetation changed with cattle excluded.

The chosen site was at the estuary

of the Miranda Stream about halfway between the Limeworks and the outer shell-bank.

A post-and-wire fence was installed by David Walter, a farmer and serving Council member at the time, around a rectangular area of about 8m x 20m. The fence was removed in 2012.

In 1984 the area had been intensively stocked and the vegetation very close-grazed.





From far left: Identifying invertebrates; banding shorebirds; mist netting; mud sampling.

## on the Miranda coastal strip?

in or on them.

That, he says, means the bioblitz will be able to study: the **biofilm**, the thin layer of water that forms on the mud surface, and seems to be important for foraging wrybill; all the things in the **mud** that the shorebirds eat; life on and among the **mangroves**; whatever lives in the **saltmarsh**; animals and plants able to survive in the harsh **shellbank** environment; the inhabitants of **Widgery Lake**; and all the **insects and spiders**.

As well as identifying species the experts will be giving regular short talks, the specimens found will be put on display and in the case of tiny creatures shown on screens, and there will be a chance to see fish trapping, mist netting and moth trapping in action.

The “thousand species” is a target

but one which Peter reckons is achievable. A recent three-day bioblitz Forest & Bird held on the Denniston Plateau found 729 species of which 510 have been identified. One in the Auckland Botanic Gardens last year got 1251.

By Peter’s rough figuring the coast at Miranda could produce 250 plants, 50 birds, 300 insects, 20 algae (including seaweeds), 50 lichens, 50 fungi, 20 spiders, 50 mites, 50 bacteria, 30 mollusca, 10 marine/freshwater invertebrates (including earthworms, snails, flatworms, mussels and cockles), 20 fish (including eels), 10 mammals and 3 reptiles/frogs.

That’s a total of 913 but, as Peter says, “That’s only a start point. If it’s a fine night we should be able to boost the tally of insects by catching lots of moths. We may discover a lot of parasites on the birds we catch. We

really have no idea what we might find. That’s almost the point of doing it: to find out what actually is there.”

Understanding the biodiversity of an area is worthwhile of itself but in this case there is the underlying aim of providing a firm basis for developing a management plan.

“The list of species generated by the bioblitz will contribute towards our understanding of this important wildlife site,” says Peter. “We will learn more about the various components of the mudflats, shellbanks and streams which are the habitat of the shore birds.

“The survey may reveal unique aspects of the area that were not known previously. As we gain valuable information about the web of life in these areas it will enable us to improve our management of the coastal area.” 🦅

## cattle on the reserve?

As years passed, a thick sward of introduced grasses gradually developed inside the enclosure. However, the grazing pressure outside the enclosure was relaxed anyway as farming practices changed, so by 2012 the plant-cover was only slightly thicker inside the enclosure than outside.

The key point to emerge from the exercise is that in more than 25 years there was no progression

to woody vegetation either from native or introduced shrubs. During Miranda field courses in 1999 and 2000 botanical examinations showed that grasses and other introduced species had so proliferated within the enclosure that rare herbs like native musk (*Mimulus repens*) were actually doing better elsewhere — in grazed areas!

Brian Gill



Native musk at Miranda today



Aerial photo of a segment of the youngest chenier 500m south of the shorebird centre in 1980. It has since attached itself completely to the coast and advanced southward by 1.5km. **Photo / Bruce Hayward**

## An internationally significant landform

**Bruce W Hayward**, founder and principal scientist with consultants Geomarine Research, explains why the chenier plain at Miranda is so important

The Miranda chenier plain, which extends 15 km north and 2 km south of the Shorebird Centre, is an internationally significant landform. It is probably the best example anywhere of a Holocene coastal strand plain accreted by a combination of gravel and shell cheniers (beach ridges) that overlies intertidal mud.

The gravel portion occurs in the north around Whakatiwai and is fed by greywacke pebbles eroded from the Hunua Ranges. These pebbles are moved southwards during coastal storms and become more rounded, smaller and less common towards the south, where they are replaced by vast masses of shells, dominantly cockle. The southern two thirds of the chenier plain was created by the accretion of a sequence of shell cheniers over the last 4000 yrs. Jim Schofield's 1960 surveys showed that the oldest and most landward shell ridge has its crest and

base approximately 2 m higher than the present day coastal beach ridge. A sequence of eight cheniers (numbered 13 to 6) aged between 4000 and 1000 years old extends seaward forming a 2 km wide plain and the cheniers become progressively lower. There has been considerable debate on how to interpret this. Schofield (1960), Dougherty and Dickson (2012) and Woodroffe et al. (1983) inferred that they recorded an actual sea level fall over this period of about 2 m, 2 m or 0.8 m respectively. Gibb (1986), Liefting (1988) and other workers have suggested that the difference in height can all be explained by slow tectonic uplift on the west side of the Hauraki Graben and differences in historic storm surge heights. In a number of other places around New Zealand and the Southwest Pacific there is well-dated evidence for sea level being 1.5-2 m above present level around 3,000-4000 years ago. I believe

that over time most workers will accept that the Miranda chenier plain deposits provide perhaps the best record in New Zealand of mid-late Holocene (last 5000 years) sea-level variation in our part of the world. Dougherty and Dickson (2012), who used ground piercing radar to map the buried contacts between the shell ridges and the underlying mud, contend that the distance between the various cheniers may relate to the speed of sea-level fall at the time. There was a major change in the nature of shell ridge accretion about 1000 years ago switching from seaward advance to southward migration. All the younger shell cheniers are roughly the same elevation and suggest that the change was due to a switch from falling sea level to one that has been stable or in the last 150 or so years has been rising rapidly.

The Shorebird Centre is built on the shell chenier numbered 5 by Schofield.

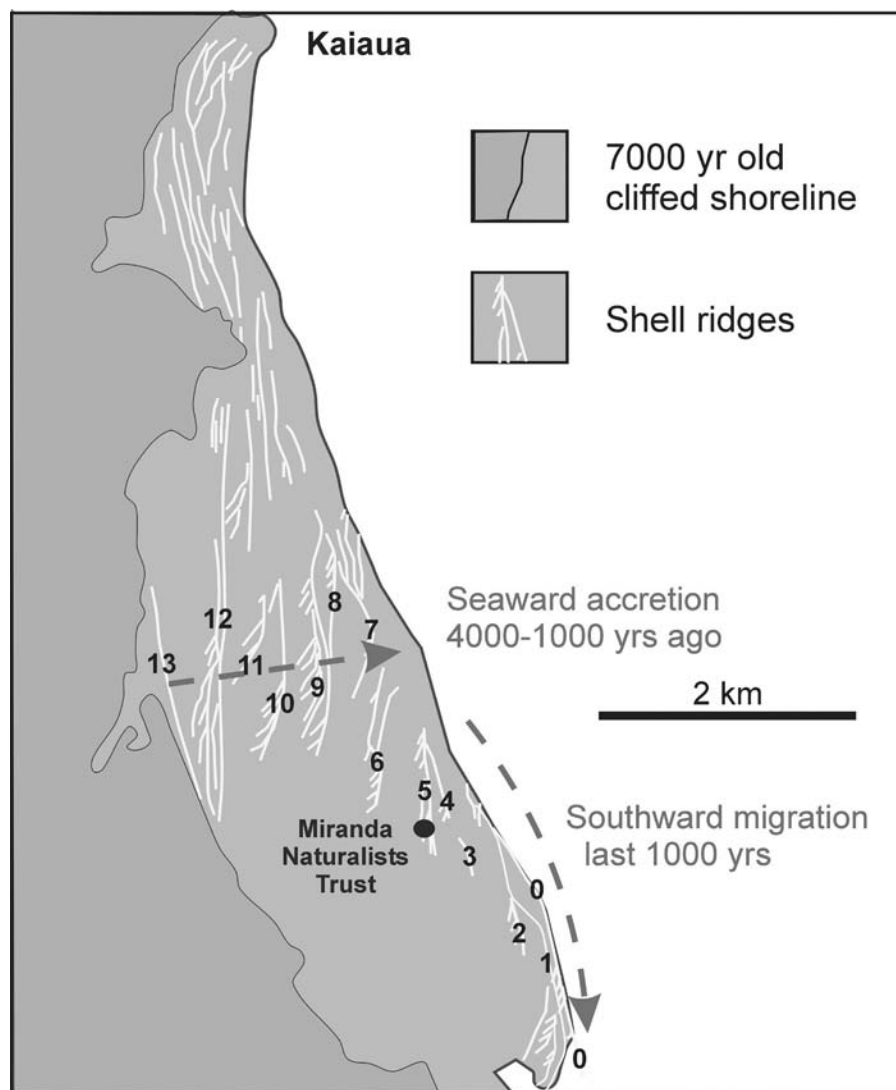


Although it has not been directly dated, its age is inferred to be somewhere between 500 and 1000 years. Seaward and to the south of the centre are five more major cheniers (shell ridges) with splays and numerous overbank featherings all of which have accumulated since chenier 5. The land area seaward of the road has all accreted within the last 500 years and since the Miranda Naturalists Trust was formed a whole new chenier has been added across the seaward front of this section of coast. I have numbered it 0 on the accompanying map as it was not numbered by Schofield in 1960 as it did not exist at that time.

This youngest shell spit's growth and migration has been documented in a series of air photos since it first appeared as an arcuate offshore shell bank located just off from the shorebird centre in a 1969 photo. It migrated shorewards with the north end attaching to the existing shell beach by 1977. The shell ridge then straightened out parallel to and about 150 m seaward of the coast by 1988 and since then the accumulating shells have advanced the southern tip of the chenier another 1 km south almost to the mouth of the Miranda Stream. Over the same period the chenier has advanced shoreward by another 30-60 m. In the past 30 years the tip of the shell spit has migrated an average 50 m southwards per year.

It has been suggested that new cheniers at Miranda are initiated by northeasterly, possibly subtropical, storms with sufficiently large waves to winnow away vast quantities of intertidal mud in suspension and concentrate the remaining sand and shell into an offshore arcuate bar. In later storms, waves progressively add more shells to the bar and drive it shoreward. Coincidentally, the first appearance of the offshore bar that developed into the modern chenier at Miranda was in a 1969 airphoto not many months after one of the largest storms in the last century, Cyclone Giselle, passed over the Firth of Thames in April 1968 (Wahine Storm).

At Miranda the offshore bar is usu-



Map showing the shell chenier ridges mapped and numbered by Schofield (1960) forming the southern half of the Miranda Chenier Plain. Cheniers 13 to 6 accreted onto the seaward edge of the plain between 4000 and 1000 years ago during a period of overall sea-level fall of perhaps 1.5-2m. The subsequent cheniers (1-5) have all advanced southward in the last 1000 years during an interval of relatively stable and more recently rising sea level. The youngest chenier (0) has accreted since the formation of the centre.

ally oriented at an angle to the shoreline and perpendicular to the inferred northeast winds and waves that move it. When the northwestern end reaches the existing shoreline it tends to anchor the shell barrier and the remainder of the bar straightens out parallel to the shore and over time its southern end advances down the coast.

For the majority of the time the shell beach ridge is stable, but in storms further shells are brought ashore and high tide storm waves may wash over the crest of the chenier producing a feathering effect with arcuate lobes of displaced shells. Over time, storm waves throw shells up onto the crest of the youngest chenier and this tends to stabilise it and stop further landward

migration as waves no longer wash over it moving the shells with them. Once the new chenier becomes attached, the gap between it and the old beach ridge becomes a quiet backwater that accumulates mud. The mud builds up, mangroves and salt marsh become established and their roots help accumulate further sediment eventually to supratidal elevations creating additional dry land. Sometimes, as is the case with the modern chenier, the elongate shore-parallel gap between the new and previous shell ridges becomes the channel for a small tidal stream that may assist in preventing the youngest chenier advancing further landward.

Thus the strip of land seaward of the road from the shorebird centre

southward is a complex of young shell cheniers and their feathery washover lobes separated by lower elevation areas of accumulated salt marsh mud. Nearer the coast these low areas still support salt marsh and salt meadow communities that are periodically inundated by spring high tides. Closer to the road some of these elongate depressions become shallow ponds after heavy rain and exceptionally high tides. In the southern area some of the original cheniers and salt marsh flats have been modified by quarrying by the former Miranda Limeworks operations (1930s-1950s).

The future of this part of the Miranda chenier plain is hard to predict as sea level is currently rising faster than it has at any time in the last 5000 years when the present strand plain began to accrete. Undoubtedly this rise is already causing erosion of the shore to the north around Kaiaua. At the moment the supply of sand and shell to this southern end of the Miranda chenier plain is outstripping the inevitable erosive effects of sea level rise. For how long this will last we do not know. Will the mud coming down the Hauraki Plains' rivers help offset the oncoming erosive phase? Only time will tell. 🐦

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Gary and Adrienne Dalton with some of the awards won by their Te Whangai Trust.

## Trust's neighbours win national acclaim

Neighbours, Gary and Adrienne Dalton, have won a national award for the work done by their Te Whangai Trust. Now they're keen to co-operate with MNT to improve the coastal habitat

Gary and Adrienne Dalton reckon their Te Whangai Trust and the Miranda Naturalists' Trust have a lot in common. And they would like to see the two working more closely together.

Both are trusts that strive to improve the local environment but whereas MNT's emphasis is on the shorebirds Te Whangai's focus is on at risk people in the community.

Six years ago the couple started a nursery on the Dalton family farm – which includes the block of land between the Findlay Reserve and the DoC land at Access Bay – and began using it to teach good work habits and staying drug-free, how to propagate native plants and revegetate landscapes, and how to manage staff and run a business.

“Since then,” says Adrienne proudly, “we’ve had 320 go through our scheme and we’ve placed 282 of them into work. Several have even started

their own businesses.

“We’ve also had 3000 people sent to us to do their court sentences of community service work and it’s allowed a lot of them to turn their lives around. Quite a few ask for jobs here when they finish their sentences.”

The scheme has also been hugely beneficial to the environment because the nursery specialises in raising native plants from local seeds – 100 varieties and 100,000 plans a year – for large-scale revegetation projects.

“We specialise in mitigation planting, especially for government and council jobs,” says the trust’s development manager John Walter, “and because of the expertise we’ve developed, the use of locally sourced seed and the fact that we can usually produce plants cheaper we’ve been able to do a better job for less money.”

The Daltons originally funded the nursery by taking out a mortgage on





Te Whangai Trust development manager John Walter watches trainees move another consignment of native plants from the shadehouses into the outdoor nursery.

the farm and the trust has certainly had its financial ups and downs over the years mainly due to changes in government funding policies.

“But,” says Gary, “we’re gradually getting ourselves on to a firmer footing. We now get 60 per cent of our income through sales. Our target is to get 70 per cent so we’ll be less dependent on what the government does.”

Initially, the Daltons say, their ideas met with a bit of scepticism. But the trust’s high success rate is now starting to earn plaudits. Visit its tiny office and you find the walls covered with certificates and trophies.

The most recent of those is the prestigious Social Innovation Award which they collected at the NZI National Sustainable Business Awards.

“The awards have been good for us,” says Gary. “We enter them because they give us something to measure ourselves by and they provide an incentive to upskill what we do. Plus, of course, they give us greater credibility in the wider community.”

One of those awards which was sponsored by NZ Steel – Adrienne was named as Outstanding Person in the Franklin District – even acted as a catalyst for the trust getting support to establish a second nursery adjacent to the steel works at Glenbrook.

“That’s been pretty exciting,” says John. “It means a huge expansion. We’ve produced 40,000 plants there already and it’ll be able to produce 140,000 a year. That’s meant a lot of challenges but it also opens some fantastic opportunities.”

The Daltons are also keen to explore opportunities to work more closely with MNT.


“We’ve always supported the work of the Shorebird Centre,” says Adrienne. “We’ve been happy for the path from the centre to the hides to run through our land. And we think the time is now right for us to get together on some other projects.”

They are, for instance, enthusiastic about the forthcoming bioblitz includ-

ing their property as well as the Findlay Reserve and DoC land. And they’d like to be involved in any management plan for the whole coastal strip.

“We’ve got the expertise to help with any revegetation work,” says Gary. “And if we could get our guys working alongside the Shorebird Centre’s volunteers on some environmental projects it would be great for them.

“It would give them a chance to mix with the sort of people they’d never ordinarily meet. Just meeting someone like you,” he adds, pointing at me, “would be a good experience. It’d be win-win.”

To find out more about Te Whangai Trust or to buy native plants from them see [www.tewhangai.org](http://www.tewhangai.org) 

## **Tamaki Pompey, from Mangatangi Marae, gives a trainee’s perspective on the Te Whangai Trust**

My experience at Te Whangai Trust native tree nursery in Miranda has been positive and keeps me enthusiastic each day.

Within my short time attending the award-winning, non-profit establishment, I have witnessed five people gain employment.

Thanks to Adrienne and Gary and the team who support those who attend presently and in the past.

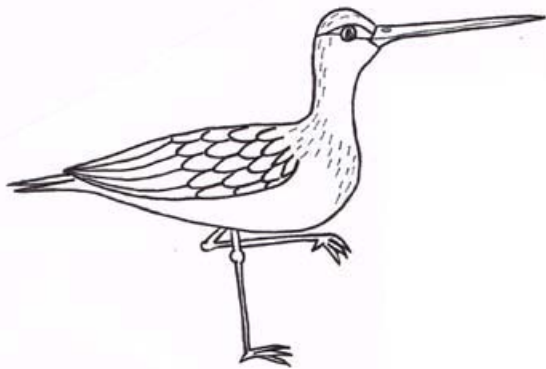
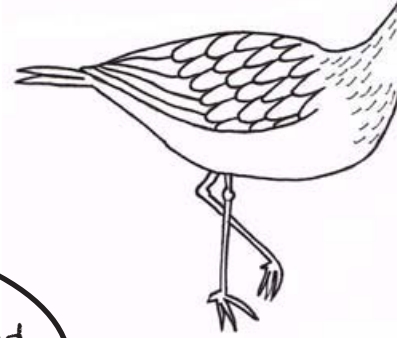
I can honestly say to anyone who enquires about Te Whangai that they will not be disappointed and like myself will gain friends for life who come from different backgrounds and share with you a common goal: to participate in the community and gain employment. With that in mind you’ll have nothing to lose.

# GODWIT

Gidday.  
It's Godfrey, the godwit,  
here again. Every issue we will be  
finding out about one of the birds that  
spends time on the NZ coast. This week I  
would like to introduce you to my friend,  
Natalie Knot. You can see two pictures  
of Natalie and me (and some of  
our friends) at Miranda at the  
bottom of the page.

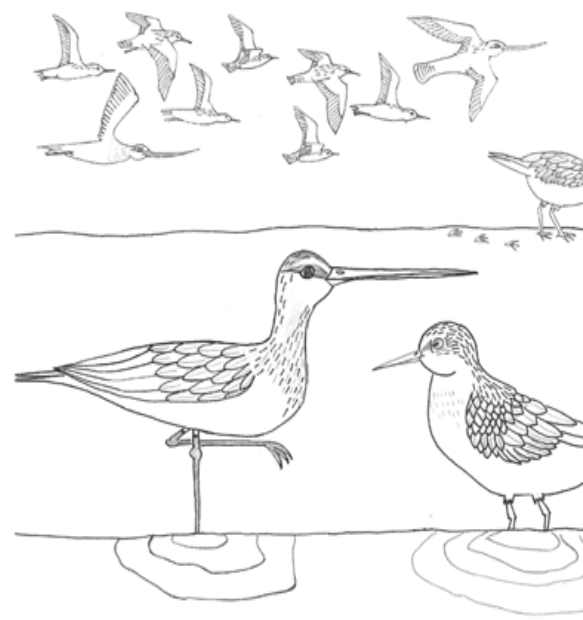
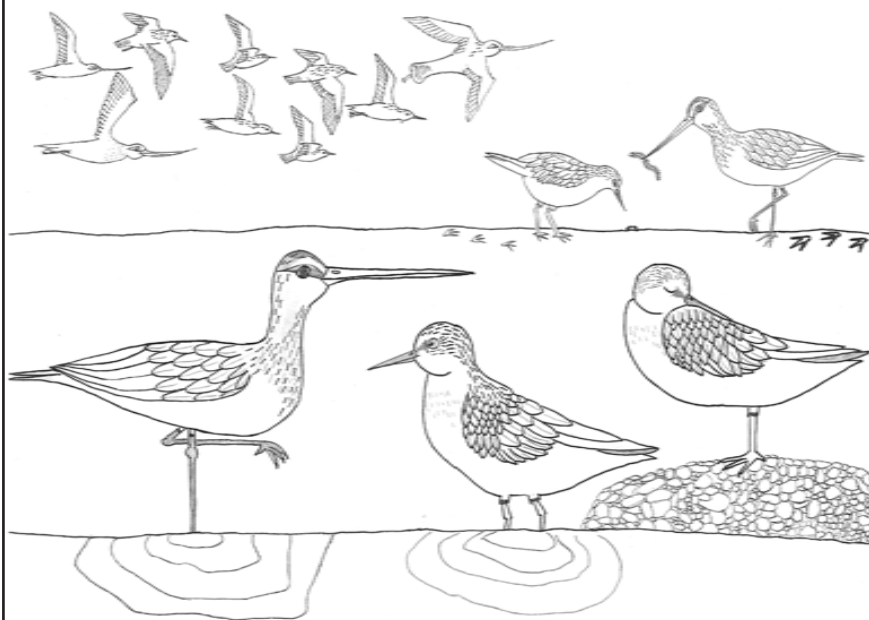
Natalie  
is one of the Lesser  
Knots (as they are called  
in most NZ bird books) or Red  
Knots (as the rest of the world  
seems to call them) who are  
the second most common  
migrants to NZ.

It can  
be hard to tell us apart  
if you are looking from far away  
though actually we are quite different.  
One difference is that I have got long  
legs while Natalie's are short and  
Perhaps you could colour our legs  
the pictures.  
What other differences can you  
find between Natalie and me?



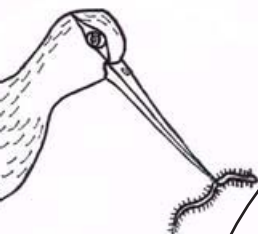
## SPOT THE DIFFERENCE

Find 10 differences between the two pictures of Godfrey and Natalie.  
Answers can be found on page 22





# TIMES



## WORDFIND

Can you find these words in the table below?

Miranda  
Shorebird  
Rail  
Tern

Godwit Whimbrel  
Snail  
Flyways  
Knot

Dotterel  
Alaska  
Rudy Turnstone  
Oystercatcher

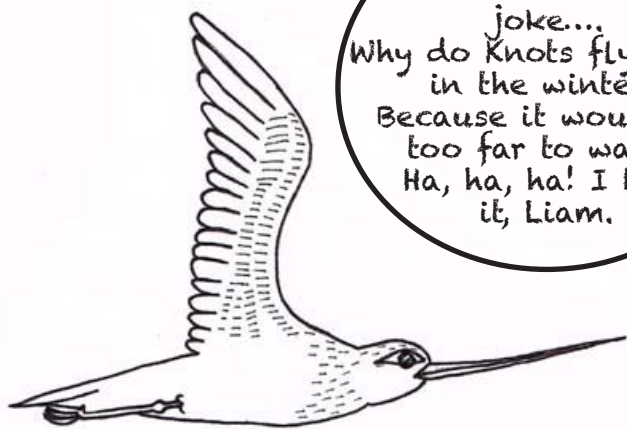
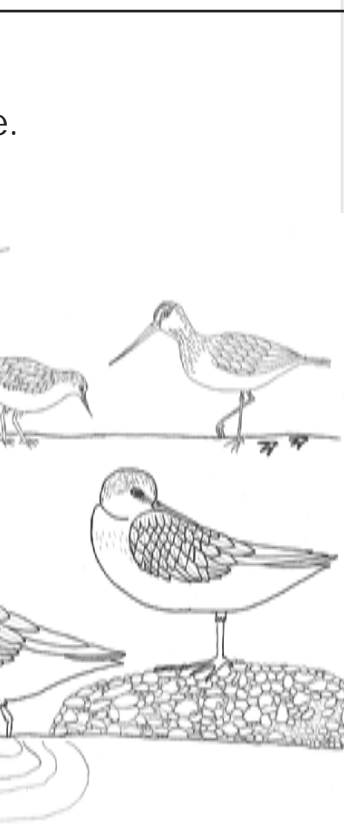
Plover

T	I	W	D	O	G	A	D	N	A	R	I	M
N	O	R	E	H	W	H	I	M	B	R	E	L
R	U	D	Y	T	U	R	N	S	T	O	N	E
E	S	A	N	R	E	V	O	L	P	D	T	T
T	P	F	L	Y	W	A	Y	S	I	I	E	L
T	D	O	T	T	E	R	E	L	I	A	R	I
I	T	O	N	K	A	K	S	A	L	A	N	T
B	P	E	R	D	R	I	B	E	R	O	H	S
O	Y	S	T	E	R	C	A	T	C	H	E	R

If you lightly colour in all of the words in the wordfind table the name of the bird for next time will be left behind?

t  
away  
different.  
long black  
and green.  
eggs in on

you see  
e?



Liam  
of Tauranga  
sent me this  
joke...  
Why do Knots fly north  
in the winter?  
Because it would be  
too far to walk?  
Ha, ha, ha! I like  
it, Liam.

Seriously  
though, Knots and  
Godwits come to NZ when it is  
winter in the Arctic because there isn't  
much food around with all the snow  
and ice. They fly back north when winter  
is coming to NZ and it is spring in the  
Arctic to lay eggs and raise chicks.  
It's a long way whether you  
walk or fly!

### WIN A BOOK

The nice people  
at the Shorebird  
Centre bookshop have  
provided a copy of Janet  
Hunt's delightful book  
"E3 Call Home" - which  
happens to be about a  
godwit - to give away.

If you'd like to go into a  
draw for the book just email  
something about yourself  
- a photo, a joke, your  
favourite shorebird - to  
seagulls@clear.net.nz

Hope to hear from  
you

From the chair

# More visitors, new information boards, boardwalks and our first bioblitz

Council chair **Gillian Vaughan** reports on a successful field course, the latest news on the Flyway, great birding guides, new signs, the bioblitz . . . and the chance to wallow in the mud

The upcoming bioblitz on February 28 will be a big step forward for our detailed knowledge of the Miranda ecosystem.

Bioblitz is a way of ensuring that you look not only at the well known and visible parts of an ecosystem, but the smaller, less charismatic parts: the biofilm, the mosses, algae, lichens, nematodes as well as the birds, the plants and those well known charismatic animals in the mud!

I encourage members to attend, be involved on the day and bring their friends.

I would also like to take this opportunity to thank Peter Maddison and Eila Lawton for their efforts in pulling this programme together. nothing like this has happened at Miranda before and without their wide range of contacts and their organisational efforts I am not sure that it would have.

## FIELD COURSE

In early January I was lucky enough to be able to attend the whole of Miranda's yearly field course. I



attended this course back in 2000 and it was a major step in my involvement in the Trust.

In between helping with wader identification sessions I took the opportunity to sit in on some of the talks, the change in our level of knowledge since I took the course is phenomenal.

The group of "students" we had were a great group to work with, each

bringing their own knowledge and skill with them and adding to what we as the tutors could provide.

My thanks to all of the volunteers who helped make the course work, Brigid as course organiser led a really good team.

We will be having some personnel changes next year, and it will be sad to see the course without Eila Lawton for the first time in many years. Eila your dedication to the field course over a dozen years has been an inspiration.

## CENTRE AND LIMeworks

Pleasingly, for most of the year the number of people visiting the Centre increased, though from October to December visitor numbers were slightly down.

This will be partially related to increased visitors in 2011 for the rugby world cup, and appears not to be confined solely to us, but is a trend reported from other environmental attractions in the area. We are hoping that January will see a turnaround of the trend.



Plenty of birdwatchers at the Limeworks.



More and more people are visiting the shoreline every year and controlling people around the birds has become a growing issue.

We have been lucky this summer to have Kristelle spending much of her time down at the hide showing people the birds, ably joined by Heloise Gauvin, who has spent her summer volunteering for us.

The number of people visiting the area now does mean that there are less opportunities for the “up-close-and-personal experience” that may have been more common in the past. Kris and Heloise have commented to me that this summer if a few people go out to the bird roost on the outer shellbank to take pictures then other visitors will want to follow, and the level of disturbance can be quite high.

We generally need to ask people to stay off the outer shellbanks. If you have a specific project and want to get onto the shellbanks please talk to Keith Woodley and arrange your time so that you are there when the least number of visitors are present.

In order to improve the experience for visitors Keith has been working on signs, both for the trail and the hide. I would expect that in the next month the first of these will be in the hide, and over the next 6 months all of the trail signs will be in place.

On the last day of the field course the large tide managed to wash away again the path to the new hide. It was spectacular to watch, as the tide came over the top at the same time as a heavy downpour of rain. Council has committed to investigating the options for boardwalks, with the aim to get something in place in April. The path is still passable, but it is now somewhat rough.

Members who visit the centre on a regular basis are likely to have met Heloise Gauvin over the summer, she has spent much of her summer near the hide, showing people birds. Heloise will be leaving for further adventures near the end of January, she has been a pleasure to have at the



The path to the new hide is washed away. Photo / Gillian Vaughan

Centre over the summer and I am sure members will join me in wishing her well with her next steps.

#### SIBSON AWARD

At the council meeting in November the Trust council agreed that, as no distributions had been made from the Sibson Award for two years that we would put \$2,000 towards helping cover the on-ground costs of shorebird work in the Gulf of Carpentaria.

We can expect to hear more about this work from Adrian Riegen in the future, however in general a team of Australians and New Zealanders will be aiming to census shorebirds in the Gulf in late March and early April. We will be particularly interested in any Red Knot sightings that the team comes up with. The trip sounds challenging and I wish the team all the best with it.

#### COASTAL ENHANCEMENT

The idea of holding a Bioblitz at Miranda was raised at a meeting in November that looked at the concept of a habitat enhancement programme. The draft vision came out of this meeting is:

To maintain and enhance the coastline habitat from the Miranda to the Taramaire bird roosts.

a. Maintain safe roosting habitat around the high tide bird roosts on a long term basis, having due regard for the dynamic nature of this environment b. Maintain and enhance/extend existing salt-marsh vegetation.c. In various appropriate areas between the Taramaire and Miranda roosts, establish or enhance a mosaic of habitats that will encourage wader breeding, banded rail and bittern extension, lizards, invertebrates



A delegation of North Korean schoolteachers visits the Miranda Shorebird Centre. Photo / David Lawrie

and the re-introduction of fernbird and any other appropriate native bird species.

It will be important that the habitats that exist now are recognised, and the bioblitz will be important in allowing us to achieve that. The next steps on this project will be to map out this existing landscape, thus allowing us to determine how and where we can make changes.

One of the pleasing aspects so far has been the opportunity to reconnect with people involved in our wider region, from Waikato Regional Council, DoC and QEII Trust. While still in the planning phases this is promising to be an exciting project.

#### FROM THE FLYWAY

There is ongoing news from the Flyway Partnership, with the Yukon Delta Wildlife Refuge becoming the first site from the USA to join the site network, in addition Malaysia has joined the partnership. In addition

organisations such as Birdlife are becoming more involved in Flyway issues in China.

We hope that the interest being shown in the Yellow Sea will lead to further conservation of mudflats around the whole of the Yellow Sea coast. MNT members will be aware by now that work in this area can take a lot of time and patience before results can be seen.

The trust is looking at returning to Yalujiang in 2013, and Adrian Riegen is currently trying to organise dates that will work for all involved, including the birds and the tides!

At the same time we continue to look for funding to visit North Korea. This is proving harder than originally thought, but David Lawrie is persevering, so while it appears unlikely that a team will visit North Korea this year it is not off the agenda.


A group of teachers from North Korea did visit the centre in late

November.

#### PERSONAL NEWS

It is with sadness that I advise members of the recent death of Nanette McLaughlan.

Nanette was a member of the Miranda Naturalists' Trust Council from 1998-2006, and was very welcoming to me when I joined the Trust. When I took on the role of newsletter editor Nanette was co-ordinating its distribution, and she did everything she could to help me into the role. On council she was focused on the education side of the Trust, doing her best to help people understand the importance of birds and the natural environment.

Although unable to attend events at the Centre for several years before her death Nanette will be missed by many members of the Trust, and I am sure that all members will join me in offering condolences to her family and friends. 

## DoC gets more reserve land at Miranda

The Government has bought 5.6ha of land at Miranda to protect the coast's world-class example of a chenier plain and preserve an important area of habitat.

The Nature Heritage Fund purchased the land for \$250,000 and it will be managed by the Department of Conservation as a scenic reserve.

As part of the deal the landowner, local farmer Rob McCartie, who also runs the Rangipo Museum, has agreed to enter into a covenant over a further 14.5ha of his land which contains more

of the remaining chenier plain.

As well as chenier ridges, the site contains wetlands with a healthy population of the threatened New Zealand musk (*Mimulus repens*).

It also serves as habitat for native species such as grey duck, South Island Pied Oystercatchers, Grey-faced Heron, and Pied Stilt.

The area is on the landward side of East Coast Rd, on the southern corner of Rangipo Rd, near the existing Taramaire reserve about 4km north of the Miranda Shorebird Centre.

## Shorebirds on the worldwide web

The Miranda Naturalists' Trust continues to fly around the worldwide web. Its latest migration is to a website hosted by Britain's Wildfowl and Wetlands Trust.

This now carries a profile of the trust and its contact details. See <http://wli.wwt.org.uk/2012/11/members/miranda-shorebird-centre/>

Coming up is a delightful little film about Shorebird Centre, starring Keith Woodley, to be shown on the Wetland International website.

At the time of writing it is not on the actual website but can be viewed at [wli.wwt.org.uk/toolkit/movies/](http://wli.wwt.org.uk/toolkit/movies/)



# Records of change on the Miranda coast

Former MNT Council chair and longtime newsletter editor **Stuart Chambers** looks through birdwatching records of yesteryear and records how the coastline and bird numbers have changes

Miranda Naturalists' Trust newsletters go back to 1974 and I still have them all. A few years ago I had these ancient papers bound into two rather grand volumes that sit on my book shelf and look quite important. Every now and then I dig into them and explore their rich seam of early Miranda history. The contents show how the coastline and its bird numbers have changed.

For example, back in 1975 R B Sibson and H R McKenzie, the two great lovers of the Miranda coastline, suggested that Turnstone numbers were increasing so rapidly that one day they would be the third largest of the summer migrants. Through the records we now know this hasn't happened. In fact Turnstones are rather scarce on the coast these days.

In 1975, so the newsletter recorded, summer counts of birds showed: NZ Dotterel 9, Banded Dotterel 100, Wrybill 3500, Golden Plover 0 (but 240 in 1976), Turnstone 220, Lesser Knot 7277, Curlew Sandpiper 10, Sharp-tailed Sandpiper 26, Red-necked Stint 9, Eastern Curlew 15, Bar-tailed Godwit 5672.

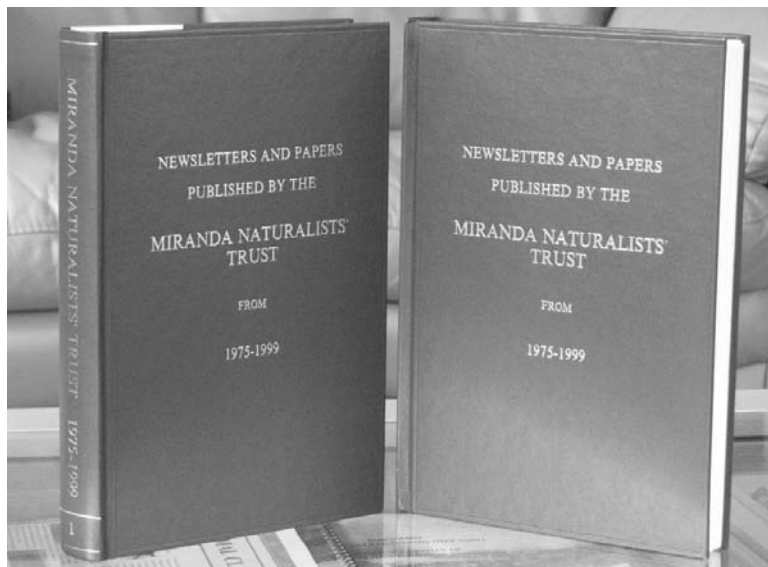
Others included Terek Sandpiper 1, Grey-tailed Tattler 1, Pectoral Sandpiper 1, Asiatic Whimbrel 1 and American Whimbrel 2, Little Tern 20.

As that demonstrates Miranda bird life in the 70s was impressive. As Sibson said at the time, it was a "golden age" for bird-watching at Miranda.

Jumping ahead to the blackboard numbers in *Miranda News* 84 and we get a somewhat different picture: NZ Dotterel 0, Banded Dotterel 0, Wrybill 1500, Golden Plover 14, Turnstone 16, Lesser Knot 3800, Curlew Sandpiper 1, Sharp-tailed Sandpiper 7, Red-necked Stint 1, Eastern Curlew 0, Bar-tailed Godwit 4900, Royal Spoonbill 3.

It's easy to see the changes. Godwit numbers are down and there are half as many knots. Royal Spoonbills have arrived. Spur-winged Plovers are now so obvious that they are seldom counted.

As my personal bird records of the Miranda coast go back to 1949 I decided to dip into these and seek further comparisons. What I found was:



Pied Stilt – on 28 October 1949 one nest was found on the shoreline near Kaiaua. On May 26 1951 among the Pied Stilts was one Black Stilt. On 8 August 1953 there were 1000 Pied Stilts on paddocks near the Lime-works. I also noted a partial Black Stilt on July 5 1953 at Eastern Beach on way to Miranda.

Wrybill – on 12 November 1949 there were 28 at Miranda, on 26 May 1951 there were 1500 and on 8 August 1952 there were 1200.

Banded Dotterel – on 12 November 1949 two nests were found in weed on the beach near Taramaire. On 8 August 1952 only one pair was seen.

Bar-tailed Godwit – on 12 November 1949 two small flocks were seen near the Limeworks. On 10 May 1951 a flock of 10 was seen and a Whimbrel was with them.

Pied Oystercatcher – two seen on 12 November 1949 and on 26 May 1951 60 were seen. They were not such a common bird in those days.

To further add to our picture of bird numbers 60 years ago here are census figures for 2 July 1953 for the Miranda area:

Bar-tailed Godwit – Taramaire 30, Limeworks 425, Wrybill Reach (on the coast 2.5 kms south of the Miranda Hot Pools) 700

Knot – 400 at Wrybill Reach

Pied Stilt – Kaiaua 26, Taramaire 63, Limeworks 51, Wrybill Reach 56

Wrybill – 950 at Wrybill Reach

Banded Dotterel – 1 at Kaiaua

NZ Dotterel – 5 at Kaiaua

Pied Oystercatcher – 435 at Kaiaua

Variable Oystercatcher – 3 at Kaiaua

Eastern Curlew – 2 at Wrybill Reach

Red-necked Stint – 4 at Wrybill Reach

Turnstone – 7 at Wrybill Reach

Capsian Tern – Taramaire 37, Lime-works 9, Wrybill Reach 5

White-fronted Tern – Taramaire 37, Limeworks 9, Wrybill Reach 100

Black-billed Gull – 350 at Limeworks

Black Shag – 3 at Limeworks, 3 at Wrybill Reach

Pied Shag – 5 at Limeworks

Gannet 2 – at Taramaire

Black Swan – 2 at Limeworks

The changes are obvious. I do not know of any records of Banded Dotterel nesting on the Miranda coast since the 1960s. Black Stilt have not been seen for some years.

Banded Dotterel now appear in far greater numbers in winter as do Pied Oystercatchers. The overall numbers of the "golden age" of the seventies have not been repeated.

What is also apparent from those early records is the movements of birds along the coast from, for example, the high tide roost at Wrybill Reach to the Limeworks. Today Wrybill Reach is covered in mangroves.

Once again, it's a reminder of how things have changed, often in ways we don't necessarily register at the time. It all underlines, for me, the importance of saving trust newsletters and keeping regular notes of sightings. Then 50 years on you'll be able to look back and enjoy a peaceful reminiscence about the good old days. 🐦



# The fall and rise of the Shore Plover

Shore Plover were once found in much of coastal New Zealand. The arrival of humans and their rats saw them retreat to a tiny island in the Chathams. Now these colourful birds are making a modest comeback. **Keith Woodley** tells their story

The annual Miranda Field Course has attracted its fair share of special guests over the years. In 2012 the wader watch session on the first evening turned up excellent views of a Little Whimbrel. Everyone had a good look at this rare visitor, tinged with gold by the low sunlight, as it stood among godwits in front of the new hide; which is just as well for there were no further sightings of the bird that year.

The 2008 course turned up the first sighting of E7 at Miranda since that famous female godwit had been fitted with her satellite tag the previous February. On an earlier course the unusual guest was a male Ruff on the Stilt Ponds, a considerable distance from its main non-breeding grounds from Africa to India.

Field Course 2013 maintained this fine tradition through the presence of another rarity, not as well travelled as a Little Whimbrel or a Ruff, but perhaps even more special given its tiny population - a New Zealand Shore Plover.

A broad white band circles the top of this male's head, on top of which sits a neat little brown cap. Below the band, the face, throat and forehead are black which makes the vivid red-orange eye-ring and bill, the latter tipped with black, all the more striking. The back of the bird is the same brown tone as the cap, while the underparts are pure white, and the legs and feet orange.

This smart little bundle was often to be found roosting beside a tiny patch of *sarcocornia* on the shell bank immediately in front of the old hide, or

on open ground on the edge of the Stilt Ponds. It actively foraged along the edges of the channel that bends away in front of the hide, or on the inner flats nearer the new hide, where it could be seen alongside godwits and knots.

So where did this bird come from? Before answering this, let us trace the history of the New Zealand Shore Plover.

Johann Forster collected specimens in Dusky Sound in April 1773 during Cook's second voyage. For German naturalist and taxonomist Johan Friedrich Gmelin describing a specimen in 1789, it was clearly a plover so he placed it in the Charadriidae family - with the name *Charadrius novae Seelandiae*. Yet while it bore many similarities with other plovers, there were a number of features marking it as more unusual.

Indeed two features - the long thin bill and pointed tail - were sufficiently different to other New Zealand plovers (such as New Zealand Dotterel and Banded Dotterel) for later taxonomists to place it in its own genus *Thinornis*. In contemporary taxonomy it now shares this genus with *Thinornis rubricollis*, the Hooded Plover of Australia. However its squatter proportions, red eye-rims, loudly vocal behaviour, feeding method and the fact that it remains in pairs after breeding are similarities also shared with Black-fronted Dotterel *Elseya melanops*. Yet there is one further feature - its habit of nesting under-cover - that makes Shore Plover unlike any other member of the Charadriidae.

The original distribution is not

entirely clear, although Forster also collected it at Queen Charlotte Sound in May, indicating at least a wide dispersal in the South Island.

While it was widely reported in the North Island - with records into the late nineteenth century from the Hauraki Gulf, Great Barrier Island and Coromandel Peninsula, as well as Wellington Harbour, many of these have since been questioned. For instance based partly on reports from his brother-in-law Gilbert Mair, Walter Buller reported it to be "comparatively plentiful in flocks near the mouth of Piako River, Manukau Harbour and the sandspits of Tauranga."

However Dick Sibson expressed considerable doubt about these records, especially as they did not mention other birds likely to have been present at the same time, such as Red Knots and Turnstones. Particularly in regard to the latter, Charles Fleming's observation on South East Island in 1937 seems pertinent: "On the wing the Shore Plover is reminiscent of the Turnstone, the wing pattern, glistening white breast, dark collar, orange legs and general manner of flight being remarkably similar."

But whether or not Shore Plover were common in the North Island, by the mid nineteenth century most records were from the southern regions.

Its decline is not well documented, though Otago collector Percy Earl considered it to be rare by 1845 and the last mainland records come from the 1870s. "So complete and so early was this extinction," wrote Fleming, "that it is difficult, if indeed





From far left: Adult Shore Plover on Mangere Island in the Chathams; juvenile which stayed briefly at Pakiri; juvenile and adult at Plimmerton. Photos / Ian Southey

not impossible, to locate, in New Zealand collections, specimens from mainland localities.” Indeed, the last reliable mainland record is considered to be one from the Waikawa River in Southland in or before 1872, meaning all remaining birds were by then confined to the Chathams.

So what happened to it? As with the narrative of so many of our native species, there is a four-legged thread running through the story of the Shore Plover. In this case the legs belonged to kiore, Norway rats and cats all of which were well established by the early 19th century; for once ship rats and mustelids are not the accused as by the time they spread throughout the country, Shore Plover were largely gone.

A common theme among New Zealand birds is evolution in the absence of mammalian predators, and shore plover seem to have been especially susceptible. While most plover species nest in the open, such as on beaches, gravel or shell banks, tundra or low turf, Shore Plover are unusual in that they nest under cover - be it dense vegetation such as *muehlenbeckia*, tussocks or sedges, or even under boulders; in one study only two of 141 nests were completely open to sky: all others were sheltered from above and entered through the sides.

This may be a factor of Shore Plover breeding biology in which there is a long laying period before a clutch is completed and an interval of one to five days between laying of the last egg and the start of incubation. Eggs are therefore unprotected for a

considerable period meaning increased exposure to predation. Nesting in confined spaces would also limit visibility and escape routes.

It is assumed Shore Plover occurred on all islands in the Chathams group, but once pests got onto some islands birds suffered the same fate as on the mainland. By 1871 they were found on Pitt and Mangere but not on Chatham, but then disappeared from Pitt sometime in the 1880s while the last record from Mangere was 1898.

So by the dawn of the twentieth century a species once widespread on at least parts the mainland had become confined to a single island - Rangatira/ South East. However even there the numbers continued to plummet - caused in part, it is believed, by wide scale collection of specimens for European museums. If the population was confined to one island then so too were the efforts of collectors, with “hundreds of birds” being removed between 1890 and 1910.

Yet against all odds, as Fleming pointed out, the species survived - just. “It is little short of a miracle that South East Island has remained free from imported vermin. During the period of whaling activity, when the island was for a time a shore station for the bay whalers, every visiting ship carried in her holds rats, which, had they reached the shore, would have completed the extermination of the Shore Plover.” (And with them the last population of Black Robins.)

On this last bastion it remained - a small but largely stable population of what was now one of the rarest

shorebirds in the world. One tiny population - a 1993 study indicated it to be just 130 birds - at one location, meant it remained acutely vulnerable. Furthermore there was evidence - a high proportion of non-breeding adults of breeding age in the population along with a more or less constant number of breeding pairs - to suggest Rangatira was at maximum carrying capacity.

With the successful establishment of two additional populations of Black Robins away from Rangatira, thoughts of conservation managers turned to doing something similar for Shore Plover. Given its particular vulnerability to mammalian predators, and “although numbers have been roughly constant for some years and the age structure of the population gives no cause for concern” should rats or cats ever reach the island rapid extinction in the wild would surely follow. Establishing other populations was therefore an urgent priority.

A captive breeding population was set up in 1992 and the Mt Bruce National Wildlife Centre, with a second programme subsequently commenced at Isaac Wildlife Refuge in Christchurch. But establishing new populations in the wild required suitable islands with what was considered to be suitable habitat.

Exactly what is suitable habitat for Shore Plover? The coast of Rangatira is a series of headlands interspersed with wave-cut rock platforms and pebble or boulder beaches in the bays. There are no sandy beaches. Shore Plover appeared to favour the rock platforms and adjoining areas of salt meadow,

although some were recorded from grassy slopes near the summit. But was this their optimal habitat? Or was it a case of birds making do with what was available on their last outpost?

Thomas Potts wrote: “This pretty plover is sometimes frequently seen in the southern parts of this [South Island] fossicking about the sandy shores at the mouth of rivers. It is very hardy, with a strong inclination for the neighbourhood of the sea.” According to Buller, who relied largely on Potts’ observations, “It hunts about for its food among the sand and dry ooze in a very diligent manner and associates freely with the flocks of godwit both on their common feeding-ground and when the latter crowd upon the high banks during the alteration of the tides in the manner so familiar to those who have studied their habits.”

Such habitat observations led some early observers to confer on it the name Sand Plover. Meanwhile, fossils from a riverbed in the Waikari area of North Canterbury suggest that, despite the name it has been given, it may also have been distributed inland as well. If so, the riverbed populations were the first to go, disappearing before 1850.

However, we now know, partly thanks to translocations of Shore Plover, that they are not dependent on the rock-platform habitat primarily used on Rangatira, and can use a wide variety of substrates. Birds introduced to Motuora Island in the Hauraki Gulf in the late 1990s had a choice of rock platforms and sandy beach, and spent 90 percent of their time on the beach.

Motuora was one of several offshore islands around the North Island, along with Mana north of Wellington, to be chosen. Both appeared to have suitable shore plover habitat and no predators – or more correctly, no introduced predators. But an unforeseen hitch quickly revealed itself on Motuora – in the form of Moreporks, a species that does not occur on the Chathams. When five Shore Plovers were released on the island in 1994, a resident native species found itself served up with a highly endangered and naïve snack.

Subsequent harassment by Moreporks and possibly by other avian predators is thought to have encouraged birds to disperse off the island.




Between September 1994 and March 2000, 75 birds were released on Motuora, but only one breeding pair remained at the end of the 1999–2000 breeding season. Despite these setbacks the Motuora programme did achieve one significant milestone: one chick fledged in each of the 1998/1999 and 1999/2000 seasons, probably the first wild-bred shore plover around the New Zealand mainland for 120 years.

It also led to a milestone for Miranda. One Sunday evening, one of the wandering Motuora birds turned up at Taramaire, just north of the Shorebird Centre. This was clearly the first record since Miranda became recognized as an ornithological hot spot, and, depending on the reliability of Buller and his sources, it may even have been a first ever.

Undeterred, the programme has continued – and achieved considerable success. With fine-tuning of captive breeding and release methods, populations of shore plover have now been established at several locations around the North Island, one of which has been extremely successful. Another, on Mana, was initially successful with birds breeding on the island. Unfortunately there then occurred yet another setback, and once again it is the problem of birds not remaining where they are put. In 2011 the entire Mana population of 35 Shore Plovers began to frequent the coast between

Titahi Bay and Plimmerton. Clearly the mainland holds much attraction for these birds – but it also still holds all the pests that drove the species offshore 150 years ago. As it happens it was the appearance of a rat on Mana that was likely behind the dispersal to the mainland. From 11 breeding pairs in the original 30 birds released on Mana, there are now only four pairs and two unpaired females. One of the latter appears to have made great, but ultimately unfruitful efforts to find a mate, being recorded at Manawatu Estuary and as far away as Christchurch.

Meanwhile, by 2012 in the Hauraki Gulf, a long term programme of island restoration had expanded to the stage where one of its largest islands had been made pest free. Thus Shore Plover came to be released on Motutapu. Included among them was RY-YO, a young male hatched at Mt Bruce and released in March 2012. It was known to have wandered on and off the island several times but the last sighting on Motutapu was in mid-October. It was not seen again – until it turned up at Miranda in mid-December, where it has remained, much to the delight of numerous birders.

Overall the Shore Plover population in the wild is now over 250, with the number of breeding pairs in the wild up from 50 in the 1990s to 90 in 2011. However, as the population on the Chathams remains largely static this increase is solely due to captive breeding and release to sites around the mainland. Following a number of recent setbacks in the recovery programme, there is still a long path ahead for Shore Plover. Its status remains highly problematic and there is much work still needed to secure a future for this unique bird. 

#### Further reading:

- Dowding, J.E. & E.S. Kennedy. 1993. ‘Size, age structure and morphometrics of the shore plover population on South East Island’. *Notornis* 40:213–22
- Fleming, C.A. 1939. ‘Birds of the Chatham Islands’. *Emu* 39:1–15
- Davis, A. 1994. ‘Status, distribution, population trends of the New Zealand shore plover (*Thinornis novaezealandiae*)’. *Notornis* (supp.) 41:179–94
- Davis, A. 1994b. ‘Breeding biology of New Zealand shore plover (*Thinornis novaeseelandiae*)’. *Notornis* (supp.) 41:195–208
- Woodley, K. 2012 *Shorebirds of New Zealand: Sharing the margins*. Penguin.





THE LAST REFUGE  
(clockwise from top  
left): Female Shore  
Plover on Rangatira  
Island; Male Shore  
Plover foraging on  
Rangatira Island;  
plover habitat at  
Thinornis Bay on  
Rangatira Island;  
Chatham Islands  
Oyster Catchers;  
Chatham Islands  
Black Robin.



Opposite page:  
The plover trying  
to hang out with  
Wrybills on the Stilt  
Ponds at Miranda.

Pictures / Ian  
Southey, John  
Dowding, Jim  
Eagles, Wikipedia



# Predator control programme catching weasels and rats

The predator control programme is now into its third season and continues to be highly successful with significant numbers of weasel and rat, in particular, continuing to be caught.

This autumn and winter it was decided to continue trapping for the first time, even though birds would not be nesting, to test the effect on predator numbers.

To save money we only used eggs for bait during this period – usually we also use rabbit meat – and I also experimented with peanut butter but it didn't make a noticeable difference to the catch rate.

When water levels in the reserve were higher than usual, as a result of heavy rain or big high tides, there was a noticeable increase in rat catches.

Interference with the traps is an on-going problem. The majority of

predators prefer to use tracks when traveling but when we set traps alongside the walking track visitors tend to be curious and sometimes destructive. As a result traps have to be hidden in places where they are not as effective.

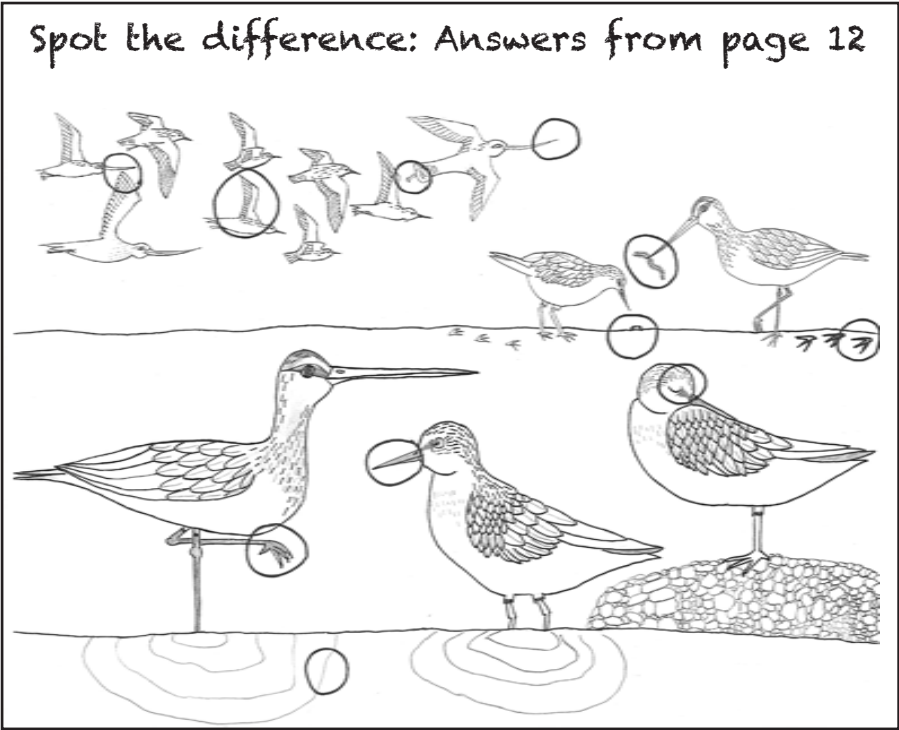
Another issue is the number of feral cats in the area. The traps we are using at the moment aren't designed for catching cats so we are exploring other options.

On a more positive note, it would be nice to think the reduction in predator numbers was a factor in the presence on the shellbanks of nesting colonies of White-fronted Terns and Black-billed Gulls as well as a Variable Oystercatcher nest and possibly two NZ Dotterel nests. More traps have been placed on the shellbank to provide extra protection.

Kristelle Wi

Trapping results to date (S=summer season) are:

	S1	S2	Winter	S3 so far
Stoat	9	1	0	0
Ferret	8	2	0	0
Weasel	1	0	9	3
Hedgehog	22	7	0	3
Rat	22	10	16	8
Feral cat	1	3	1	0
Non target (rabbit, mynah, starling)	8	6	8	1



## What's on at the Shorebird Centre

### The Thousand Species BioBlitz

**February 28  
6am-midnight**

MNT is organising a bioblitz with the aim of identifying the full range of species found in the Miranda coastal strip plus the adjacent intertidal zone. An array of experts will be on hand to identify what is found. Volunteers are need both beforehand to get the centre ready and on the day to guide, collect samples, assist experts, etc.

Contact the Shorebird Centre for details.

### Migration Day March 3, 10am

Come and see the Arctic birds at their finest. This is one of the best times to see Miranda. Guest speaker: Jimmy Choi on habitat changes at Yalujiang. High tide is at noon so birdwatching afterwards.

### Annual General Meeting May 19, 10am

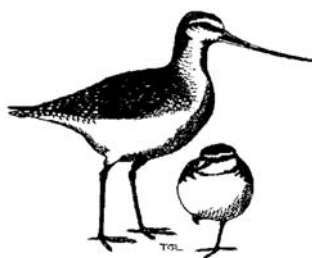
Don't miss your chance to have a say in the running of the trust. Guest speaker. High Tide is at 1.30pm so birdwatching afterwards.

### OSNZ Firth of Thames Wader Census June 20

Contact the centre for information if you want to take part.



# MIRANDA NATURALISTS' TRUST



## The Shorebird Centre

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Assistant Manager  
Maria Stables-Page  
topcats@ihug.co.nz

## Miranda Naturalists' Trust Council

Chair: Gillian Vaughan  
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Deputy Chair and Banding  
Convenor: Adrian Riegen  
riegen@xtra.co.nz  
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Council members: David Lawrie  
(Immediate Past Chair), Estella  
Lee, Wendy Hare, Eila Lawton,  
Emma Pearson, Phil Hammond,  
Trudy Lane, Jim Eagles

## Miranda News

Miranda Naturalists' Trust publishes *Miranda News* four times a year to keep members in touch and provide news of events at the Shorebird Centre, the Hauraki Gulf and the East Asian-Australasian Flyway. No material may be reproduced without permission.

Editor: Jim Eagles  
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## See the birds

Situated on the Firth of Thames between Kaiaua and the Miranda Hot Pools, the Miranda Shorebird Centre provides a base for birders right where the birds are. The best time to see the birds is two to three hours either side of high tide. The Miranda high tide is 30 minutes before the Auckland (Waitemata) tide. Drop in to investigate, or come and stay a night or two.

## Low cost accommodation

The Shorebird Centre has bunkrooms for hire and two self-contained units: Beds cost \$20 per night for members and \$25 for non-members. Self-contained units are \$65 for members and \$85. For further information contact the Shorebird Centre

## Become a member

Membership of the trust costs \$45 a year for individuals, \$55 for families and \$60 for those living overseas. Life memberships are \$1300 for those under 50 and \$750 for those 50 and over.

As well as supporting the work of the trust, members get four issues of MNT News a year, discounts on accommodation, invitations to events and the opportunity to join in decisionmaking through the annual meeting.

## Bequests

Remember the Miranda Naturalists' Trust in your will and assist its vital work in education and protection of migratory shorebirds. For further information and a copy of our legacy letter contact the Shorebird Centre.

## Want to be involved?

### Friends of Miranda

This is a volunteer group which helps look after the Shorebird Centre. That can include assisting with the shop, guiding school groups or meeting people down at the hide. Regular days for volunteer training are held. Contact Maria Stables-Page for details.

### Long term Volunteers

Spend four weeks or more on the shoreline at Miranda. If you are interested in staffing the shorebird centre, helping with school groups or talking to people on the shellbank for a few weeks contact Keith Woodley to discuss options. You can have free accommodation in one of the bunkrooms and use of a bicycle.

### Firth of Thames Census

Run by OSNZ and held twice a year, the census days are a good chance to get involved with ongoing field work and research. This year's is on November 4. Ask at the centre for details.

### Contribute to the Magazine

If you've got something you've written, a piece of research, a poem or a great photo send it in to *Miranda News*. If you want to discuss your ideas contact Jim Eagles at eagles@clear.net.nz.

### Help in the Miranda Garden

We can always use extra hands in the Miranda Garden, be it a half hours weeding or more ambitious projects. If you do have some spare time please ask at the centre for ideas, adopt a patch and call it your own or feel free to take up any garden maintenance you can see needs doing.



Three Sharp-tailed Sandpiper and one Curlew Sandpiper were netted along with the Wrybill in the canon netting exercise at this year's Miranda Field Course. As well as being banded they were flagged.

Banding convenor Adrian Riegen said the catch was a great opportunity to find out more about these regular visitors.

"We caught two sharpies at Foxton a couple of years ago but these are the first caught at Miranda. We know they breed in Siberia but don't know if the same birds come here each year. With the engraved flags in place we might learn something about them.

"The Curlew Sandpiper is the 22nd caught in NZ since the first ones were banded in 1992."

