

Pūkorooro Miranda News

Journal of the Pūkorooro Miranda Naturalists' Trust

August 2020 Issue 117

What's going on here?

Are sharpies performing courtship behaviour in NZ?



**Volunteers put
11,000 plants
on Findlay
Reserve**

**Piako roost
bought by
Regional
Council**

**Architectural
students'
vision for the
Centre**





BURIED AT TARAMAIRE: A rare Fin Whale, the second largest mammal on the planet, was buried on the coast just north of the Centre on the day of PMNT's AGM. The whale was seen thrashing in distress off Whakatete Bay on the Coromandel coast and after it died was towed across the Firth to Taramaire Reserve. The whale, which was given the name of Te Atawhai, measured 22m long and is believed to have been a female. Several iwi from the Hauraki Collective supported the burial and performed cultural rites. The cause of death is not known but small blubber and skin samples were taken for a toxicology tests and genetic testing.

Photo / Adrian Riegen

Shorebird Snippets

Knots reach China in spite of algal poisoning

Five of the more than 80 Red Knots rescued after being hit by suspected algal poisoning in the Pūkoro Mirando area last summer have been sighted on the Luannan coast of the Bohai Sea in China. The rescued birds, mostly unable to fly, were sent to bird rescue operations in Auckland, Hamilton and Thames where over 90 percent recovered. Adrian Riegen, who was advised of the sightings in China, said it was great news. 'It's good to know they recovered well enough to fly 10,000km. Thank you everyone for the great effort to get these birds back to full health. It was certainly worth it.'

Roost appeal re-launched

The Trust is re-launching its Manager's Roost Appeal which got off to a good start – raising \$129,000 – when it was stopped in its tracks by the Covid-19 lockdown.

The original aim was to raise \$350,000 to build a new home for the Centre manager with an attached self-contained unit for shoreguides and visiting researchers. But that has proved to be problematic so the target is now to find \$210,000 for a transportable three-bedroom cottage.

Now the lockdown is over, Council member David Lawrie, a surveyor, is working through the process of getting planning permission and Building Sub-

committee chair Ann Buckmaster is renewing the appeal for donations.

'The reasons for providing a new manager's roost are just as compelling as they were when we started,' she said. 'I know Keith is comfortable enough in the present cottage but unfortunately it doesn't comply with the current building standards. At some stage Keith is going to retire and then we'll have to be able to provide a place suitable for a new manager who may have a family in. Failing that we could be left without a manager and a Centre that is only able to open when we have volunteers to staff it which would be a hugely retrograde step.'

Unfortunately, fundraiser Alister Harlow has tried every avenue he knows of to get a grant for the project without success. So it looks as though it's up to us.

Ann said she was well aware that most members couldn't afford to make large donations to the project. 'But if we can get lots of small amounts they could add up to enough for us to reach our target.' **You can make a donation through PayPal by clicking here** or by contacting the Centre.

Maternity leave

Assistant manager Chelsea Ralls will shortly be going on maternity leave and will be away at least until early March. To

fill that gap and reduce costs the Council is advertising a temporary 40-hours-a-week position combining the roles of assistant manager and summer shoreguide. The cost of the appointment will be assisted by the recent bequest of \$33,000 from the estate of Stella Welford from Oxfordshire in England. We will also be seeking to set up a roster of volunteers to augment coverage at the hides. If you'd be interested in doing some guiding please contact the Centre.

Helping Godfrey Godwit

Godfrey Godwit, who writes the children's page for *PM News*, has a new human helper in regular Shorebird Centre volunteer Emma Salmon (at right).

Alex-Eagles Tully, who eight years ago persuaded Godfrey to write for the magazine and has been doing a wonderful job of assisting him to produce his informative and entertaining articles ever since, is taking a well-earned break.

Emma, who is now heading into her final semester at Massey University where she is studying for a Bachelor of Science in Zoology, was keen to take over.



COVER: The photo of Sharp-tailed Sandpipers displaying at Lake Ellesmere was taken by Steve Attwood.

'I am very passionate about volunteering in conservation and educating all age groups about the great outdoors and I have helped out on Motuihe Island with planting and kiwi monitoring for eight years and have been a girl guide leader for four years,' she said. 'My dream job includes educating communities about the natural environment around New Zealand and being involved with research projects which include seabirds and marine mammals so this is a great opportunity.'

Emma said she was hugely grateful to everyone at the Centre 'for their passion and making me a part of their volunteer team' and to Alex 'for providing me with the chance to join Godfrey Godwit in keeping children inspired about conservation'.

Generous support

PMNT has received a much appreciated grant of \$20,000 from Foundation North towards general running expenses.

Magazine savings

The decision to distribute the May issue of *PM News* by email, because our printers were shut by the Covid-19 lockdown, has paid off for the Trust.

The digital version was sent to all those members for whom we had an email address, and when the lockdown lifted a printed copy was posted to all those who indicated they wanted one plus those without emails. As a result we made savings of over \$2,000 on printing, postage and envelopes. In addition, one member who loves the printed magazine sent a \$1,000 donation towards publishing costs.

The same approach is being taken with this issue. The aim is that any member who wants a printed copy should get one, but we also hope that many members will be happy with the digital version because that will save us money and be kinder to the planet. If you aren't getting your preference please let the Centre know.

Cycle Trail at last

It was a long time coming. Beset by multiple hurdles and delays – weather, floods, stopbank repairs, cattle stop mod-



BETTER ACCESS: The entrance to the Shorebird Centre has been widened, making it easier and safer to access, thanks to work done by the construction team working on the Hauraki Cycleway. Photo / Keith Woodley

ifications, skink surveys and of course, Covid-19 – the Kaiaua to Pūorokoro section of the Hauraki Cycle Trail, is now nearing completion.

Prior to lockdown the initial stages of bridge construction began at Taramaire and Pūorokoro. After it ended diggers became a feature in the landscape as contractors began work on the trail itself.

As manager Keith Woodley noted: 'Cyclists were not long in following. From the Sibson Room I could see two cyclists heading north. This was notable for two reasons. Only their torsos were visible because the cycle trail opposite the Centre is below road level. And it seemed like the digger had only been gone five minutes.'

Council re-elected

The annual general meeting of PMNT, which was postponed due to the Covid-19 lockdown, was held on 28 June. The current Council was re-elected unopposed so still consists of: William Perry, Adrian Riegen, Gillian Vaughan, Ray and Ann Buckmaster, Bruce Postill, Wendy Hare, Jim Eagles, Trudy Lane, David Lawrie, Trish Wells (secretary), Kevin Vaughan (treasurer). At a subsequent Council meeting Will Perry was re-elected as chair.

Recent sightings at Pūkorokoro

Arctic Migrants
516 Bar-tailed Godwit
27 Red Knot

NZ Species
2200 SI Pied Oystercatcher
1800 Wrybill
1100 Pied Stilt
Hybrid Black Stilt
57 Caspian Tern
57 Royal Spoonbill
6 White-fronted Tern
Banded Dotterel
Variable Oystercatcher
NZ Dotterel
Australasian Shoveler
Banded Rail
1 Bittern

What's on at the Shorebird Centre

15 August, Working bee and Mid-Winter Potluck Dinner

9am A list of working bee tasks will be sent around by email so volunteers can choose what they'd like to do. Contact the Centre for details.

6pm Dinner. Email Holly Perry at ehperry50@gmail.com whether you plan to bring a main, dessert or don't mind, so she can try to ensure a balance. Speaker Jim Eagles will talk about the legendary Alaskan town of Nome – slogan: 'there's no place like it' – and striking gold dust and gold birds.

18 October, Welcome to the Birds



VOLUNTEERS: (clockwise from top left) Lyle Millar delivers more plants for the team; Ann Buckmaster and Chris Eagles get lunch ready; Tony Green tows a trailer-load of plants; Mike O'Donnell drills some more holes; Warwick and Krishna Buckman with a trailer able to hold 800 plants at a time; Tiaulun Zhang puts another plant in the ground.



DO IT LIKE THIS: Ray Buckmaster gives a health and safety briefing to volunteer planters. Photos / Jim Eagles

Restoring the mauri of our reserve

The first stage of the plan to transform the Robert Findlay Wildlife Reserve into a natural coastal strip of pre-colonial times was a huge success with 70 volunteers planting more than 11,000 plants, writes **Jim Eagles**.

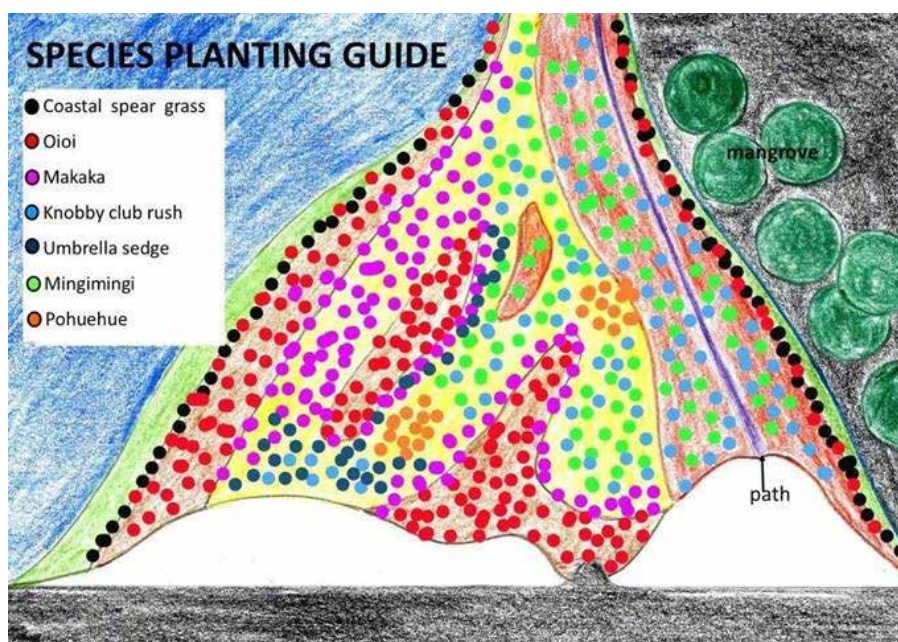
Next time you go to look at shorebirds at the Findlay Reserve be sure to stroll down the track past the Wrybill and Stilt hides to the end of the Stilt Pond – or better yet walk the track to the reserve from the Shorebird Centre – because you’ll find yourself enjoying a remarkable new landscape.

In the strip of land between the ponds and the coast, an area a bit over a hectare, volunteers have planted more than 11,000 native plants as a first stage in a longterm land rehabilitation programme.

The shorelines of both the pond and the little creek running into the bay are now dotted with hundreds of Coastal Spear Grass and Oioi plants; either side of the track where Fennel once flourished is Mingimingi and Knobby Club Rush; and down the middle of the planting area is Makaka, Pohuehue and Umbrella Sedge.

If the weather is kind and the plants survive in this harsh environment then in a few years this should entice back species such as Fernbird, Banded Rail, Australasian Bittern, Shore Skinks and Giant Dragonflies which would once have thrived there. That’s a vision that obviously captured the imagination because at least 70 people turned up for the planting, despite worrying weather forecasts, and put in an estimated 620 hours of work.

On Saturday morning the planting strip was a sea of heads and bottoms. The



average age of the planters was quite high – up to the nineties – so the bottoms belonged to those whose backs were strong enough to bend over and put the plants in the holes; the heads to those whose knees were strong enough to get back up after kneeling. Meanwhile down at the Centre Ann Buckmaster, Alister Harlow and Chris Eagles were producing gallons of soup and piles of homemade bread to feed the workers at lunchtime.

Ray Buckmaster who planned all this, was exhausted but delighted when it was

all over and described the result as ‘an incredible feat’.

‘The most remarkable aspect for me,’ he said, ‘was the level of community support for this restoration going back to when we started some 18 months ago.’

‘We kept running into hurdles that seemed unsurmountable but people kept coming up with solutions. ‘How do we raise our own plants with no water supply? Up step Annie and Sean Wilson with their wonderful offer to host and care for a nursery at their Miranda Farm.



‘How do we get 10,000 plants from where they were grown onto the Reserve? Up step Warwick and Krishna Buckman, from Habitat Enhancement and Landcare Partnership (Help) in Waihi, and spend two-and-a-half days moving plants.

‘When the call for planters went out, people travelled from as far away as the Wairarapa and Taranaki, staying for two to 12 days, to help.’


Those on high helped too. As the seasons progressed there were fears the Covid-19 lockdown might go on so long the plants would not be planted early enough to be ready for summer. Just in time Prime Minister Jacinda Ardern opened things up. As the big day approached the continuing drought meant the ground was worryingly dry. But two days beforehand the weather gods kindly provided torrential rain.

Of course organising a working bee to put 11,000 plants into the ground took a lot of preparation. Some \$38,000 in funding was provided by the Department of Conservation’s Community Development Fund and used to buy thousands of plants, replace the fence on the northern boundary and pay for vital equipment like two post-hole borers. In addition, 1,500 plants were raised by volunteers in the project nursery, 500 were donated by Help and several hundred more were grown at home by supporters.

In the days before, unwanted vegetation like Fennel was sprayed – some of it three times – areas of dead *Carex divisa*, the major invasive weed, were scrub-barred to break it up, thousands of holes were drilled and plants laid out nearby. Then more volunteers than expected turned up and swarmed across the reserve to make it happen.

‘Thanks to all that support,’ said Ray, ‘we have taken the first few steps towards making our vision a reality and the task ahead now seems easier – although still challenging – and we can look forward to watching the Reserve change.’

But don’t imagine that’s the end of the work. The new plants will have to be monitored. At least another 8ha of the Reserve needs restoring. An application has already been lodged with the DOC Community Fund for two years more funding. The nursery is empty but there are seedlings coming on and it will soon be filling up with 3,000 plants for the 2021 planting season.

In other words, there are plenty of opportunities for anyone wanting to get involved. Just contact the project coordinator at annandrayb@gmail.com or 021536766. 

ACTION: (from top) The white dots around the Wrybill Hide in Dallas Storey’s drone image show the first plants; Gillian Vaughan and Cynthia Carter plant at the Stilt Hide. Cynthia Carter leads her team in stretching exercises; teabreak.



PROGRESS: (from top) One of our longest-serving members, Stella Rowe, leads the way in planting through the dreaded *Carex divisa*; Joe de Jong makes more holes for his fast-moving team; Ray Buckmaster delivers another load of plants to the planters working on the shoreline.



FELLOWSHIP: The pleasure of shared memories at PMNT's 40th anniversary lunch.

Photo / Ray Buckmaster

The special power of PMNT membership

Membership of PMNT has been static at between 600 and 700 for many years. Council member **Wendy Hare** (at right), who has belonged to the Trust for almost 30 years, has recently volunteered to take on temporary responsibility for promoting membership and wants to see that number grow in order to strengthen the organisation and its work. She is keen to get ideas from members on how to do a better job of keeping existing members and attracting new ones.



MEMBERSHIP: 'to belong to a community of like minded souls to support a common purpose.'

At Pūkoro Mirānda that common purpose is to 'keep the birds coming.' One of the best ways to support this goal is to be a member.

We have members who have been with the Pūkoro Mirānda Naturalists' Trust since its birth in 1975 and even one member, David Lawrie, who has been on our Council for 45 years! Now that's commitment.

A healthy membership brings more weight to our opinions on a national scale, more strength to our applications for funding from both government and NGO sources, a wider skill set to our activities both local and offshore, a sea of enthusiastic volunteers when there are jobs to be done, more funds from subs and, of course, a greater resource when seeking donations.

Our highest membership to date was 682 in 2007. Currently we have

something over members, some 10 percent of which are based overseas. There are another 70 or so members from 2019 who have not yet renewed for 2020 so perhaps we are not too far behind 2007.

There are so many worthy projects to carry us forward for our next 45 years including the following:

- Keeping our infrastructure (hides, trails, interpretation, visitors centre) robust.
- Keeping our Manager warm and dry in a new Roost.
- Sharing shorebird stories with our children and our visitors on the shoreside and in the Centre..
- Unravelling the mysteries of where our Pacific Golden Plovers go.
- Discovering the roaming of our juvenile Bar-tailed Godwits around New Zealand and beyond.
- Restoring coastal vegetation habitat at the shellbanks.
- Taking our message on the road to

schools that are unable to come to us

- Developing new displays in the Centre to tell the stories of our birds.

And that's just in New Zealand! Offshore there are our ongoing and longstanding commitments to our flyway partners in Australia, China, the Democratic People's Republic of Korea, South Korea and Alaska.

We need those overseas links to keep our birds coming. And WE NEED YOU and everyone you know, who might be interested, to stay with/join us for the journey. Please share the Pūkoro Mirānda story, consider giving membership as a gift and send me ideas on how we can grow our membership. Thank you all for your continued commitment to the Pūkoro Mirānda Naturalists' Trust, I look forward to hearing from you and watching our membership climb.

• You can reach me at admin@shorebirds.org.nz but please put For Wendy in the subject line.



ROMANCE 1? Sharp-tailed Sandpipers interacting at Lakes Ellesmere.

Photo / Steve Attwood.

Mystery of the exhibitionist Sharp-tailed Sandpipers

Sharp-tailed Sandpipers have frequently been spotted displaying here on their non-breeding grounds in New Zealand. What are they up to? **Jim Eagles** tries to find out.

Most years now each summer 4-6 Sharp-tailed Sandpipers visit Pūkoro from their breeding ground in northern Siberia and from time to time they puzzle us all by putting on a cabaret show.

They prance around in what looks like a formal dance, tails often upright and fanned out, wings sometimes lifted, feathers fluffed up, from time to time chasing back and forth, calling as they go. All this happens not just at the end of their time here – when they might be warming up for when they get home – but also a few weeks after they've arrived.

What could they be performing? A mating ritual? Looks a bit that way but it would be rather unusual at the other end of the world from their breeding grounds and the other end of the calendar from their mating time? A ritualised defence of feeding territory? Sounds more likely were it not for the fact that several birders who've seen the ritual say it looks like courtship and sometimes ends in copulation.

Last season we had four sharpies in residence at Pūkoro and they put on several performances for the entertainment and mystification of observers. A

fascinated witness of a couple of shows was Ray Buckmaster, who back in December took a video and posted it on the Shorebird Centre's Facebook page under the heading, 'Southern Hemisphere Sharp-tailed Sandpiper courtship display.'

By way of explanation he posted, 'At Pūkoro Miranda we don't often get to see something that usually happens half a world away in the Arctic in the depths

of our New Zealand winter. These Sharp-tailed Sandpipers put on an incredible mating display just in front of the Stilt Hide this morning. Lots of varied behaviours on display here, quite dramatic!'

Ray said the performances 'were preceded by what was almost a lek, if you can have one with only four birds, certainly they were all interacting before the main pair did their thing.'

Another witness to a sharpie show was Summer Shoreguide Amanda Hunt, who wrote the following detailed description:

'It was a Saturday afternoon. I was at the Godwit hide, going through my usual routine: godwits, Red Knots, Wrybills, South Island Pied Oystercatchers, gulls, terns, Pacific Golden Plover. Even the Broad-billed Sandpiper turned up to thrill the punters. Then, the familiar question was asked: "What's this?"'

'I had a look through the scope. It was a baffling sight. Three small brown birds were strutting around in some sort of ritualised routine. They were circling each other, with tails up and spread like fans.

'From time to time, one would lunge at another and chase it away, then resumed

Sharp-tailed Sandpiper (*Calidris acuminata*)

These used to be the sixth most common of our Arctic migrants, with as many as 200 visiting each year, but in the past 15 years fewer than 25 have been recorded annually in the annual Wader Census.

There are estimated to be around 160,000 in the East Asian-Australasian Flyway of which over 90% migrate to Australia in the non-breeding season. The decline is thought to be the result of loss of habitat round the Yellow Sea and possibly of more birds deciding to stay in Australia.



ROMANCE ?? And at Kidds on the Manukau Harbour.

Photo / Ian Southey

an apparently civil exchange with the remaining bird. It seemed to be a primarily territorial display, but more complicated. The most aggressive bird consistently chased one away, then returned to the other. They resumed their circling interaction, one with an impressive fanned tail, occasionally lunging towards the other.

'I was still trying to figure it out when one of the pair hopped up on the other and began copulating. The bird underneath didn't seem to mind very much. Fortunately there weren't any children in the hide so I didn't have to censor my explanation.

'In my head I ran through the list of birds we might expect to get up to a bit of hanky panky at this time of year. . . . Then JoJo Doyle said "are they sharpies?" Surely not, we thought, completely wrong hemisphere and time of year. But a closer look revealed that, yes, that was exactly what they were.'

Back at the Shorebird Centre Amanda asked manager Keith Woodley who said he had seen similar rituals a few times over the years and thought it was probably a courtship display. 'If it is, they're possibly the only Arctic migrants to show mating behaviour on their wintering grounds which is very interesting.'

Amanda also asked the very knowledgeable Ian Southey who, it turned out, had photographed a similar display at Kidd's, on the Manukau Harbour, a few years before. Ian agreed it did seem like mating behaviour but he thought it more

likely being done to establish dominance.

On the general issue of mating displays by Arctic birds down here, Ian noted that he had also seen Little Terns in New Zealand picking up small sticks, something they do as part of their breeding display. Gillian Vaughan added that the Buff-breasted Sandpiper currently at Lake Ellesmere had been reported doing a raised wing display. 'So did the one at Papakanui a few years ago,' she said. 'I saw that displaying to a Turnstone.'

I was unable to find any online references to sharpies displaying in their non-breeding grounds. However, I did come across some very nice photos of sharpies in New Zealand taken by Steve Attwood from the Ashley Rakahuri River Care Group. I asked Steve if I could use one of his photos with my story and, on the off-chance, inquired whether he had ever seen sharpies displaying.

To my delight he responded that he had indeed observed Sharp-tailed Sandpipers 'displaying to each other down here at Lake Ellesmere and got a rather wonderful series of photos of it.'

As well as sending his photos Steve kindly provided a description of what he saw: 'I remember the incident quite clearly even though it is over a year ago. It was the first time I have seen such distinctive behaviour. There was a small flock of about six Sharp-tailed Sandpipers. Only the one bird was displaying. At first I thought it was aggressive territorial behaviour but the more I watched the more it seemed

to be courtship. It was targeting one bird and (as the photos show) fluffing its feathers, lifting its wings, and (what the photos don't show) sidling up to the other bird and appearing to try to preen it. I was interested in the fact that it was only doing this to one bird and not the others. The recipient of all this attention was not impressed and rejected the approaches.'

Since then I've heard more stories of Sharp-tailed Sandpipers displaying – and seen part of one myself – and though the rituals seem to vary almost all the witnesses thought they were watching courtship. But most also expressed surprise, even disbelief, that such should be the case.

So what does the sharpie's mating display on the breeding grounds look like. There are surprisingly few references.

However, *Exotic Calidris species of the Siberian Tundra* by JP Myers, Olavi Hilden and P Tomkovich (1982), does discuss behaviour on the breeding grounds: 'Sharp-tailed Sandpiper inhabit the Arctic coastal plain tundra of eastern Siberia. . . Mating resembles the behaviour of [the Pectoral Sandpiper] and is either polygynous or promiscuous. The similarity continues farther. Like [the pectoral], [the sharpie] has a large breast sac important in the flight display. The species' displays are quite different, however. The male [sharpie] quickly rises high over the tundra (some 30-40 m) and then glides downward while giving a dry, crackling warble unlike any other calidridine vocalization.'

The paper does not describe the



ROMANCE 3? And at Pūkoro on the Firth of Thames.

Photo / Ray Buckmaster

ground display that follows but the *Handbook of Australian, New Zealand and Antarctic Birds* does offer one: 'In [the] main display, [the birds] adopt semi-erect posture with feathers of back and throat raised, wings stiffly dropped, and tail sometimes held vertically, fanned and vibrated sideways. [The] second display involves [the] same actions but with wings raised and arched, and wings, head and tail jerked up and down.'

The two publications also offered some of the few references I've been able to find, in books or online, of out-of-season displays by sharpies. HANZAB notes that sharpies are 'occasionally seen in display during non-breeding months with two birds chasing each other'. And the paper by *Myers et al* reports, 'Surprisingly, a summer observation clearly indicating nesting (one of the two birds showing distraction display, for instance) was made in the Dovrefjell area, south Norway, in 1970 (Bauer & Persson 1971).'

In addition, nzbirdsonline.org mentions that in autumn 'sharp-tailed sandpipers begin to attain breeding plumage in New Zealand and become more animated and courtship behaviour can be observed before migration'.

Those reports were interesting but don't really clarify what we've been seeing here during spring and summer. Seeking further information I approached some of the academic experts the Centre has worked with. Most said they had never heard of such behaviour and, while they thought it

sounded fascinating, couldn't assist.

But Bob Gill, for many years leader of the US Geological Survey's Alaskan-based Shorebird Project and now its research biologist emeritus, did offer a view after seeing a couple of Ray's photos and reading a description. 'No,' he said, 'I am not aware of displays by sharpies on the non-breeding grounds. However, I would expect agonistic behaviors among birds in feeding flocks. The two images show, to me, birds defending feeding areas. The ruffled back feathers and raised tail are not uncommon behaviours among other *Calidris* spp when guarding feeding areas.'

But when I sent Bob the video, he changed his mind. 'From the video it is clear there is courtship behavior going on. I almost expected the cut to end in copulation.'

However, Bob referred me for a more authoritative view to Pavel Tomkovich, the hugely respected Head of the Ornithology Department of the Zoological Museum at Moscow State University (and co-author of the paper quoted earlier), and he wasn't convinced this displaying was courtship. 'It is a nice video,' he said, 'but for explaining this behaviour it is necessary to take into account the following circumstances:

'According to observations on breeding grounds, most forms of demonstrative behavior are polyfunctional, and males may use any of them for territorial, aggressive and courtship purposes without an obvious difference.

'I was unable to see any size difference


between the birds on the video, while quite obvious sexual difference exists in size of sharpies.

'If you track any of the birds on the video it is easy to see that aggressive behaviour of one of them (chasing) at some point changes, [when met] by similar behaviour of the opponent, while the first bird stops in hesitation.

'My opinion is that this is a typical territorial conflict of two males with alteration of the behaviour from one bird to another at about the boundary of their territories.'

When I asked what he thought about the numerous reports that the ritual often ended in what looked like copulation, Pavel wasn't moved. 'Without seeing details of the behaviour it is impossible to judge. I know that in old literature there have been cases [during] fighting [when] one of the fighters jumped on the back of the opponent and such behaviour was considered as copulation which was not the case.'

So that's where my amateur investigation stands at the moment. Looking at the video in the light of Pavel's comments, it does look like one bird chasing another out of its feeding area, then the roles reversing after they cross the boundary. But not all the displays witnessed follow that pattern.

So what the sharpies are doing is probably defending their feeding territory. But, then again, some of the displays do seem to end in hanky-panky. Hmmm. 

Ricci Harker



Matthew Connolly



Vaishnavi Adi



Olivia Boyd



Rebecca Higgs



Nomundari Munkhbaatar



Tom Chapman



Ricci Harker



Pieter Wilkinson





PASSIONATE: Architectural student Olivia Boyd outlines her plan for the Shorebird Centre.

Photo / Jim Eagles

Visions for a spectacular new Centre

A visit to the Shorebird Centre inspired a team of senior architectural students from Auckland University to come up with some exciting, spectacular - and expensive - ideas for its future development, writes **Jim Eagles**.

The Shorebird Centre is always an exciting place to visit – mostly because of the extraordinary people you meet and the amazing things that happen there – and those who visit regularly tend to take the odd defect for granted. So, it was a fascinating exercise when manager Keith Woodley and I met up with 11 enthusiastic senior students from the University of Auckland's School of Architects who had been charged with designing the perfect Centre.

This arose from a talk I had last year with a former colleague at the *NZ Herald*, Chris Barton, who originally trained as an architect and now lectures at the university and edits *Architecture New Zealand*. When I mentioned PMNT's intermittent interest in revamping its building, Chris told me that every year groups of students were assigned a specific project to work on and he thought the Centre would be an ideal topic.

Chris put me in touch with lecturer Jimmi O'Toole, who enthused that it was the perfect assignment for his Masters students. Just before the Covid-19 lockdown he brought 12 students down for the day to have a good look round the Centre, bird

observation area and the wider chenier plain, and to talk to key people like Keith and Chelsea Ralls.

We had feared that the lockdown might have brought the project to a temporary halt. But it turned out that it meant the students spent even more time on it than they would normally because they had nothing much else to do.

So, in mid-June, Jimmi and 11 of the students returned to the Centre to present their designs to Keith and me – chair Will Perry was also able to sit in briefly before a TPRK meeting – and it was absolutely fascinating. During their brief visit the students had obviously acquired an amazing understanding of what the Centre is about, how it works, and the flaws in the present structures, including not just the Centre building itself but also the grounds, the track to the birdwatching area and the hides. We were hugely impressed.

The plans they presented were wonderful. They were all done to the highest standards of sustainability and eco-friendliness. And they would all have made working in or visiting the Centre an even more delightful experience than it is now.

There were a lot of interesting ideas

about materials. A number looked for inspiration to the old Limeworks and the Chenier Plain and opted for environmentally friendly kinds of concrete containing shells or with shell patterns.

Many opted for cladding the Centre with local materials like locally-milled macrocarpa or manuka poles or rushes – with replacements able to be grown on-site – while one had native coastal grasses and special roosting areas on the hide roofs. There was even an idea to bring the smells of the coast into the centre through door handles and a sensory wall small with space for dried plants.

The designs for the actual Centre varied enormously, some with the shell of the present building left largely intact, others providing for massive expansion, but all with the internal design significantly changed.

All the students commented that they had noted the inconvenience of visitors having to walk through the entrance and display areas to get to toilets or the kitchen while Keith was talking to them and as a result moved those service areas to the back of the building. Most also observed that the present courtyard seemed small,



INGENIOUS: (from left) Meihan Li shows the door handle she made to help bring the scents of the coast into the Centre; Matthew Connolly uses his model to illustrate how to make better use of the courtyard space.

unattractive and rather wasted and as a result produced designs that moved the accommodation outwards in order to open up the space and make it a charming meeting place. Most of them also saw a need for more display space and for a few small, quiet spots where people could meet for a chat.

Beyond the Centre itself there were lots of ideas. All of them thought we should expand accommodation to take advantage of the cycle trail but many suggested having small, transportable, solar-powered, self-contained units scattered round the property rather than as part of the Centre.

Some students thought we should do more to link the Centre to the hides, and thus encourage more people to take the track to the Findlay Reserve rather than driving down the road. To do this they suggested augmenting the present information signs along the track with small structures like seats, display area or shelters big enough to be visible and provide a tangible reason to walk.

There were numerous impressive designs for hides, some elevated to provide better viewing, some sunk into the ground and camouflaged to blend in better, a few with viewing on the roof. To overcome frustrations they had experienced during their own visit to the hides, most had separate spaces for keen birders wanting quiet and casual visitors eager to talk, while

several had built in scopes or binoculars to improve the experience for non-birders.

After hearing from me about Bruce Postill's suggestion for a viewing tower at the reserve car park and from Keith about the observation area that was in the original plans for Centre roof, all the design proposals included elevated viewing areas, and some had several.

There were lots of viewing towers proposed for the Centre, some scattered along the track to the reserve, a couple extending out into the water, including one a kilometre out on the flats, and one on the shellbank.


In particular, the students – both in their designs and in the discussion afterwards – strongly endorsed the idea of a viewing tower near the reserve car park to attract passers-by, give people a perspective on the chenier plain and the coast, provide space for displays on PMNT's work and, in a couple of cases, even a small lecture area for schools or visiting groups.

Of course, delightful though these ideas were, the prospect of turning them into reality seems remote. They weren't intended to be entirely practical, the cost of building them would be huge, our reserves have been depleted in recent years, this is a very difficult time for fundraising and the economy seems unlikely to recover quickly.

But there are some specific proposals –

like a viewing tower at the reserve or seats along the track to the hides – we might be able to introduce reasonably easily at a relatively low cost. It might be also worth trying to meld the best ideas into a draft plan so that any future improvements – such as perhaps upgrading the public toilets or revamping the accommodation units – fit into an overall design.

As it happens, the lecturer involved, Jimmi O'Toole, is co-founder of AHHA Studio, a group of architects which has experience working with NGOs on turning student visions into something practical. So we have asked him to provide a price for an exercise to pull together the best ideas from the students, plus some of the Trust's earlier plans, into something practical we might at least aspire to. We have even found a possible funding source to cover the cost.

And as for turning such a plan into a reality, who knows? I might win Lotto; we have a lot of very generous members; and the Centre does have a history of making the impossible happen: like carrying out the first shorebird survey of North Korea; helping to show that, contrary to what the vast majority of biologists believed, Bar-tailed Godwits do fly 11,000km non-stop from their breeding grounds in Alaska to New Zealand; or even putting tags – some of which have worked – on the world's most devilishly cunning and elusive waders, the Kuriri. 



ROYAL ROOST: Two Royal Spoonbills fly in to land on the barn framework which has become their favourite resting place at the Piako Roost while White-faced Herons and Cattle Egrets watch respectfully. Photo / Martin Sanders

WRC's big plans for Piako River and Piako Roost

Waikato Regional Council has bought the block of flooded farmland near the mouth of the Piako River which has become known as the Piako Roost because of its appeal to waders, writes Keith Woodley. The purchase will neatly dovetail into an ambitious Council proposal to establish a green corridor linking the Kopuatai Wetland to the chenier plains of the Firth of Thames.

From the bank beside the cycle trail there is a glimpse of the future. Thousands of shorebirds are gathered – mainly godwits, oystercatchers and stilts. There are also legions of young mangroves.

But once you focus beyond these familiar features of an estuarine landscape, you notice the incongruous things: the semi-submerged cattle trough, and the drowned fence lines. Perched on top of the remnants of an old barn – all that remains are the hoops that held up the roof – are six Royal Spoonbills. On the lower levels are lined up rows of White-faced Herons, as if in attendance on their royal majesties.

Once part of a farm, this place has been open to the tide since the seawall near the mouth of the Piako River was breached in January 2018. Here the sea demonstrates the true meaning of 'reclamation.'

This is what we know as the Piako Roost, a name that joins Access Bay and

the Limeworks in the lexicon of PMNT. It has quickly become one of the most important shorebird locations on the Firth.

On all but the highest tides it supports a great diversity of species, including rarities such as Hudsonian Godwit and Black-tailed Godwit. The three Far Eastern Curlew present throughout last year were often found at Piako, along with over a dozen Whimbrels. During the Pacific Golden Plover project frequent visits to Piako were essential, because the flock divided itself between there and Pūkoro, with regular commuting in between. The spoonbills, White-faced Herons and assorted duck species are also regulars. For a few months in 2018 it was also the regular haunt for a Glossy Ibis.

Given that this was all the outcome of an extreme weather event, it was perhaps understandable that the landowner initially considered restoring the stopbank to recover his lost hectares. As time passed this

seemed to become less practicable, just as the ecological value of the place continued to rise. The incredibly quick colonisation by mangroves informed both these considerations. So it is very good news indeed that Waikato Regional Council have now acquired the affected land.

Council officials are careful to point out that concern for the integrity of the infrastructure protecting surrounding farmland, was the main impetus behind the 17 ha purchase. The tidal inundation has weakened some parts of the stopbanks along the eastern side of the site. The Council has applied for government 'shovel-ready' funding for the repair and strengthening project.

However WRC is also fully aware the site now holds high biodiversity values. The plan is for the initial breach will be temporarily plugged while repair work is carried out, after which tidal flow will be restored. Council will be seeking input



THEN: The Piako Roost shortly after the stopbanks round the paddock were breached in January 2018.



NOW: Mangroves spread across the Piako Roost today.

Photos / Jim Eagles

from PMNT and other stakeholders over ongoing management of the area. We have stressed that removing the mangroves, and controlling future spread is essential if the site is to continue to support shorebirds. We have offered to mobilise volunteers to assist if required.

The Piako purchase will neatly dovetail with a more recent, and even more exciting WRC initiative. The Council has announced plans for ecological restoration elsewhere around the southern Firth of Thames.


The key component of the scheme is to reconnect the Kopuatai wetland to the Firth. The vision for this ambitious project is to have a continuous green corridor along the Piako River, linking the two Ramsar sites: from the restiad peat bog

of the Kopuatai through the mangrove forests and the salt marshes to the chenier plains of the Firth foreshore.

There will also be riparian planting to increase biodiversity and shaded margins to drainage systems extending from Kopu Bridge on the Waihou River, to the Piako, which will provide important shade to aquatic fish and insects. The plan will include:

- 36km of riparian margin fenced: a 14m wide riparian margin along the Piako River and 4m wide along the drainage systems.
- 35ha of riparian margin retired, planted and habitat created.
- 248,340 native plants planted.
- Animal pest control along the 36km margin.

The projected outcomes of the project include: enhanced habitat for native fish and waterfowl; an increased network of biodiversity sites connected to DOC conservation land and reserves; reduction in contaminants entering the Piako River and Firth of Thames; improvements in water quality; and increased survival rates of native aquatic species and waterfowl in drought periods.

Around \$2.8 million is being provided from the Government's environmentally focused COVID-19 recovery funding. The Jobs for Nature programme is aimed at accelerating work already being done by regional and unitary councils in fencing off sensitive waterways and riparian planting. WRC will also contribute funding to the project. 



TRACKING: Lee Tibbitts studies satellite data on Pacific Golden Plovers in her office at the US Geological Survey's Shorebird Project in Anchorage Alaska. Photo / Jim Eagles

Ra's satellite tag springs back to life

After months of radio silence since leaving New Zealand, we suddenly started hearing reports from one of our six tagged Kuriri, Ra, and she was on her nesting grounds in Alaska.

We had almost given up hope of hearing from any of this season's six tagged Pacific Golden Plovers when suddenly, just over two months after she flew from the Firth of Thames, a report arrived from Ra, the bird with red and yellow bands that we named after the sun.

Ra's tag did report while she was still on the Firth of Thames, but after she departed on 4 April there was silence.

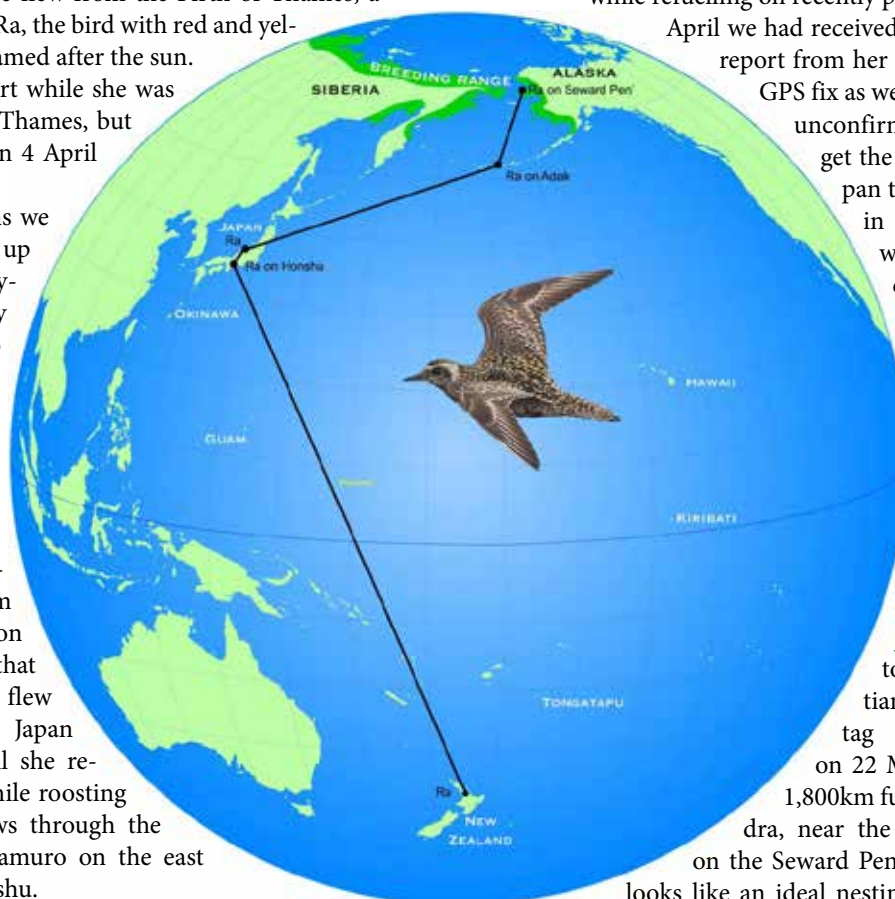
After two months we had almost given up hope of hearing anything when suddenly her tag sprang into life again.

Then followed more than two months of silence – during which we had almost given up hope – until a belated broadcast from Ra's tag came in on 8 June. It showed that she almost certainly flew 9,000 km straight to Japan because on 12 April she recorded a GPS fix while roosting on a river that flows through the coastal town of Kitamuro on the east coast of central Honshu.

She next hopped 75km north to the coastal city of Matsusaka where she recorded GPS fixes on 15, 18 and 30 April while refuelling on recently ploughed fields. (Back in April we had received a single Argos satellite report from her tag but as there was no GPS fix as well it had to be treated as unconfirmed. We did attempt to get the Wildbird Society of Japan to check out the site just in case but they, like us, were locked down and couldn't go.)

Getting into position for the final leg of the northward migration, Ra flew 300km north to Kamisano on the north east coast of Honshu where she got a GPS fix on 8 May.

Finally she flew just under 4,000km to Adak, in the Aleutian Islands, where her tag recorded its position on 22 May. By 5 June she was 1,800km further north on the tundra, near the village of Shishmaref, on the Seward Peninsula, in Alaska. That looks like an ideal nesting ground so hopefully





HIGH TECH: (at left) One of the sites in Matsusaka where Ra's tag recorded a GPS location; (at right) Chelsea Ralls tapes a tag to a plastic bottle on a fence post ready for testing.
Photos / Google Earth, Jim Eagles

she has mated and raised chicks.

After the 8 June broadcast Ra's tag missed one possible reporting time, and we started wondering if that was it, only for Lee to send a message on 6 July saying Ra had reported again from Shishmaref. This gave us another GPS fix from Honshu and a couple more from the Seward Peninsula. More importantly, the two reports led Lee to speculate, 'Hopefully we will get some southbound data from it.'

Hearing from Ra was exciting – as was the prospect that her tag might continue to work – but overall it was a slightly disappointing performance from the six tags we deployed. So what went wrong. Well, as Lee told us, 'It comes down to problems with the harness, the tag or the bird.'

We got great sightings of all six of this season's birds before they left. They all looked good and, apart from Whero whose tag was at a bit of an angle, the tags were where they should be.

Before being deployed the tags were regularly charged and tested and the schedule for the northward broadcast was drawn up and programmed in by Chelsea Ralls, Amanda Hunt and JoJo Doyle with great care working closely with the New Zealand staff of the Canadian tag manufacturer Lotek and with Lee.

We did hear from all six tags before they left but less often than the schedule should have produced. And after birds departed for the Arctic we heard nothing at all from five of the tags. Ra's transmissions from Alaska were the only proper reports for the whole northward migration.

To try to find clues as to what the problem might be, last month Chelsea programmed our one remaining tag to send some test signals and taped it to a fence post round the back of the Centre. The tag duly sent both GPS and Argos positions so looks to be working properly at the moment.

If we can spot any of our Kuriri back on the Firth of Thames next summer – the way JoJo Doyle spotted JoJo last summer – it should also help to indicate what might be the primary cause of our lack of results this season.

In the meantime, let's hope we hear more from Ra. 🐦

Kolossally Korny Kuriri kwips

On 8 June satellite tracking expert Lee Tibbitts emailed: No data. I'll keep looking but don't hold your breath.

Just two days later she added: Finally heard from one of the birds. Ra sent data that shows her spending almost a month on Honshu, a possible stopover on Adak, and breeding site near Shishmaref on the Seward Peninsula.

Jim Eagles instantly forwarded it to other members of the PGP team with a one-word addition: Wahoo!

Amanda Hunt added: Yayyyy!

Adrian Riegen affected a British stiff upper lip: I see Amanda and Jim are as eloquent as you can expect Kiwi's to be. Having been raised in Oxford I feel the need for someone to be more eloquent. Oh to hell with it. Yipeeeeeeee!

Being an uppity colonial Jim replied: I'd have thought an Oxford man would know not to put an apostrophe in Kiwis! But otherwise, well said, old chap. Jolly good show.

Keith Woodley saw an opportunity for a pun: Isn't everyone missing something? Shouldn't it be Hoo-Ra!

Amanda, of course, went poetic:

As usual, Keith has the last word.

Ra-ra-ra-ra-a, as Lady Gaga would say.

It's getting a bit Tea-dious waiting to hear from the others – Where where can they be?

Jim wasn't going to be left out of a punfest: Kikorangi may feel blue at not being mentioned. Amanda upped the ante: Kowhai is probably a bit jaundiced. Which left Jim with one last name to misuse: Hope Ahi isn't burning up.

JoJo Doyle fired a volley from Vermont: Rah Rah Sis Boom Bah. From one live bird to another.

Then Wally Johnson summed up from the USA: Never in plover history such an interesting/entertaining chain of commentary! You guys are great! We are chuckling here in Maine where Diane and I are corona-hermits at her lake cottage watching/hearing a pair of Common Loons! 🐦

More amazing stories from Kuaka tracking project

Adrian Riegen outlines the latest discoveries made by the New Zealand-based international project to track the migration of adult Bar-tailed Godwits to the Arctic.

The excitement of the satellite tagged godwits during their northward migrations (reported in *PM News 116*) faded a little once 13 we tracked to Alaska had settled on their breeding grounds but not before they had yet again enthralled us with their chosen or forced routes from Asia to Alaska.

At one extreme, we reported on 4BBWY, which at one point looked to be heading for the Lower 48 States, then Canada, before finally swinging north to Alaska, having stretched the minimum distance of 5,500 km from Yalu Jiang to the Yukon Kuskokwim Delta (YKD) out to at least 13,400 km.

At the other extreme was 4BWRY that refuelled on the Dalian Peninsula, further west than the others, headed north rather than east and stopped on the island of Sakhalin. Could this actually be one of the least understood godwit subspecies, *anadyrensis*, heading to the Anadyr lowland where this subspecies breeds?

We kept our fingers crossed when two days later it flew on to the northeast coast of the Kamchatka Peninsula, still potentially on track for Anadyr. He stopped on Kamchatka for three days and then disappointingly struck out eastward across the Bering Sea to a point just northeast of the tiny remote settlement of Wales on the Seward Peninsula. So he was a *baueri* godwit after all.

He was the only godwit to take this route, the others all tackling the full width of the Bering Sea. Perhaps he was the smartest bird because, as it turns out, he flew almost exactly along the Great Circle route from the Dalian Peninsula to Seward Peninsula. In addition he had a couple of places to stop for a rest and a bite to eat. If his transmitter still works next year it will be fascinating to see if he follows this route again.

Whilst the lack of an Anadyr bird was disappointing the 13 that reached Alaska spread out beautifully across their breeding range from the YKD in the south to the North Slope (see map). Now from the comfort of our wintery homes in New Zealand we could monitor their potential breeding activity. The further north they breed the shorter the summer and the quicker they most start breeding.

Generally, once breeding is over, either having successfully raised some young or not, the adults generally move to the



Kuskokwim Shoals at the southern end of the breeding range. For some this is just a few kilometres but is well over 1,000 km for North Slope breeders. Vast mudflats at the Shoals provide fuel for the southward migration. Some will spend more than four months there moulting into non-breeding plumage and fattening up for the epic flight back to New Zealand, which is unlikely to commence until September or October.

In the end four godwits stopped on the YKD to breed, four on the Seward

Peninsula and five flew to the North Slope, with three finishing up less than 20km from the Arctic Ocean.

As I write this I can see that nine have left the breeding grounds and flown to the Shoals, none are left on the North Slope or Seward Peninsula. One has stopped transmitting and two are possibly still breeding on the YKD and one bird is on the coast north of the Shoals.

Did any breed successfully? To do so they need to be on the breeding grounds long enough to find a mate, then for

the female to produce four large eggs, followed by the pair incubating those eggs for around 23 days. The adults then protect the chicks at least until they can fly, about four to five weeks after hatching. All in all we can expect successful breeders to be on the breeding grounds for at least 60 days, so anything less than that is unlikely to be successful.

Based on that, it doesn't look like a particularly good season, unlike last year. Eight godwits spent less than 60 days on their breeding grounds so are unlikely to have been successful. The other five may have been successful or some of the YKD birds may have lost their first clutch and be trying again.

In a little over a month the first godwits with a northerly wind on their tails will lift off from the Shoals and set course for a speck of land in the South Pacific a third of the way round the Earth and we will be waiting to welcome them back.

We will also be looking for all of them but most closely for the ones whose transmitters have stopped working; in the hope it is a technical problem rather than a dead bird. Watch this space or better still get down to Pūkoro Mirānda and become part of the project by looking for the colour-banded birds.


Remember to record the four colour bands from left leg to right leg and most importantly the position of the white flag. Only four colours are used, red, white, blue and yellow. Also if possible see if the transmitter aerial is visible. This is a very fine wire, which should extend out well



TRAGIC: This picture of a godwit caught in a fishing net and drowned at Yalu Jiang illustrates the threats the birds face. Photo / Shoudong Zhang

beyond the tail.

A spotting scope is essential for this and if you don't have one, see Keith Woodley at the Shorebird Centre. Then, even more importantly pass the information on

promptly to Keith or myself, even if you saw just one banded bird. It may turn out to be the most interesting one. If you do we will certainly let you know the stories of the birds you have seen.. 



INSPIRING: Rod Emmerson's cartoon in the NZ Herald drawing on the image of godwits as supremely successful migrants.

A great deal has been done but there's so much still to do

William Perry looks back to the famous naturalist who first directed him to Pūkoro Mirānda, Ronald Lockley, and wonders what he would feel about where the Naturalists' Trust stands today.



'You should go to Miranda.' So said Ronald Lockley to me in March 1989 when I phoned him for suggestions of birding locations on a visit to New Zealand for the first time from my home in the UK. I knew from my parents that Lockley lived in Auckland and I found his phone number in the Phone Book (remember that useful resource?).

I visited Miranda on his recommendation shortly after that discussion. When I arrived, the tide was out, there was nobody else there, there were no birds, no hides, no board walks, no interpretative signs, no information centre, and nothing to indicate that this might be a good place for birds. I thought that it was bleak, boring and birdless, and went away disappointed. Of course, no self-respecting birder is discouraged by one unsuccessful visit and I was somehow encouraged to return to this place.

Ronald Mathias Lockley (1903–2000) was a household name for me, growing up in West Wales with parents who were keen amateur naturalists. Like me, he was born in Cardiff, was interested in birds, lived in West Wales, migrated to New Zealand; and like me, he got involved with the organisation that we now call Pūkoro Mirānda Naturalists' Trust.

Ronald was always interested in birds and wildlife in general as he was growing up in Cardiff. Between the world wars he took out a lease on the island of Skokholm off the Pembrokeshire coast with the intention of farming chinchillas and of becoming self-sufficient. The chinchillas proved to be a tougher prospect than Ronald expected but, in the meantime, he developed a fascination for the migratory seabirds that breed on Skokholm through the northern summer.

He also developed a skill for writing about these creatures and eventually realised that he could make a better living from his writing than he could from the farming. He wrote about the Manx Shearwater and the Atlantic Grey Seal.



Ronald Lockley

He wrote about the tough farming life on the islands of Skokholm and Skomer. He wrote many books, including *The Private Life of the Rabbit* and later collaborated with Richard Adams in a fictional tale of rabbits titled *Watership Down*.

I met Ronald twice in New Zealand, long after he had retired from his involvement with Miranda Naturalists' Trust. The first time was in 1990 at his home ('The House above the Sea') in St Heliers, Auckland, and the second was in 1999 in Te Puke, where he spent his final years in a rest home. The rest home had trays on the reception desk for mail. One tray was for outgoing mail; the second was for residents' incoming mail; the third was for Ronald Lockley's incoming mail and it contained more than the other two combined. Such was the volume of correspondence that Ronald continued to have at the age of 95 with people all over the world.

So, I was excited to find a copy of Ronald Lockley's book, *Man Against Nature* in Scribes Books, one of many secondhand bookshops in Dunedin. In this book Ronald expressed his frustration on behalf of the indigenous creatures of Aotearoa New Zealand at the devastation of their habitats by the invading mammal, *Homo sapiens* and the other species

they brought with them.

This book was published in 1970, five years before the establishment of our Naturalists' Trust, and many of the opinions expressed would be unacceptable today, particularly those regarding the earliest human arrivals, the tangata whenua, the Maori people. Perhaps Ronald may be excused his critical comments of Maori because he cared mostly about the native creatures that inhabited this land before Man arrived.

His advice was, 'Go slow, New Zealand, go slow!' He had clearly fallen in love with this country and wanted the best for it and respected the needs of mana whenua even if he had a strange way of expressing his respect sometimes. Ronald would certainly have been happy for our Trust to expand our relationship with the local farming community – he was a farmer himself and understood the farmer's life. I hope that he would also have understood the importance of expanding our relationship with local iwi, particularly regarding the change of our name to include Pūkoro. Our increasing use of te reo Maori may have surprised Ronald but we think it is important. A Welsh person should understand that.

The tide was high for my second visit to Pūkoro in 1990. There were still no hides or board walks or interpretative signs but there were massed flocks of shorebirds and plenty of excitement for this new immigrant birder. There was a building but there was nobody inside it yet because it was still not commissioned.

The likes of Ronald Lockley and Stuart Chambers and David Lawrie and their companions on the Trust had worked hard to raise the funds and build the Shorebird Centre that we enjoy to this day. Ronald would no doubt have been impressed by the progress we have made to date. But he would not have admitted it – so much still to do.

Kia kaha, kia maia, kia manawanui.
William Perry

GODWIT TIMES

with Emma Salmon

Kia ora e hoa

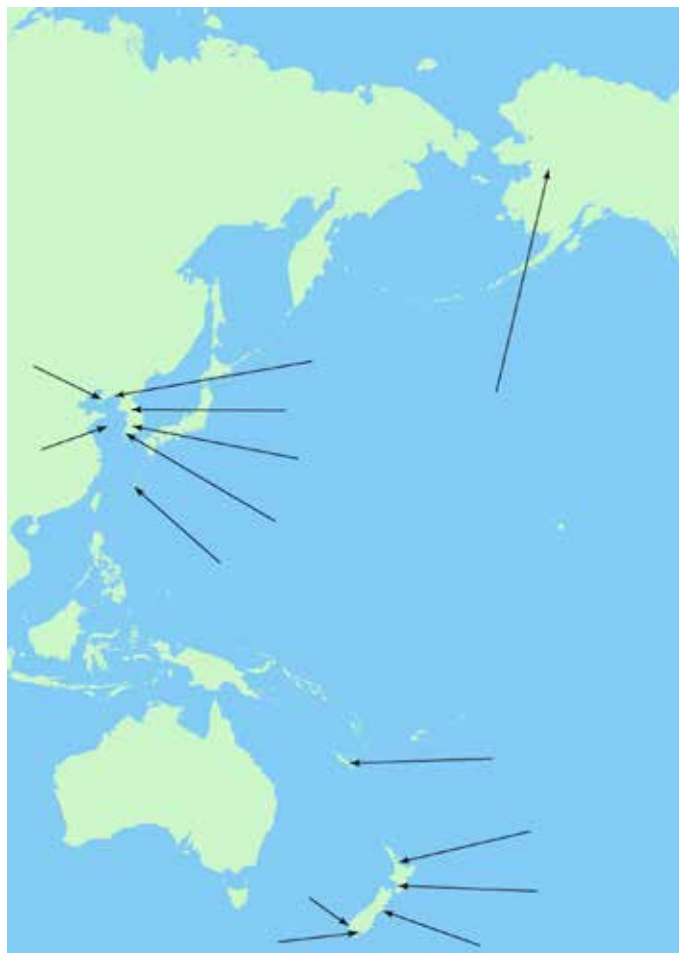
Did you know that Earth loses almost two football fields of natural habitat every six seconds! In June, volunteers from the Shorebird Centre planted 11,000 native plants to cover close to two football fields in the Findlay Reserve (the picture shows some of the volunteers in action) and they're planning more planting next year. Hopefully in the future, you'll see moths, reptiles, fernbirds and more!



The team at Pūkoro-koro have certainly been busy, as over the summer they also fitted small tracking devices on kuaka to see where in the world they go. The map shows some of the places they visited. Have a go at the wordfinder below to find the names of all those places. If you get stuck you'll find the full list upside down at the bottom of the page. Have fun.

Ngā mihi
Godfrey Godwit

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



Alaska, Aphaedo, Awarua, Dalian Peninsula, Fiordland, Foxton, Korean Peninsula, Lake Ellesmere, South Korea, New Caledonia, Okinawa, Pūkoro-koro, Yalu Jiang and Yellow Sea.

Pūkoro-koro Miranda Naturalists' Trust



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Centre Assistant: Chelsea Ralls
Educator: In abeyance
Shoreguide: Appointment pending

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Buckmaster, Jim Eagles.

Magazine

Pūkoro-koro Miranda Naturalists' Trust publishes Pūkoro-koro 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.

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See the birds

Situated on the Firth of Thames between Kaiaua and the Miranda Hot Pools, the Pūkoro-koro 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, especially around new and full moons. The Miranda high tide is 30 minutes before the Auckland (Waitemata) tide. Drop in to investigate, or come and stay a night or two.

Budget accommodation

The Shorebird Centre has bunkrooms for hire and two self-contained units: Bunks cost \$20 per night for members and \$35 for non-members. Self-contained units are \$90 for members and \$130 for non-members. For further information contact the Shorebird Centre.

Become a member

Membership of the Trust costs \$50 a year for individuals, \$60 for families and \$75 for those living overseas. Life memberships are \$2500 for those under 65 and \$1000 for those 65 and over.

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

Join now by clicking here and paying a subscription via Paypal. Or you can join through the Centre by direct credit or by posting a cheque. Contact admin@shorebirds.org.nz for further information.

Bequests

Remember the Pūkoro-koro Miranda Naturalists' Trust in your will and assist its vital work for migratory shorebirds. For further information contact the Shorebird Centre.

Become a Volunteer

There's always a need for volunteers to do a variety of jobs including helping with the shop, guiding school groups, meeting visitors at the hide, working in the Centre garden, joining in the restoration project at the Findlay Reserve, helping with the Shorebird Census and lots more. If you're interested have a chat with Keith or Chelsea at the Centre to see what will best suit you.

PMNT's work is made possible by the generous support of our sponsors



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The Shorebird Centre has re-opened and the shop is ready for business. If you can't
get down to Pūkoro Miranda you can always visit our online shop by clicking [here](#)
or ring 09 232 2781.