

# Pūkorokoro Miranda News

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# Editorial

An irony about visions is they may be difficult to see. Take the Robert Findlay Reserve as it was 30 years ago – grazed pasture to the edge of the Stilt Ponds. Then it was retired from grazing and steadily became a mass of exotic species, notably Fennel. In 2015, with massive support from Waikato Regional Council and Foundation North it was purchased by the Trust, and we were charged with being land managers. How to do that?

Ray Buckmaster’s vision was for a major restoration of the reserve, replacing exotics with native species, creating coastal wetland habitat as once may have occurred on this coast. There followed a massive planting project over several years. Survival of plants, in this harsh chenier environment was patchy. But in some areas there was considerable success, although you sometimes had to look for it among the surrounding exotics. The vision was slowly being realised, but from a distance it was hard to see.

Today, it is now dramatically evident. The efforts of Ray and Ann Buckmaster, assisted by a host of volunteers, were impressive. But the advent of a full time kaitiaki ranger was a game changer. With substantial contributions from assistant ranger Hera Clark and that host of volunteers, Tansy Bliss has spent innumerable hours transforming the reserve.

Her strategy was to continue planting but on a reduced scale, to concentrate on increasing survival of plants already in the ground. This primarily meant weed-busting, particularly Fennel. In some places it has been removed completely, in others suppressed. Planted sections have emerged to prominence. This is particularly evident in the southern section and, more recently, around the car park. Now the vision is made tangible: now it is in full view.

The most recent planting efforts are covered in this issue. We also report on remote tracking of mobile species such as Bittern, and the conservation implications it reveals; there is also our region’s genetically distinct population of Spotted Shags; and we reach for the stars.

**Keith Woodley**



PMNT Chair Stuart Laurensen CHELSEA RALLS

At the Trust Council meeting on July 7, Stuart Laurensen was elected Chair. He succeeds Gillian Vaughan who stepped in temporarily two years ago when former chair Will Perry moved to Dunedin. We are most grateful to Gillian for her second stint in the role.



Adrian Riegen and Peter Fryer with the new sign CHELSEA RALLS

Front cover: Riley planting CHELSEA RALLS

## Recent sightings at Pūkorokoro

550 Bar-tailed Godwit	2070 Wrybill
260 Red Knot	82 Banded Dotterel
1 Turnstone	75 Royal Spoonbill
4500 Pied Oystercatchers	1 Kotuku
	2 Ruru/Morepork



# Shorebird Snippets



The carpark has a new gateway, thanks to Adrian Riegen and Bob Rigter, and to funding from the Stephenson Fund of the QEII National Trust.  
KEITH WOODLEY

## Bird notes

**This year three species have been added to the list of birds seen on or around Widgery Lake. Over summer both Glossy Ibis and Royal Spoonbill were recorded. In early June, Ruru Morepork was also added. (see page 7) There were also at least two visits by a pair of Putangitangi, Paradise Shelduck. While there are previous records for the lake of this wary species, they are extremely rare.**



Sulphur-crested Cockatoos  
KATHRYN JONES

Elsewhere in the district there were regular sightings of the regional population of Sulphur-crested Cockatoos. It has to be said there is nothing unobtrusive about these large, noisy Australian imports.

## Coastal Protection Update

On 6 June a meeting was convened at the Shorebird Centre to discuss ways of increasing the level of protection for the Pūkoro coast, its biodiversity and landscape values. Attending were representatives of Waikato Regional Council, Department of Conservation, Hauraki District Council, Ngāti Paoa and PMNT. The meeting agreed on the following stepped approach:

**Advocacy:** Multi-agency signage would be created and installed in key areas, of which the Taramaire stream mouth immediately south of Ray's Rest is considered a high priority. This would support community engagement and education through the PMNT Kaitiaki Ranger and Hauraki District Council Freedom Camping Ambassador roles. This is seen as a 'behaviour change project', aimed at positive messages, and empowerment of the community. Initially, the focus will be on what behaviour is appropriate at such a significant site. PMNT has undertaken to draft text for signage, which Hauraki District Council will produce.

It was recognised that, in addition to signage and education, physical barriers, where practicable, may be necessary in future.

**Legislation:** In conjunction with the above, it was agreed a higher degree of legal protection, such as a by-law or a specific reserve status, is needed. It was agreed that an inter-agency working group would be formed to establish the most appropriate form of protection for the coast. This would include representatives of WRC, HDC, DOC and Ngāti Paoa. PMNT member Dr Pip Wallace, a specialist in resource management and environmental law, would also be part of the group. WRC has agreed to take the lead in coordinating this.

**Compliance:** Once signage and appropriate legislation is in place.

A further meeting is scheduled for early August.



## Bird Diverters

Three years ago, strange objects began appearing on the power lines beside the Stilt Ponds. From a distance vaguely resembling a stylised Piwakawaka, Fantail, they attracted much comment from visitors. Then early last year more appeared, extending almost as far as the Shorebird Centre. They are called bird diverters, and Keith Woodley approached Counties Energy for some background.

Was this an idea developed locally or is it common practice within the industry? Jodine Laing, Head of Corporate Communications & Community Partnerships for Counties Energy, explained they are produced by suppliers and used within the industry. 'Not all distributors utilise them however it is something that is likely to increase in use over time. The bird diverters are a relatively cost-effective solution to both protect wildlife and improve network reliability for the community.'

And they are clearly successful. 'There has been a decrease in unexplained faults, and an increase in reliability for that area – which we believe to be the result of less contact from wildlife. The diverters have a reflector on them which makes them highly visible so mitigates risk to avian wildlife. Counties Energy has around 1.5kms of these installed. We also have some installed in an area near the Waikato River around Pukekawa that has a large amount of avian wildlife and there has been less unexplained faults there as well. We have around 500 installed throughout the network in these areas.'



Bird diverters KEITH WOODLEY

The diverters first started appearing at the time when the Stilt Ponds were retaining too much water leading to a huge increase in waterfowl, especially Black Swans. Had this resulted in a notable increase in bird strikes? For instance, were the swans a particular problem?

'No there was no obvious increase in unexplained faults but given the high levels of avian wildlife in the area it was decided to install the diverters. We don't have evidence of there being an increase in Black Swans hitting the line, however most outages in that particular area are unexplained, and assumed to be from avian wildlife if there are no obvious sources of the fault.'

## QEII National Trust board visit

In June Pūkoro hosted a visit by the board and staff of QE II National Trust. Tansy and Keith gave an overview of PMNT's work and conducted a tour of the Robert Findlay Reserve. This was followed by a meeting with covenanters at the Shorebird Centre. It was especially pleasing that the man responsible for PMNT's long connection with QEII was in the audience. Stuart Chambers was both Waikato Representative for QEII and Chair of PMNT during the period the Shorebird Centre was being built. That is why there are covenants on both the Robert Findlay Reserve and the Centre grounds. Also among the covenanters present were long time Trust members Bev and Geoff Davidson.



Chelsea collating bird counts of the Wildlands students. KEITH WOODLEY

## New Education Partnership

In May we hosted 22 staff and students from Wildlands Studies at Western Washington State University. Not unlike EcoQuest, with which we have a longstanding relationship, they are an organisation that make several visits to New Zealand each year. They were interested in shorebird identification and monitoring methods, shorebird conservation efforts at Pūkoro and nationally, as well as local history.

They stayed four nights during which Chelsea spent time in the field with them and Keith delivered four lectures. This all came about at relatively short notice when other plans they had fell through. They were delighted with what we provided, and a second group is scheduled to come in October.

Team leader Isaac Newell reported back to us: 'I had a few students that were resistant to considering themselves birders, and I think the two of you were able to officially convert the last of them. It's a safe bet to say that supporting and protecting shorebird populations (associated habitats, flyways, and beyond) will be engrained in them – no matter where they end up in life. [www.wildlandsstudies.com/](http://www.wildlandsstudies.com/)



Top: Keith Woodley briefs the QEII Board at the Godwit Hide. L-R Philip Hulme, Board Chair Alan Livingston, Graham Mourie LAURA DALBY  
Bottom: QEII Board and Covenanters at the Centre LAURA DALBY

# Ranger Snippets

Kaitiaki ranger **Tansy Bliss** reports on recent events on the Robert Findlay Reserve.

## Why the Godwits Fly.

It was a lovely Sunday afternoon in late May, and I was relaxing at the open viewing area overlooking the northern end of the Stilt Pond. Shadows were lengthening and the air unusually still. I had counted 162 Taranui, Caspian Terns and sighted a couple of flagged godwits. There was no one else around so I stretched out on the bench and turned my head west so I could keep an eye on the birds. They seemed equally relaxed. Most were perched on one leg with bills tucked under their wings. Suddenly the flock was alert and within seconds godwits were in the air. I sat up quickly and scanned for the source of panic. A dark heavy-set bird ploughed low and relatively slow through the flock. My mind went... petrel, falcon, immature Karoro, Black-backed Gull - until I had it in my binoculars as it crossed in front of me and rose above the mangroves. Two separate passes of godwits pursued it, drove it higher into the sky, circled around and accompanied it out of their airspace.

The Kereru disappeared over the Firth of Thames and the godwits returned to roost on the Stilt Ponds. It seemed extraordinary to me. I had never seen a Kereru in the area before, nor seen godwits react in such an aggressive and defensive manner. Something about the Kereru had triggered this unusual behaviour but it remains a mystery to me.



Kereru GLENN PURE NZbirdsonline.

## Introducing the Banded Rail Trail



What the start of the Banded Rail trail from the car park looked like in 2022. TANSY BLISS

Remember that huge pile of shell, overgrown with weeds west of the toilet block? Well, its gone, thanks to some welcome tractor work by PMNT Council member, Bob Rigter. The wire fence keeping visitors from straying onto the saltmarsh is also gone. Instead, the area is now dotted with native

saltmarsh and salt tolerant trees and shrubs planted in mid-June by a hearty band of volunteers after some exceptionally heavy rain. Winding through these 2024 plantings is the new Banded Rail trail.



Planting begins ROWENA WEST

It starts from the southwest of the carpark, weaving past the Muehlenbeckia and hebe patch. Then Knobby Club Rush comes into view leading one around the back of the toilet and up onto a small ridge of shell left over from the Limeworks. From this elevated walkway there are excellent views out over the mudflats where the Kuriri, Pacific Golden Plover sometimes roost. There also, are the patches of mangrove from where Banded Rail scurry at unexpected times. Sometimes in haste in a slightly prone position and sometimes just quietly picking through the mud, Glasswort and Sea Primrose, tail flicking, moving forward in a jerky motion. Then something changes and they run for cover.

Continue along the ridge, dipping down through more plantings, past a lone Pohutukawa, Cabbage Trees nestled in a slight hollow and finally a row of Saltmarsh Ribbonwood fringing the mud flats as you rejoin the main track to the hides. Hopefully, with time as the plantings mature, this trail will be a well-worn path frequented by visitors and Banded Rail alike.

## YSAR lend a hand

There was no lack of youthful energy and enthusiasm when the Thames – Coromandel Youth Search and Rescue Team (YSAR) returned in late June to help with restoration work in the Reserve.



YSAR plantings 2023 TANSY BLISS



They had already made their mark in 2023, successfully planting the group of native trees and shrubs in front of the wooden swing gate in somewhat challenging weather conditions. The weather was not much better this year, but a team of eight, starting off in waterproofs and high viz jackets were soon carting mulch and planting trees with a speed that left Hera and I racing to catch up. By late morning the team had stripped down to T-shirts and their YSAR waistcoats as the mulch pile disappeared.

Once the plants were in, bordering the carpark, they turned their attention to the old Limeworks, shifting accumulated soil and debris, so the concrete and fire bricks from the kiln were exposed. Where the concrete had badly degraded, Muehlenbeckia was planted in the remaining soil and heavily mulched to help combat weed growth and retain moisture throughout the dry summer period.

By early afternoon the whirlwind of activity was over, the team stood proud, job done and done well. My thanks to all the YSAR team who made the day possible. Welcome back at any time.



YSAR team in action TANSY BLISS



YSAR team in action TANSY BLISS



YSAR team L-R Dirk de Jong, Harvey Allen, Austin Court, Robin Douglas, Max McLean, Marcel de Jong, Deon Dollera, (Absent from photo only but present on the day: Kim Court, Cullen Remnant) TANSY BLISS

CELEBRATING **50** YEARS OF

**Pūkorokoro Miranda Naturalists' Trust**

*Keeping the birds coming*

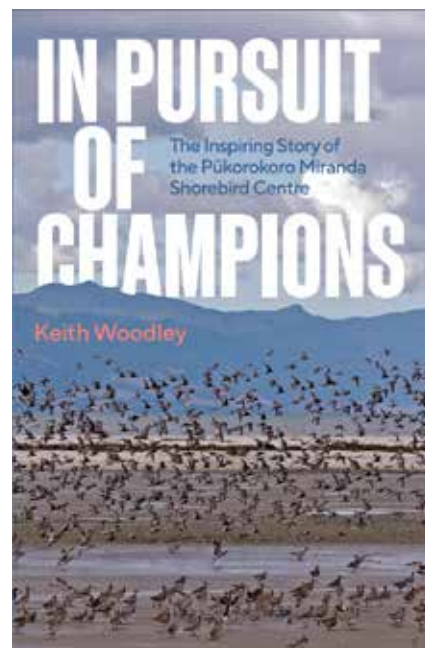
Next year PMNT will be 50.

Assembling the diverse material that became *In Pursuit of Champions* was a complex task. The history of PMNT, its work and its people, the operation of the Shorebird Centre and its events and programmes, as well as our extensive involvement with the East Asian-Australasian Flyway are all part of the story. There are also elements of memoir, accounts of my long tenure as Centre Manager.

It is gratifying to report that it has been very well received, particularly welcome being positive comments from long-time PMNT people. For it is their story as much as anything else.

*“Compelling reading.... and a most accurate summary of the PMNT and the Flyway.”*

*‘All the early people.... will be or would have been well pleased.’*



Keith Woodley | \$40

*‘I very much enjoyed reading your book because you had made it such an easy read; and so much was familiar!’*



# Ruru at Pūkorokoro

Recently Pipiwharaura, Shining Cuckoo was added to the Shorebird Centre species list. In June there was added another significant species. **Kevin Barker** reports.



Ruru pair KEVIN BARKER

**Over two weekends in June we heard Ruru, Morepork calls in and around the Pūkorokoro Shorebird Centre. Around 10pm the evening of 7 June, while astronomers were waiting in the Centre grounds for clouds to clear, a Ruru called from across the road to the north. A week later, on the Saturday of the planting weekend, Peter Fryer heard a Ruru call around 6 am from near the Centre.**

The following morning Kevin Barker, Olga Brochner and Tansy Bliss spotted two Ruru hunting around Widgery Lake in front of the Centre. This surprise occurred whilst the group were on the front deck observing Matariki and Jupiter rising above the Coromandel. Kevin first spotted a bird at 5.40 a.m. as it flew silently over the lake. The owl encounter ended when two birds called to each other and flew off across the road at around 6.20 am.

This is an exciting development, but is it so surprising?

A quick look on eBird reveals two entries for Ruru on the Robert Findlay Reserve in 2021 and 2023. Phil Battley heard a “yeow yeow yeow” call at 11pm in March 2023 from the reserve car-park. And Russell Cannings reported

a Ruru beside the Stilt Hide in July 2021 in broad daylight at 11.41 am. This was also seen by Centre manager Keith Woodley (PM News 121) [www.shorebirds.org.nz/wp-content/uploads/2021/08/PMN-121-digital.pdf](http://www.shorebirds.org.nz/wp-content/uploads/2021/08/PMN-121-digital.pdf) Ruru have also been recorded in 2021 along nearby Miranda Road.

So, have Ruru been around for some time? We know they have long been present in the hills immediately behind Pūkorokoro. Tansy has in recent times picked up Ruru calls during night bird surveys at Kaiua and Taramaire.

Olga and I have been observing the night sky from Pūkorokoro for a few years now, but the one we heard on 7 June is our first Ruru observation. I suspect as the native plantings have grown and the landscape returns to a more natural state, Ruru are now considering Pūkorokoro as a good place to live.

So just where are they roosting in the daytime? Traditional wisdom suggests there are few trees with suitable height in our environs. Across the Robert Findlay Reserve there are not many trees to be seen. Obviously, the replanted salt marsh plants are slowly gaining hold, but aside from the mangroves there are few trees taller than a metre or two. However, the Shorebird Centre supports a dense cluster of native trees and shrubs that rise to around 6 metres tall. From the ground this outcrop of vegetation dominates

the view. And, of course, the hills and base of the Hunua ranges and the ranges themselves offer good forest cover. As fellow planter Lyle Millar remarked: “I wouldn’t want to walk there – but as owls fly...”

I suspect the small fragments of bush planted on DOC land across the road from the Centre and possibly some of the taller mangroves may be the daytime roosts for this pair of Ruru. As dawn broke, we watched them fly off in that direction. However, they could also be inhabiting the dense Karo bush around the Centre. A short time after the Ruru called on 7 June, a Blackbird roosting in the Karo beside the driveway alarmed loudly. Perhaps it was responding to a visiting owl.

So, we also considered if the Ruru are closer to the centre, and if they are a pair, where will they breed and what are their chances of breeding successfully? A plan was quickly hatched and a nestbox is now mounted on the Centre grounds.



Centre manager's stature is used to install the nest box OLGA BROCHNER

The transformation of what was a bare section in 1990, is largely due to the vision of Anthea Goodwin, Esther Burgess and Norah Peachman who, assisted by many others, began planting what are now well-established trees. Maybe we will be able to help these enigmatic birds and add to a more complete ecosystem. If Ruru do stay and make Pūkorokoro a permanent part of their home range, it will be a grand legacy of that effort.





## Planting in Findlay Reserve 2024

Planting Day TANSY BLISS

Visitors to the Robert Findlay Reserve car park will see the landscape transformed. Kaitiaki Ranger Tansy Bliss, with assistance from Hera and various volunteers, has steadily cleared the area on and around the foundations of the old Limeworks, and around the car park. Following several days of heavy rain warnings, conditions were fortunately better for the main planting day. **Olga Brochner** reports.

**Saturday 15 June was this year's main planting day at the Robert Findlay Reserve. But we all know that day was just the latest part of a lot of work. The project really started about 2017 when Ann and Ray Buckmaster began organizing for the restoration of the Reserve. The aims were to try and restore coastal habitat and increase the Reserve's biodiversity. To achieve this there were first the plans and grants to enable the project to go ahead. Then the sourcing and growing of the plants, and the land preparation. This involved removal of pest species in the Reserve area to be planted such as Carex Divisa and Fennel, amongst other invasive plants. And, of course, there is the organisation for the volunteers to do the planting. That even involves DOC and other teams who auger the holes. This all augurs well for us who just show up and plant! Ann and Ray lead the way in all of this, and now we have the Kaitiaki rangers Tansy Bliss and Hera Clark to thank for all the preparation mahi.**

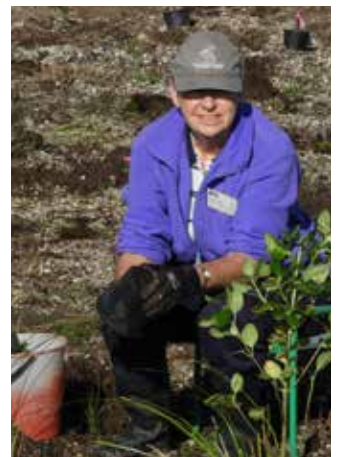
Earlier, at King's Birthday weekend, 773 plants went in the ground (we even had a few children join for a planting experience). And other groups joined Tansy for midweek sessions, and on Arbor Day. However, 15 June was the main planting day. And what a day: the Sun came out, and there was a great bunch of over 30 volunteers of all ages. We were planting around the Reserve's car park area and old limeworks. While the holes had been prepared earlier, we still needed a bit of a dig-out to get some good soil.



Clockwise from bottom left Jennifer Glenn, Gillian Vaughan, Ken Brown, Olga Brochner ROWENA WEST



Kaitiaki Ranger Hera Clark KEVIN BARKER



Regular Pūkorokoro gardener Sue Frostick ROWENA WEST





The Banded Rail trail emerges ROWENA WEST

We also had compost type soil that had been “recycled” from prior weeding around the limeworks; most nutritious for the plant’s new “home”. There were over 1,000 plants, a mix of sedges, rushes and riparian species that would have been in the Reserve, before it became farmland. They include Saltmarsh Ribbonwood, Knobby Club Rush, Flax, Cabbage Trees, Coprosma Repens, Mingimingi and Umbrella Sedge.

Once planted, some of the volunteers were wheelbarrowing the mulch from the “mulch mountain” to help suppress the weeds, protect the plants and retain moisture come the hot dry summer. All a very well organised operation. And come lunch time, most of the plants were in, and there was even time for a wee stroll along the new “Banded Rail Trail” (great name for it, Tansy) at the back of the toilet area. Whahay – all looking good.

Smiles all around at jobs well done, we headed back to the Centre for a great lunch. Thanks for the yummy soups etc. goes mainly to Sue Townson and Joy Gough. After lunch several of us went back to the Reserve to finish the last section of planting, which did not take long at all. Plus, it was high tide, so there was also the chance of spotting waders. And a Wrybill flock put on a great fly by, a wonderful sight to cap off a most successful day.

## Acknowledgements

Approximately 1500 plants came from the Pūkoro Shorebird Centre nursery, with a further 951 purchased from Waihi Native Plants – Nursery and Restoration [www.waihinativeplants.nz](http://www.waihinativeplants.nz)  
 500 Tree guards FibreGuard 300 were purchased from Advance Landscape Systems [www.advancelandscape.co.nz/](http://www.advancelandscape.co.nz/)  
 Approximately 35 cubic metres of mulch was purchased from Premium Forest Products Ltd Mangatāwhiri. [www.premiumforestproducts.co.nz/](http://www.premiumforestproducts.co.nz/)  
 We are grateful to GAS Kaiaua who donated the use of a trailer for the day.  
 Overall funding for the project is from the DOC Community Fund grant.



Peter Fryer planting under close supervision by Lyall Millar KEVIN BARKER



Moving Mulch Mountain LR Andrew Sinclair, Lyle Millar, Kevin Barker, Ken Brown ROWENA WEST



A willing helper and Tansy ROWENA WEST



Mike Frost taking a day off from being the local electrician ROWENA WEST



# Remote tracking: new insights for conservation

We think we know a lot about some birds. Enough to make assumptions about what they do, where they go, and what they need to make a living. But in many cases, we really don't. The work of Jesse Conklin, Phil Battley, Bob Gill, and many others, in the study and tracking of godwits, is a case in point. It has taught us at least one valuable lesson: once we start to think we know the birds well, that it is safe to make predictions, the birds will invariably confound us by doing something completely unexpected. Even if it is something once considered impossible. Current research on threatened mobile species such as Bittern is turning up even more surprises - and causes for concern. Emma Williams, Chair of DOC's Mobile Terrestrial Threatened Species research advisory group, was the speaker at our AGM in May. **Keith Woodley** reports.

**There has been little research on migratory, nomadic, or dispersive species moving within the country during the non-breeding period. Conservation management has generally focused on key sites or reserves, places known to be important for a given species. A lot of focus from DOC and other authorities has been on breeding sites, but not a lot on movements within country, to overwintering or even, in many cases, roosting sites. What if our network of such managed sites is insufficient to protect and sustain mobile species?**

Research on Matuku-Hūrepo Australasian Bittern highlighted the need to identify mobile networks. There had been growing concern that a network of sites being managed and/or monitored across the country was not adequate to capture the total needs of a mobile species like Bittern. Deploying VHS transmitters on birds in Hawkes Bay, found they were spending 75 per cent of their time outside the network of reserves. In collaboration with Germany's Max Planck Institute for Biological Intelligence, Birds New Zealand, and Manaaki Whenua Landcare, the Mobile Terrestrial Threatened Species team is working to address such gaps.

So, what exactly do we mean by a mobile species? The National Policy Statement on Biodiversity now includes

the following definition: 'species that use the environment at regional and national landscape scales, often moving across rohe, takiwa or territorial authorities' jurisdictions on a seasonal basis to exploit feeding and breeding resources.'

A review ranking all such species to work out which ones most required attention, identified some priority research themes.

- Mobile wetland bird species such as Bittern.

Identifying internal flyways for threatened shorebirds: Tarapirohe, Black-fronted Tern; Tarapuka, Black-billed Gull; Pohowera, Banded Dotterel; Tūturiwhatu, Southern NZ Dotterel; Tōrea, South Island Pied Oystercatcher; and Tara- iti Fairy Tern. While some of our shorebirds are protected on their breeding grounds, most also spend more than 75 per cent of their time outside protected networks. Identifying where the flyways are, and the sites along the way that are crucial for feeding and resting, will provide data for DOC, Councils, and partners to protect them when they are outside Public Conservation Land.

- Similarly, mobile threatened forest and open country species, Kaka, Kukupa, Karearea, Koekoea, Kea, and bats
- Incorporating mātauranga Māori into the workstream
- Developing/testing new technologies for tracking mobile species. Working with companies on new technology to help push the boundaries and get tracking devices small enough to put on the likes of bats.
- Developing monitoring methods for mobile species to allow more effective outcomes.



Bittern IMOGEN WARREN nzbirds online



## Remote tracking

Emma showed how using remote GPS tracking can bring greater understanding of bird behaviours. One example was determining nest success or failure of a Banded Dotterel in the Mackenzie Basin. The tracker recorded the bird's level of activity and time of day. A period of no activity indicated the bird was on a nest: and, as we know the typical length of incubation, when activity levels then increased prematurely, it suggested the nest had failed. This was confirmed by a nest camera which showed predation by a Ferret.

The bird moved and resettled, and then activity levels dropped which indicated another nesting attempt. But this too failed because once again activity levels increased too soon. As there was no camera on the second nest, the cause of failure is unknown. Nevertheless, it was an example of remote tracking providing valuable information. This is particularly important because we know far too little about our Banded Dotterel population except that it is declining. So, most welcome was Emma's announcement that Max Planck is planning a project of tagging and monitoring Banded Dotterels across the country and Australia.

Another example involved a South Island Pied Oystercatcher (SIPO) which was fitted with a tracker at Southshore spit in Christchurch. When the bird was in a coastal area the data clearly show a pattern of activity linked to the tides. When the bird moved inland to a breeding site, data show a more diurnal pattern, with the bird resting (incubating) at night and active during the day. It then migrated back to a coastal area.

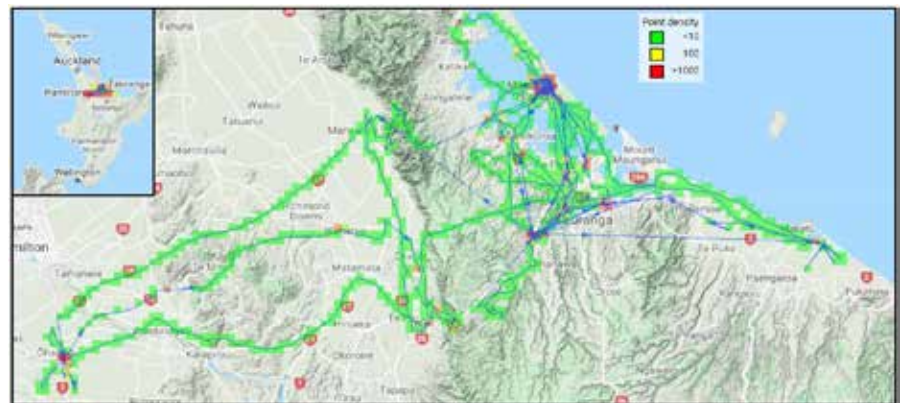
So remote tracking can produce intimate data on habitat use, help identify potential threats, and provide information towards managing them. But where does all the data end up? What is it used for? One area where there is a lot of demand is from people working in the Resource Management Act (RMA) space.

There follow several examples.

### Predicting impacts of wind farms on mobile species

Understanding flight behaviours is important for RMA cases involving wind farms, and the DOC team are constantly looking at the GPS data to determine if a species is at risk. Data from a GPS tag attached to a Bittern in November 2019 at Lake Rotomanuka near Ohaupo, revealed substantial risk. Not only was the bird shown to be highly mobile, but it was also often flying at the same altitudes as turbines of a proposed wind farm.

Data from the area of another proposed wind farm at Waiuku, known to be within the path of migrating SIPO, showed similar patterns. While only a small proportion of the population



Ohaupo bittern movements to the Bay of Plenty EMMA WILLIAMS DOC

## Lessons from a Northland Wanderer: The 200km Journey of a female Bittern

Emma then took us on a trip following the movements and behaviour of a young female bittern.

She was a rehabilitated bird which, following treatment at Auckland Zoo, was released at Pouto on the northern Kaipara Harbour. The hope was she would pair up and breed, but instead she went on a journey, making 62 flights totalling over 200 km in 20 days. And this journey was during the breeding season.

### What does the tracked behaviour tell us?

- Most disturbingly, calibrated flight heights ranged from sea level to 226 metres with an average altitude of 109 m. Of these flights, 93% were within the rotor strike height profile of the proposed wind farm site over which it flew
- The bird did not spend much time at each site with intense movement between sites, and all of it during the season when we expected it to be nesting. It was trying to forage but we don't know how much it was actually eating.
- With much of the travel after dark, anybody seeing this bird would have no idea that it has been visiting all these sites, because it is all happening at night

### Risks identified

- Vehicle collisions – several times it flew across roads and several times it landed on roads. We already know from rangers that there is a lot of roadkill of Bittern in this area.
- Windfarms: we already had windfarms flagged as a risk from the behaviour of other birds, but we didn't have data from this area. We have confirmed that now.

- Starvation: The energy expenditure of that bird in those 20 days is really concerning. We cannot tell how much it ate during that time but given we do have other information showing their position in the food chain, that they are not sitting as an apex predator but they are foraging on really poor quality food – is problematic. Of 119 autopsies of Bitterns, 90 revealed a cause of death while 29 were unknown. Of those 90 known causes, 20% were starvation; 57.8 % impact trauma (powerlines 9.6%, vehicle 50%, and window 1.9%) This fits with the mobility of these birds, putting them at risk.
- Predators: It spent a lot of time foraging in areas with no predator control.
- Disturbance. Lots of sites were on farmland where there is lots of disturbance
- Not breeding. It was doing all this movement during the breeding season!

'We thought we had a problem with males not being in one place during the breeding season, but we always hoped the females were more sedentary. It does, however, come with a caveat: she is a young female, and we don't know exactly when females start breeding, so over time we may be able to put this into a bit more perspective. Perhaps they don't breed in their first year and that is fine. But it wasn't what we were hoping for.'



**Autopsy results for 119 Bitterns - Emma Williams DOC**  
( 90 known cause, 29 unknown)

Cause of death	Specific cause	n =	%
Illness		5	5.6
Entanglement	Powerlines	1	1.1
Starvation		18	20.0
Starvation and impact trauma		6	6.6
Impact trauma		52	57.8
	Powerlines (9.6%)		
	Vehicle (50%)		
	Window (1.9%)		
Shot		7	7.8
Predation		1	1.1
<b>Total (known cause)</b>		<b>90</b>	<b>100</b>

has been tagged, 25 per cent of tracked oystercatcher flights passed within the rotor strike zones. For Bittern at this site, it was 40 per cent of tracks.

‘You can take the flight path data’ says Emma, ‘and put the wind farm on top of it and they are basically the same. Windy sites are on shorebird migration routes, which is also where you want your turbines.’ A collision risk model is used to predict the number of bird collisions that might be caused by a wind farm development. The data has been used in multiple RMA cases to highlight the risk that wind farms pose to Bittern. ‘The problem is the data only demonstrates risk: there is no data on actual strike rates until the turbines are in place.’ Nevertheless, there is sufficient information to inform resource management consent applications.

**Solar farms**

Emma outlined another threat ‘that popped up that we didn’t consider in relation to Bitterns: the impact of solar farms. Large numbers of consent applications for solar farms are coming in.’

Solar panels reflect light, and it is thought that this looks to birds like water. Overseas studies show a lot of waterbirds are affected particularly at night. Globally, hundreds of thousands of wetland birds are killed annually because of collisions with solar farm panels. On moonlit nights solar panels are causing birds to think it is a lake or watercourse, and so they come down on to them in hard landings. There is also concern that insectivores are attracted to insects flying in the warmer air immediately above solar panels.

The site of a proposed solar farm near Twizel supports 18 different

threatened species, including Nationally Endangered Black-fronted Terns. A high proportion of 49 terns fitted with trackers were shown to be flying over the site, mostly at night.

‘Black-fronted Terns are known to do a lot of nocturnal foraging on the lakes – so we had a look at this, and confirmed most of the flying is at night. Bitterns are the same. It is giving us at least some understanding of why they might be at risk. These data demonstrate the scale of the potential risk – though we have no way of predicting if Black-fronted Terns will collide. Even if we cannot stop these things, we may be able to get consent conditions that are meaningful, that are going to help the species.’ She also pointed out that data is urgently needed for the Critically Endangered Kaki, Black Stilt which also occurs in the area.

**Bitterns**

‘Along with flight heights we can also extract data from the GPS tag on flight speeds and the time of day most flights happen.’ A male Bittern caught and fitted with a solar powered tracker at Ohaupo was tracked over an 18-month period, during which it overturned many assumptions about this species. For example, it was known that birds could fly 100 km, but it was thought they would do this occasionally. This bird regularly commuted to Matakana in the Bay of Plenty. (The current thinking is the bird breeds on Matakana, but this is not confirmed). It was assumed they would follow streams and rivers and would travel at low altitudes. This bird hopped over the Kaimai Ranges. ‘This one bird smashed all those preconceptions, and we now know it is not just this bird – it

is the norm. This is the bird that spent 89 per cent of its flying time at the same height as wind turbine blades. There is similar tracking data for other birds.

Emma pointed out the massive conservation implications of this data. ‘It has changed everything because how do you conserve that?! We are trying to consult iwi, and find out the right iwi, but there are 24 different iwis relating to this bird. The bird chooses the people that it connects to! We now talk a lot more about Bittern networks rather than Bittern sites. You must have sympathy for DOC because for years there has been a focus on a Category A site for Bittern, often at the expense of other sites. But now the focus is on a network of sites. And we as an organisation must learn how to do that.’

That Bittern are so shy and secretive is a further challenge, although as more information emerges, we can infer quite a lot from it. ‘This year we know they make patterns like this when they forage, and we do see them. Those of you have managed to spot a Bittern will have seen how they move and when you look at the trackers – if you can get the in-depth data through GPS trackers/cell phone towers – you can piece it together.’

‘We are now fairly confident we can recognise a booming site, and we are getting more confident in whether we are recognising feeding, and as more data comes in on what habitat there is, and things they are doing at these different sites, through thermal imagery work etc – we have all this data we can go back to. These trackers last for a long time – we have one that has been going for 5 years – it doesn’t go through a whole year any more as the battery dies over winter, but it is still going. So, the bird is still alive. In time we will be able to put more and more perspective on this data.’

**What can be done?**

Managing Bittern nationally:

‘Our Workstream has already resulted in significant developments, identifying flyways for internal migrants and understanding the scale and complexity of habitat networks needed to sustain birds. This then feeds into our management decision, such as where to put our pest control. To start securing the species, it is proposed to concentrate efforts on five regional networks: Waikato, Bay of Plenty, Northland, Marlborough Canterbury, and the West Coast.’





SIPO flight paths up to 2023 courtesy of Emma Williams (DOC), Anne Schlesselmann (Manaaki Whenua Landcare) and Birds New Zealand

With up to 75% of their time spent off Public Conservation Land, a holistic approach to Bittern is essential. DOC cannot do it by itself, no one can, which is why it is now in the national policy statement for indigenous biodiversity – that councils must take Bittern and other mobile species into account. When even little farm ponds and drains may be important stopover sites for Bittern, everyone can help.

Creating and restoring habitat remains very important. One approach is to try and reduce the mobility of birds by securing suitable habitats on a sufficient scale to keep birds in sites where they are safer. Bitterns are not a gregarious species so are very hard to manage. The ultimate key to this is food.

Emma suggests following a European method which is to think of our sites for Bittern not just in terms of water level and reeds and rushes, but to maintain those sites for the fish – what do they need as part of their life cycle? 'In the UK manuals they talk about getting the reeds and rushes – that nice profile, which we talk about too, but then having a deep section where Rudd can breed, so there are lots of baby Rudd. We need to start thinking like that much more with our own fish species. But it is tricky because waterways are out of our control much of the time.'

**Emma's team are keen to get any sightings of their marked birds, so if you see oystercatchers with leg flags, and can read the flag, please report them to [www.app.birdbanding.doc.govt.nz/sighting](http://www.app.birdbanding.doc.govt.nz/sighting)**

## In search of the elusive 'rare' bird

**I read with interest about Subhankar Banerjee's presentation at the Farewell to the Birds in March, and especially about the plight of the Buff-breasted Sandpiper. The article highlights the plight of shorebirds worldwide as the ever-increasing human population, planet warming, and sea level rise encroach on their habitats.**



Buff-breasted Sandpiper  
Wikimedia Commons Caleb G. Putnam

The article reminded me of when I started Bird Watching as it was called in the late fifties. My parents were in business in Blackpool (my hometown) and in those days' businesses closed half day on Tuesdays. Blackpool being then a major tourist destination my parents took the opportunity to take the whole week off in early May before the season started. This happened for many years and this particular year we went to Dolwyddelan, a small village in rural Wales. Staying at the hotel they met up with this gentleman and when talking with him discovered he was a birder and a bird ringer.

What would never happen now is that my parents asked if I would like to go with this stranger up the mountain at the back of the hotel to ring birds. This I did and so began my love for birds. I remember catching a couple and helping to ring them.

On my return home I joined the local Fylde Naturalists' Society. This organisation was not just about birds but flowers, vertebrates and even geology. Here was the grounding of my love of birds, being around people both young and old who guided me along the path to identify what I saw.

So, to come back to the reason for this remembrance. A telephone call came through to say a rare bird had been sighted at Marton Moss – a rural place south of Blackpool. So along with my father we went and found a Buff-breasted Sandpiper sitting in a ploughed field. I cannot remember being told where it had come from, but I ticked it off on my list as the rarest bird I had seen.

This stayed as the number one in Great Britain over many years. Many interests have come and gone but the love of birds has never declined. Even through all the years of work, marriage and children I still looked out for birds. Now in retirement I can devote more time to it and enjoy my time as a guide at the hides. I've seen a few more 'rare' birds since that day in 1959 but nothing takes away that first thrill of a rarity. I have been a birder for over 65 years and still get a thrill when spotting or being shown a 'rare' bird.

On emigrating to New Zealand in 1983 I continued to 'look' for birds. I joined the local branch of the OSNZ/Birds New Zealand and so began my journey with birds here. Firstly, it was a shock to see so many familiar birds, not realising that the early emigrants had decided to bring many European birds with them.

But also, to realise the devastation the introduction of mammals had done to the rarity and specialisation of the New Zealand fauna and flora.

Pūkoro Mirānda is a fantastic place to see many shorebirds. Either in their thousands, such as Bar-tailed Godwits, Red Knots, SIPOs and Wrybills, or just one – such as the Pectoral Sandpiper feeding on the water edge. The thrill of seeing them in their full breeding plumage is also a joy to behold.

As a guide I am a small cog in a larger organisation. As an advocate for Pūkoro Mirānda and its birds, I am profoundly grateful to the Trust founders for such an enduring legacy.

**Ken Wedgwood**



# Breeding kicks off for shags under threat from set nets

While Kawau Tikitiki, Spotted Shags occur around much of coastal New Zealand, Tikapa Moana Firth of Thames is home to a distinct population. But, as **Matt Rayner** reports, remote tracking reveals it is a population under serious stress.

With the winter solstice drawing closer, breeding is far from the minds of most of the Firth's resident birds. However, out on Tarahiki Island, the action is just starting to heat up for Spotted Shags. These glam rockers of the shag world are returning to stake out their breeding sites on the island's cliffs and moulting into their stunning breeding plumage, with a troubadour crest of white head plumes and amazing turquoise and yellow facial makeup.

Although found across Aotearoa, Spotted Shags in the gulf are unique and genetically distinct from their cousins further south. Sadly just 300 pairs of this beautiful shag remain in the Auckland region where they are restricted primarily to the Firth of Thames, and eastern end of Waiheke. This represents a catastrophic fall from grace for a species that was once common on both the east and west coasts of Tāmaki Makaurau.

Evidence from middens suggests Spotted Shags were historically abundant and an important source of kai for local iwi and hapu. However, since the early 20th century the population has experienced declines and increases with an overall steep negative trend. Though widespread before 1910, by the early 1930s the decline of colonies prompted legislation to halt their extermination by shooting, carried out in the mistaken belief it protected fish stocks. With protection, numbers increased after 1940 and by the 1960s surveys counted over 2000 pairs breeding in the last stronghold of the species in the Firth.



Kawau Tikitiki, Spotted Shags CHELSEA RALLS

However, by the 1980s the colonies were again declining and when annual monitoring of the remaining colonies began in 2013, just over 300 breeding pairs were left across three colonies – two small ones at Hooks Bay and Anita Bay on Waiheke and the big colony at Tarahiki. Within the past nine years this number has shrunk to 250 breeding pairs. The cause of this decline is not strongly related to impacts at the breeding sites. Although Norway rats reinvaded the major colony at Tarahiki in 1999 they were soon eradicated, and the island remains pest free with nesting birds annually producing healthy crops of chicks. Rather the birds are facing a more insidious threat across their foraging range that has been revealed through recent GPS based tracking within the Firth region.

Tracking of birds using GPS and dive-depth loggers shows that Spotted Shags love kūtai / mussel farms in the Firth of Thames. On the farms birds make shallow surface and deeper dives to the seafloor (15-20+ metres) where a rich marine community supports abundant prey for birds to eat. Mussel farms are an important year-round habitat for the birds, but seasonally they move south during late spring and early summer (November – January) to focus their foraging in the Southern Firth, in and around the mouth of the Waihou and Piako Rivers. Presumably during this time birds are targeting seasonal fish migrations. It is during these months that big roosting aggregations of the birds are present on the Southern Thames Coast as they dry out and rest in between fishing trips. It was also during this time that we began to realise the threat that set netting is posing to Spotted Shags and other wildlife in the firth.



Spotted shag TONY WHITEHEAD



From January to September 2023, we deployed 14 GPS and dive depth loggers on Spotted Shags. By the end of the year two of these birds would be dead after being drowned in set nets off the Thames Coast. One bird died in mid-October. Its data showed it to be foraging in 2 metres of water off Te Puru when disaster struck; it was held underwater for 5 minutes. Subsequently the bird was released, and it drifted at sea for several days before being washed up the Waihou River into thick Mangrove swamp. The second bird died on Christmas Eve 2023, again off the Thames Coast, after being held underwater for ten minutes. However, this time the bird then made a slow straight-line trip at about 10 knots to the boat ramp in the Waitakaruru River and it was dumped four kilometres inland in a farm ditch. I was able to find this bird thanks to its GPS signal and discovered the DOC leg band on the bird had been ripped off, nearly severing the leg. Unsurprisingly this band is yet to be returned to DOC.



Matt Rayner and Tim Lovegrove advancing on a Spotted Shag colony  
JENNIFER CAROL

Commercial and recreational set netting is known to be a significant threat to Spotted Shags. On the Otago coast a reduction in set netting following the introduction of the Quota Management System, when many commercial fishers abandoned set netting, and the creation of a marine mammal sanctuary around Banks Peninsula, coincided with a period when the shag population more than doubled. Recent anecdotal reports from this region however still suggest that commercial and recreational nets are responsible for large scale mortality events for foraging shags.

In Auckland evidence for the mortality of Spotted Shags is limited to a single event in the Manukau Harbour where 13 birds were killed in a single net. However, a Pūkorokoro Miranda Trust member has seen Pied Shags being drowned off the shell banks, whilst the commercial fisher watched on. In addition, informal beach patrols by myself and others has revealed that dead Spotted Shags, and other species such as Pied Shag, are turning up dead on beaches surrounding the Firth in concerning numbers. The fact that many of these birds are in otherwise good condition and even in breeding plumage points the finger at drowning in nets.

I would love to hear from PMNT members who have witnessed netting incidents or found washed up animals that may have been killed in nets and would love to talk to anyone with ideas as to how we can educate the wider public as to the harm caused by this outdated and harmful fishing method.

## Which Godwit?

In May we received an email reporting a Kuaka, Bar-tailed Godwit at Foxton Beach with colour bands and something else attached to its leg. What did we know about this bird, seen on 10 March? Given he has studied the birds of Foxton every summer for many years now, there was only one person to forward the query to. Jesse Conklin replied as follows:



Foxton estuary Godwit 10 March 2024 GLENYS ROBERTSON

Hi, Glenys

The godwit in the photo is 6YBWY, a male that was captured and banded at Foxton as a young bird in February 2013. We suspect he was hatched in 2011, making him 13 years old now. The '6' part of his colour combination is missing now, being a white flag on his right leg that was lost in 2019 (it was supposed to outlive the bird, but not in this case!).

The object in question on his upper right leg is a tracking device called a geolocator, also deployed in 2013. This device records light levels every 10 minutes, and from this information you can derive the bird's position on the earth throughout the year, since latitude can be calculated from day length and longitude can be calculated from timing of sunrise and sunset. The main requirement is that one must recapture the bird and remove the device to obtain the data, which we failed to do in this case! 6YBWY has evaded all capture attempts at Foxton over the last 10 years, so we never learned where in Alaska he goes to breed.



6YBWY departing 16 March 2024 JESSE CONKLIN

However, we know when he migrates, because I watch him do it (along with dozens of other banded godwits at Foxton) every year. I have attached a photo of him departing Foxton this year (on 16 March, just 6 days after you saw him), starting the 10,000 km flight to the Yellow Sea. He is the red male at the top of the flock.

Cheers, Jesse





# Blast off for the Pūkorokoro astronomical course

Kevin Barker checking the big scope KEITH WOODLEY

**The scopes were quite different and set at different angles than is usual at Pūkorokoro, and celestial phenomena rather than *Charadriiformes* (or shorebirds) were under examination. It was early June and the inaugural Introduction to Astronomy course at the Centre was under way. With the expert and entertaining tutelage of Kevin Barker and Olga Brochner it was quickly evident course participants were in good hands. Complex aspects were distilled remarkably well. ‘From Kevin you get science, from me you get fiction,’ alleged Olga. Here is their report.**

Any visitor to the Pūkorokoro Shorebird Centre and the Robert Findlay Wildlife Reserve recognizes the beauty of this area. From the birds to the surrounding environment, it is a magic spot for sure. But daytime visitors may not realise the night sky is also spectacular. The Hunua ranges block most of the light from Auckland, making the Centre a good dark site. And, of course, being a *Naturalist Trust*, there’s an interest in what the entire environment offers. With all that in mind, Chelsea raised with us the idea of running an astronomical course at the Centre.

Kevin and I have been amateur astronomers for years, and as well as being members of PMNT, are also members of the Auckland Astronomical Society. Planning took place and it was then pretty much 5- 4- 3- 2- 1 and blast off on Saturday 8 June. We had 6 participants: Andrea, Tansy and Bob who lived with dark skies; and Estella, Manying and Lynne who lived with Auckland skies.

This course was aimed at beginners to the night sky, an introduction to what you’re looking at and different ways to look at these celestial bodies. The day was stunning, so we managed to do some solar observation (all safe with Kevin’s white light solar telescope). Also very relevant given the recent auroral activity. Unfortunately, the night wasn’t as clear. But there were breaks in the clouds and we got to observe some of the stars, clusters and constellations we had discussed in the afternoon.

We started with “naked eye observing”, then binoculars which included Kevin’s Fujinon 10 x 70 binoculars mounted on a tripod. And although the clouds were too numerous to use the big refractor, we had a lovely 8-inch reflector (Dobsonian mount), thanks to fellow astronomer Brian Sloan, which was a big hit. Clusters, galaxies and nebula were observed, and there was much discussion on the shapes of constellations and the culture that has grown up around them, such as their names.

There was even a bonus when we heard a call from a nearby Ruru Morepork, probably the first time one has been heard from the Centre grounds.

Thanks to all the participants for their enthusiasm and questioning minds. And thanks, of course, to Chelsea and Keith, and Keith’s cooking.



Astronomy group l-r Kevin Barker, Robert Cobb, Tansy Bliss, Andrea Sturgess, Lynne Le Gros, Manying Ip, Estella Lee. Photo: OLGA BROCHNER





Bob Rigter WLI

## WLI Asia Oceania Conference

Keith Woodley attended a workshop at Seosan, South Korea, in November 2013, the key outcome of which was production of a Handbook on Best Practices for the Design and Operation of Wetland Education Centres<sup>1</sup>. The latest conference was held in Sri Lanka. **Bob Rigter**, who represented PMNT, reports.

**It was an honour to be invited by the PMNT council to attend the inaugural Asia Oceania Wetland Link International conference in Colombo, Sri Lanka on 17-21 June.**

WLI is a global network of wetland centres founded in 1991 by the Wildfowl and Wetland Trust at Slimbridge, England. It is endorsed by the Ramsar Convention on Wetlands and is a key mechanism for supporting wetland centres in developing communication, capacity building, education,

participation and awareness activities at wetland sites. Tikapa Moana Firth of Thames has been a Ramsar site since 1990, and PMNT a WLI member for over ten years.

The event was opened by the current Sri Lankan prime minister Dinesh Gunawardena. Sri Lanka has many wetland areas, and Colombo is built on wetlands which serve an important role in management of water during flood events. Accordingly, the government sees the importance of maintaining these areas to make the city more resilient during future climate change challenges.

## Wetland Link International

Wetland Link International (WLI) is a global network of wetland education centres. Led by the Wildfowl and Wetland Trust, it has 350 members, including PMNT, on six continents. WLI defines a wetland education centre as 'any wetland where there is interaction between people and wildlife and CEPA (communications, education and public awareness) activity occurs in support of wetland conservation aims.'

### Objectives include:

- To advocate for, and assist in, the development of new wetland education centres and their associated programmes throughout the world.
- To improve the effectiveness of operations at wetland education centres through sharing, training and expertise exchange.
- To lobby for the greater inclusion of CEPA programmes within wetlands and related conservation initiatives and instruments, and to support the development of frameworks for subsequent implementation at national, regional and global levels.

This is the first combined Asia Oceania conference so delegates from New Zealand and Australia spoke first introducing their centres and the issues they face.

James Wilson from the Hunter Wetland Centre in Newcastle NSW explained that increased inundation by salt water is changing the biodiversity of the area and remediation work to control this is now required. The conflicting use by humans is also a concern.

Karen Denyer represented the Matuku Link wetland centre in west Auckland and gave an interesting talk into the history and importance of volunteers in her organisation.

My presentation was well received with many Asia delegates surprised by how reliant we are on volunteers, along with donations or grants to function. Our work with bird surveys both nationally and internationally is also very well-known, and the godwit tracking is well followed by centres which have migratory birds visiting

<sup>1</sup> [www.ramsar.org/sites/default/files/documents/library/2014wec-hb\\_en.pdf](http://www.ramsar.org/sites/default/files/documents/library/2014wec-hb_en.pdf)



L-R , Bob Rigger, Karen Denyer, James Wilson, Jennifer George Photo WLI.jpg

their sites. This was also mentioned by other presenters as it is very valuable information for understanding base population numbers, and identifying sites of importance which can be used to persuade governments to conserve these important areas.

Other presentations were from the Chukh Bird Research Station in Mongolia, Hans Seidel Foundation in Korea and the Myanmar Environmental Education and Sustainability Centre.

Day two was Focused on the larger well-funded organisations. Anja Szczesinski from WWF Germany gave a presentation on the impressive centres along the Wadden Sea in north west Europe. Some of the centre buildings are architecturally designed and have become destinations in themselves, attracting architects, designers and feature magazines, as well as people who would not normally visit a wetland.

The WWF Mai Po Centre in Hong Kong has also recently opened a new multi-million-dollar facility. It provides educational areas, gift shop and meeting rooms as well as some accommodation.

It was a pleasure to meet Jennifer George, PMNT member and Chief Executive of the EAAFP based in South Korea. Her presentation reiterated the importance of wetland centres continuing to collaborate in sharing information, ideas and people to strengthen the organisation, and provide a strong future for the organisations and birds which use the flyway. Her use of Menti\* as a live survey highlighted the similarities among participants but also areas we can improve on such as getting younger people involved in the organisations, and the importance of social media to spread information about events and research.

Other speakers gave interesting talks, and many common themes were repeated such as the importance of mentors for encouraging new members, guided tours as an education source, and working with local inhabitants or indigenous groups for long term sustainability.

The rest of the time was spent visiting local wetlands such as the Thalangama Tank and marshes to look at water birds, Beddagana Wetland Park, and Diyasaru Park to celebrate their 10-year anniversary.

On the final day the Western Province Tourist Board had arranged a train ride on the Seethawaka odyssey for all the delegates to promote a new tourism initiative to get people out of the city into the countryside. Lunch, speeches and a walk through the botanical gardens was the order of the day.

The conference was an excellent introduction into the good work WLI does in building capacity and education in the region as well as networking with members from such diverse countries and regions as Nepal and Sabah, Malaysia. The fellow delegates were very friendly and interesting, and it was great to meet other flyway members.

\*The app enables users to share knowledge and real-time feedback on mobiles with presentations, polls or brainstorming sessions in classes, meetings, gatherings, conferences and other group activities.

## PRE-LOVED BOOK SALE

**Fundraising for our continued good works**

**On our Welcome to the Birds Open Day, 12 October, we are holding a book sale.**

Do you have quality used natural history books you would like to rehome?

Make a little space on your shelves so you can enjoy acquiring some new gems here in October. Already we have an extensive collection of Ronald Lockley titles, books from the Falklands and Antarctica, treasures for grandchildren and much more.

Any contributions can be dropped off at the Shorebird Centre, or we can possibly arrange a pickup. Please be in touch with **Wendy Hare** on 021 02772517 or via email at [wendynigelaxxi@gmail.com](mailto:wendynigelaxxi@gmail.com) if you need help with collection. Please have your book donations with us by 5 October so they can be sorted and priced. We look forward to seeing what jewels are revealed.

## EVENTS CALENDAR 2024

**Saturday 17 August: Working Bee and Potluck Dinner** Speaker: Peter Fryer visits the Sub-Antarctic

**13-15 September Printmaking Workshop** with Sandra Morris

**Saturday 12 October Welcome to the Birds Open Day** Guest Speaker: Clare Fearnley, former New Zealand Ambassador to China and Korea

**Sunday 3 November Firth of Thames Summer Wader Census**

**15-17 November Wader ID Course**

**12-18 January 2025 Field Course**

**Please contact Chelsea**  
[admin@shorebirds.org.nz](mailto:admin@shorebirds.org.nz)



# Pūkorokoro Miranda Naturalists' Trust



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Kaitiaki Ranger: **Tansy Bliss**  
Assistant Kaitiaki Ranger: **Hera Clark**

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**Wendy Hare, Trudy Lane, David**  
**Lawrie, Bob Rigter and Olga Brochner**

## Magazine

Pūkorokoro Miranda Naturalists' Trust publishes *Pūkorokoro Miranda News* four times a year, in print and digital editions, 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.

Acting Editor: **Keith Woodley**  
keith@shorebirds.org.nz, 09 232 2781  
Layout and production: **Bernie Cornford**

## See the birds

Situated on the Firth of Thames south of Kaiaua, the Pūkorokoro 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 Pūkorokoro high tide is 30 minutes before the Auckland (Waitematā) 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 \$135 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.

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 decision making through the annual meeting.

You can join at the Centre, pay via our webpage ([www.shorebirds.org.nz](http://www.shorebirds.org.nz)), by direct credit to bank account **02-0290-0056853-00** or call the Centre with your credit card details. Contact [admin@shorebirds.org.nz](mailto:admin@shorebirds.org.nz) for further information.

## Bequests

Remember the Pūkorokoro 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 in 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 chat with the team at the Centre to see what will best suit you.

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



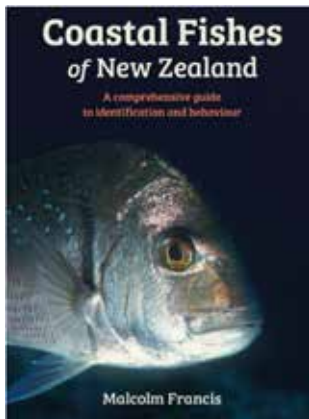
Sean and Annie Wilson's  
**Miranda Farm**  
Shop • Cafe • Gallery



*Ron & Edna*  
*Greenwood*  
*Environmental*  
*Trust*



# Great Reads from the Shorebird Centre Shop



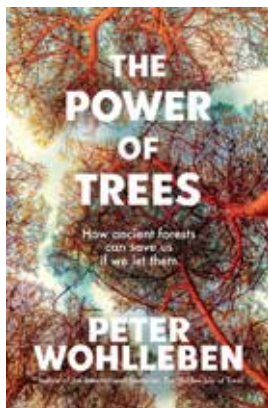
**Coastal Fishes of New Zealand**  
A comprehensive guide to identification and behaviour  
*Malcolm Francis* | \$50



**The Fight for Freshwater**  
*Mike Joy* | \$40



**The Climate Book**  
*Greta Thunberg* | \$55



**The Power of Trees**  
*Peter Wohlleben* | \$40



**Foraging New Zealand**  
*Peter Langland* | \$50



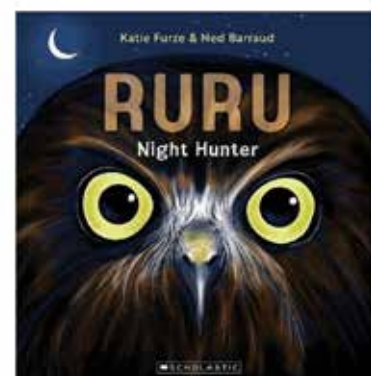
**Buzz!**  
Native Bugs of New Zealand  
*Donovan Bixley* | \$24.90



**New Zealand's Endangered Dolphins**  
*Maria Gill* | \$28



**Sibley Birder's Trivia**  
A Card Game – 400 Questions to Test Every Birder's Knowledge  
\$55



**Ruru, Night Hunter**  
*Katie Furze & Ned Barraud* | \$22

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