

Editorial

This issue was to feature the designation of Manukau Harbour as New Zealand's fifth Flyway Network Site. David Lawrie and DOC's Flyway Officer Cassie Mealey had prepared nomination papers to be presented at the Flyway Partnership Meeting of Partners in the Philippines this month, however it is now on hold.

Because the area is not managed by DOC and the nomination involves international representation, support from local boards, the Manukau Harbour Forum, and Auckland Council was required before getting government sign-off. Great progress had been made, and all bodies had expressed support verbally, but getting written documentation over the line in time fell victim to the local body election cycle. It is disappointing setback as recognition for the Manukau as this country's number one shorebird site is long overdue. The next MOP will be in two years.

Despite campaigning vigorously to make Wrybill Bird

of the Year, we could only manage 17th place. While this

was a considerably higher ranking than in previous years, this too was disappointing. At least there are now many more people who know about Wrybill. Our thanks to Trudy Lane who, using her media and graphic design skills put in a mammoth effort creating our campaign. Thanks also to our South Island campaign partners – BRaid and Rakahuri Ashley Rivercare, especially Grant Davey, for their support. We are already campaigning for next year.

In this issue we feature the extraordinary journey of a juvenile godwit, and report on the renewal of our relationship with the reserve at Yalu Jiang, as well as an initiative to increase protection for tidal flats in the Flyway. We feature the 50th anniversary lunch and the presentation made to David Lawrie, acknowledging his decades of contributions to the Trust. We also continue our review of the past, looking at our education programs and changes within the district over the last 30 years.

Keith Woodley

SNIPPETS

Are You Our New Secretary?

The Trust Council is looking for a secretary. Keeping minutes is the main task involved, and there are normally 5-6 meetings a year, including the AGM in May. If you are interested, or know of someone else, please contact us.

A new face behind the front desk

Trudy Lane is a new face behind the counter at the Shorebird Centre.

Parental duties require Chelsea to reduce her hours slightly, so Trudy will be working three days a week. This means between the three of us we can cover Centre operations, guided tours, and other tasks. With visitor numbers continuing to increase, we anticipate another busy summer season.



While she might be new behind the counter, Trudy is certainly not a new face for the Trust. She grew up at Pūkorokoro, her family farm included what is now the Robert Findlay Reserve, and she has been on the Trust Council for 12 years.

FIELD COURSE 2026

The 28th annual Pūkorokoro Field Course is scheduled from January 31 to 6 February 2026. This continues to be a flagship event on our calendar and is always popular. There are limited vacancies, so contact the Centre for further information.

Fun Run

The inaugural Pūkorokoro Fun Run held last year proved so popular, the limit on entries this year was doubled to 400. The weather was marginally better than the squalls of last year, but gusty winds did not deter the enthusiastic turnout. Our thanks to the driving force behind the event Tim Ashby-Peckham, his family and support crew, for this highly successful event. Over \$1,500 was raised for the Trust, while introducing yet more people to the attractions of Pūkorokoro. Also, thanks to Trust members Emma Salmon, Trudy Lane, Tansy Bliss, Jennifer Glenn and Stuart Laurenson for their assistance with the day. Enthusiastic Fun Run participants TIM ASHBY-PECKHAM



Recent sightings at Pūkorokoro

5,000 Bar-tailed Godwit 420 Red Knot 26 Pacific Golden Plover

6 Turnstone

1 Red-necked Stint

2 Sharp-tailed Sandpiper

2 Glossy Ibis 80 Wrybill

131 Royal Spoonbill

The Epic Adventure of B6

If the story of Bar-tailed Godwit migrations is extraordinary, how much more so are the feats of juvenile birds? On the Seward Peninsula in 2022, Dan Ruthrauff, our speaker at the Welcome to the Birds Day in October, worked on a juvenile godwit project with Jesse Conklin. In this excerpt of his talk, he describes the astounding outcome.

Imparation of this process of the pr

e know nothing about the survival of young birds during migration. We are always fascinated that these birds take off when a few months old and fly to New Zealand, but how do they do this? You would think it would have a high survival cost, but they seem to do just fine. So, it is a compelling research question. And then how do they settle once they arrive in New Zealand? We know adults are very site faithful, but do juveniles come and find home right away or do they move around?

These are questions we hoped to address, and basically until October 13 we thought we had completely failed, but then this amazing bird B6 took off from West Alaska and conducted an 11-day nonstop flight over 13,000 km all the way to Tasmania, of all places.

This is not at all what we expected was going to happen. We thought most Alaska breeding godwits come right here to New Zealand. I think Tasmania regularly only hosts fewer than 500 Bartailed Godwits, so it is unusual for them to be there let alone this one juvenile.

How did we do this? Mostly it was dumb luck but there was a method to it, a merging of older and newer techniques. Nathan Senner who has studied Hudsonian Godwits has had incredible luck monitoring the growth and survival of chicks. He finds them at hatch and glues a teeny one-gram VHF transmitter to them. Our idea was we would do the same, then go out every 3-5 days with handheld antennas to listen for these birds and monitor their growth and survival.

Just prior to fledging we were going to put on these more modern, fancy solar powered transmitters that talk to satellites and would then follow them as they completed their first migration. So, catch three little birds, attach the transmitter, set them free and watch all the data drop in. That was the plan.

But there is a reason why no one had tried this before and Jesse and I quickly learned how difficult it could be. We weren't rookies, we had worked on godwits before. We knew nests were difficult to find but we reasoned that once the nest had hatched, like we did with Marbled Godwits, we could call adults in by playing chick distress calls - they are such good parents they would let you know when the nest hatched. So, use a phone to play back the thin high-pitched squeal of a chick, put the phone on the tundra, put a net over the phone and they would crawl in, and you could flush them and catch them. Or scoop them out of the air with a net. We had done this before.

We also thought, as with other shorebirds, that as the chicks age they become a little silly and they stop hiding and get up and try to run. And we thought that would be another way of catching them. But they blend in so well. We were totally exasperated by these birds, because they did not get up and run away. They froze down into tundra and were incredibly hard to find. We were in Nome for four weeks and found one nest. Jesse had worked up there before with Phil Battley and David Melville and they had found almost a dozen nests - we just had horrible luck. We didn't find many nests, but we did manage to track 10 chicks from six



B6 26 days old release with transmitter DAN RUTHRAUFF

different broods. We had this Holy Grail idea that we would catch entire family groups, male, female and all four chicks - wouldn't that be fascinating! We know they probably do not migrate as family groups - the juveniles come so much later than adults they are likely coming without adults, but it would be fascinating to know what the adults do on migration and what the chicks do. Our Holy Grail. We got zero adults. Once the broods are beyond a certain age, adults do not respond to those distress calls and Jesse and I listened to that damn chick call for hours waiting patiently for an adult to fly by, but we just couldn't catch them.

Using VHF transmitters, we found the broods move as much a five km in a day. Hudsonian chicks use these constrained little wetlands, and they don't move around as much, so Nathan Senner had much better luck tracking Hudsonian Godwits. There are some roads around Nome, and we would drive out to the site every day and drive up and down listening for these birds.

But they were walking so far, they just walked away from us. We tracked the birds from one nest for three days before they died during a cold snap. And those chicks when just a day old, moved 750 metres so they are amazingly mobile the second they leave the nest.

But we had this one amazing experience on 11 July where we stumbled on these three chicks. They weighed 170-190 grams and based on growth curves we came up with afterwards, we figured they were about 22 days old. We glued radios to these guys and tried to track them, but this was at the point in our study when we realized how difficult this was becoming. Four days later, after a hike of many hours and on our last gasp effort, with no idea where these birds were we bobbled upon this brood again. We go over this last dome of tundra, and we hear this blip and follow it. We found and recaptured all three, and at that point we said it is all or nothing.

Their wing cord at that stage, on what is still a teeny bird, is extraordinary. At 26 days old, its bill only about halfway grown, but its wings are phenomenal - nearly 70 % grown at this point. They put their energy into fledging as quickly as possible. As we were chasing these birds down, they were trying to flap so we knew they were close to fledging. We put these fancy devices on them and breathed a sigh of relief and thought well, at least we have got three out. And what we thought would happen is that B6 and his siblings would find their way to the coast of Seward Peninsula - there are lots of observations of Bar-tailed Godwits at Nome river mouth, then they would all show up at the Kuskokwim Shoals, to prepare for migration to New Zealand.

And this is all based on an earlier project I was involved with, doing aerial surveys of the entire Kuskokwim Shoals, a vast area of sandy flats and islands. Flying up to 25 km offshore we found flocks of birds, and you keep going and keep going, and we found humongous flocks out there. 98,000 birds, nearly the entire population of Bar-tailed Godwits are found on the Kuskokwim Shoals in the Fall, with hardly any on the Alaska Peninsula and even fewer to the north.

This survey had been inspired by Rob Schuckard wanting to do a complete census of godwits in New Zealand and eastern Australia to get a good count once everyone had arrived back from the breeding grounds. And we took advantage of Rob's work here to leverage this because we wanted to see if the patterns of distribution had changed within Alaska and how they accord with what is known from non-breeding grounds.

To get these results you need a plane that can land on both land and water - you are so far out over the Bering Sea, if something goes wrong you want to be able to set down on the water. So, an amphibious plane - with me sitting in the front trying to estimate flock sizes while moving at 150 kph at 150 m elevation, and even more importantly you need my colleague Zak smiling away in the back seat. Because we have found it so hard to estimate flock sizes when moving round, Zak would take pictures and then we use counting software which can be trained in what to look for. We found a flock of 30,000 godwits at the mouth of the Kuskokwim River, an otherwise featureless place. Here were these birds out there without a care in the world, 20 km offshore. This is about 25 per cent of the world population of baueri (125,000) in this one flock.

So given all this, we expected our tracked birds would head there. What actually happened, for whatever reason the two siblings stopped transmitting near where we deployed them. They seemed to move around for about a week or so, but we don't know if they died or walked out of their transmitter harness. And we knew they were still growing physically and they still had to double their body mass, so we put them on loosely and it is highly likely they just walked out of them.

But we got these reports from B6 near where we deployed the transmitter, and on 6 August, without seemingly ever having taken a flight prior to that time, he flew across Norton Sound, near the village of St Michael on the upper Yukon, and then proceeded down south. He spent a few days very close to Old Chevak, an interior site where many godwits breed, and then found his way to the coast. There he spent about six weeks, which is typical of godwits to fatten up but notably did not go down to Cape Avinof which is where we expect to see the vast majority of Bar-tailed Godwits. Instead, he took off from Kigigak Island - where we always see birds in the Fall, but it

is not a major departure location – and then this bird took off on this amazing 11 day migration.

Once he got down this way, he tracked south between New Zealand and Australia. We thought he was heading for Australia because he had blown it for New Zealand, but he kept going and we thought he was heading for Antarctica! Thank goodness there was a really strong cross wind that pushed it to Tasmania.

Honestly, from this we learnt hardly anything about juvenile migration. From one data point you cannot say what is normal. However, this is the longest nonstop migration yet known to science, all done by a bird that was just four months old. Really amazing. And totally lucky: I wish I could say there was skill involved.

From Ansons Bay in NE Tasmania, the radio transmitted for a couple of weeks and then it went off air. We really don't know what happened. This is not unusual – Jesse has done most of the tracking of Bar-tailed Godwits, and it is not unusual for a bird to land after migrating and walk out of its harness. They get so skinny, so emaciated, that the harness just comes off. That is what we hope happened and that the bird did not die. No one has seen B6 since – but a resighting would be the cherry on the top. That bird should now be four years old.

Jesse has been doing a study of juvenile migrations, catching freshly arrived juveniles here and fitting them with tags, to understand when they first migrate. We used to think godwits did not begin their first migration to Alaska until they were four years old. Jesse has learned that is not he case. Some one-year birds go to China, some go to Russia, some go all the way to Alaska. We would like to have seen B6 by now, but it should now be four years old and a breeding adult.

What's next for the Bar-tailed Godwits? Technology keeps improving – and Jesse has now been able to deploy GPS tags on godwits that give you the altitude these birds take. That has been a long-standing question. We know they track and manage weather patterns, and we think they change altitudinally to find more favorable winds.

COVER PHOTO CAPTION: B6. Stumpy, fuzzy head, bill not very grown, but this already massive wing. Young godwits put their energy into fledging as quickly as possible

David Lawrie 50 Years of Contribution to PMNT CITATION

In May 1974 Sylvia Reed approached a surveying company in Pukekohe enquiring about land availability for a bird observatory at Pūkorokoro Miranda, and David Lawrie was dispatched to investigate. So began a connection with the Trust even when it was just an idea, for it was only founded the following year. It is a connection that endures to this day. And today, at this event commemorating the 50th anniversary of PMNT we acknowledge David's tremendous contributions to the Trust.

David has been a member of the Trust Council since 1976, was Treasurer from 1981 to 1999 and Chairman from 2000 to 2010. In his current role as International Liaison, he has represented the Trust at six Meetings of Partners of the East Asian-Australasian Flyway Partnership, always funding himself to do so. He also participated in several shorebird surveys at Yalu Jiang National Nature Reserve, our sister site in China.

For the earliest founders of the Trust there was much to be done. Many hours of meetings and travel; looking for a place to build; dealing with agencies and landowners; fundraising events; open days; bird censuses. Each role as either chair, secretary, treasurer or editor required commitment and dedication and was likely to consume inordinate hours of unpaid time. For David, that has been multiplied over decades of involvement.

He is literally at the heart of the Shorebird Centre story, having lived most of his life in Franklin, an area strategically located between the Manukau Harbour and Tikapa Moana Firth of Thames. Franklin is where the idea for the Trust originated. It was another haunt for Dick Sibson and Ross McKenzie, when they were not hanging out at Pūkorokoro, and where Beth Brown first encountered birding. And before the centre was built, Trust meetings were held in nearby Papakura.

David has an impressive network of contacts. Whatever the issue or problem, he always seems to know the name of the person who needs to be approached for help. His connections with local government, especially the former Franklin District Council have served the Trust very well. Following a series of earlier attempts to acquire land for the observatory, a suitable site was eventually found, but there was no point proceeding with the land purchase if a building could not be placed on it, and for that to happen there would have to be a specified departure from the Franklin district scheme. David successfully took the case to the council and won agreement for such a departure, so long as certain conditions were met. Only then did the purchase proceed in February 1987.



David Lawrie receiving the certificate from Trust Chair Stuart Laurenson ISABELLA WILSON

Stuart Chambers writes: 'As treasurer his careful use of Trust funds helped achieve the Centre, and his surveying skills and generosity hastened its outcome. He was always a wise counsellor, someone to lean on when in doubt.'

While the Trust's work in Asia has been led by Adrian Riegen, the outcomes would be less without David's work as international liaison, always pushing the flyway partnership, finding ways for more people to talk to each other. He was instrumental in achieving the inaugural PMNT visit to North Korea in 2009.

Former New Zealand Flyway Officer Bruce McKinlay writes: 'In the East Asian-Australasian Flyway Partnership (EAAFP) the International Non-Government Organisations caucus is made up of 16 partners and so it is a consequential part of the total partnership. They extend from the Hong Kong Birdwatching Society right through to the Ramsar Regional Centre-East Asia.

'David is a highly respected representative of PMNT at the EAAFP. His work at the Meetings of Partners (MOP) and on the Communication, Education and Public Awareness (CEPA) working party is acknowledged as leading and inclusive. David's low key and reflective approach stand out in the noise and bustle of the MOP. David's style of a pause before addressing the Meeting reflects the thought and care he has put into his words, consequently he is listened to.

T've always enjoyed David's company at the Meetings of the Parties. We've been able to check perspectives, and he's been a quiet advocate for the interests of on the ground groups and site managers. We've also had some very good days out bird watching as well.'

That low key and reflective approach is often evident at Trust council meetings. Many of us are prone to coming up with an idea which, on the surface appears to be a winner. As it gets picked up and enthused about around the table it inflates. After much discussion – but before we can get too carried away, there will be a quiet observation – usually derived from decade's worth of institutional knowledge

and experience, that gently pricks the balloon. 'We tried that earlier....' or 'Yes but remember....' and there will follow a persuasive reason why it may not be such a good idea, or why substantial modification may be required.

More than anyone David understands that conservation is not something that can be done in isolation. He bridges the space between so many organisations to make our conservation networks stronger. His clear understanding of the importance of personal connections, combined with his genuine interest in those around him means he has a sense of what people want or need from organisations, and how that can be harnessed to support conservation goals. He has a commitment to building community everywhere he goes. And he has those impressive networks. When the world was locked down due to Covid David was still getting reports from an 'inside contact' at the New Zealand embassy in China, on a 'Friends of the Flyway' meeting where the Ambassador invited embassy staff from the countries along the Flyway to a social event in Beijing.

David has always been an astute observer of birds, and for decades has meticulously recorded bird sightings and behaviour around his property, data which are now an invaluable historic record for eBird. But David doesn't bird alone. With his approachable personality, cheerful humour, and eagerness to 'speak up' for the interests of birds and their habitats he has strongly encouraged and supported his friends, colleagues, and others to become careful observers of birds and to encourage them in a range of studies. In New Zealand and across the world he makes sure that those that are new to birding, new to the area, new to the Flyway Partnership have support. He picks people up (sometimes literally, from the airport) and makes sure they are included, shown around, and understand how the places he takes them to are important for shorebird conservation. There are numerous (not quite so young anymore) people around South Auckland who David made sure had a ride to beach patrol, to Birds New Zealand meetings, to the roost to look at the birds.

David has consistently helped to organize and participate in annual censuses of shorebirds in the Firth of Thames and on the Manukau Harbour since the 1960s, and in doing so helped build up our knowledge about the timing of migration, locations and feeding habits of several species of the shorebirds that regularly visit New Zealand. This has been a specific and important contribution to both PMNT and Birds New Zealand.

With all of this it can be easy to overlook the constant work behind the computer that David contributes: consent applications, submissions, Ramsar site applications, flyway network activities, keeping up with the law applicable to incorporated societies. Armed with the knowledge from shorebird counts he took a lead in the preparation and presentation of submissions during development of the Auckland Unitary Plan concerning a compelling need for protection of critically important shorebird habitats around the Manukau Harbour. His current project is preparing the nomination of Manukau Harbour as a Flyway Network Site.

Given all this, it should be no surprise to learn that David's immense contributions to the work of PMNT have occurred alongside active involvement with many other organisations, notably Birds New Zealand (Ornithological Society of New Zealand). He was:

Regional Representative for South Auckland Region for 14 years, from 1995 to 2008, Councillor for 16 years, from 2002 to 2018, Vice-President for two years, from 2006 to 2008, Acting-President for nearly one year, from November 2008 to May 2009,

President for nine years, from 2009 to 2018.

In 2021 David was made a Fellow of the Society, its highest and most prestigious award. The citation noted: 'David has held and served in all official roles in the Society and in doing so he progressively strengthened its governance and elevated the standing of the Society in the wider community. It is tribute to David's efforts that the Society has become more widely known as a respected source of sound information about birds in New Zealand and the South Pacific. He always took a broad interest in birds through his enthusiastic engagement with other organisations and in doing so helped establish enduring linkages with Birds New Zealand.'

He was a Councillor and Vice President of the Auckland Acclimatization Society for 10 years and subsequently Chair of the New Zealand Fish and Game Council from 1990 to 2001. In 2004 David was awarded a Gold Medal by Fish and Game for his substantial achievements in fish and game management. According to the award citation: 'Under his chairmanship the 13 Fish and Game Councils, the heirs of the restructured Acclimatisation Societies, have achieved a high level of cooperation and coordination as Fish and Game New Zealand. This has meant Fish and Game New Zealand has developed into a sophisticated and effective organisation and caused it to become a powerful national advocate for the environment.'

In 1999 David was co-founder of the National Wetland Trust; its inaugural Chairman and is currently Treasurer. He was founding Chairman of the New Zealand Game Bird Habitat Trust, serving in the role from 1993 to 2008. He was, for many years, a local committee member of the Royal Forest and Bird Protection Society. An 'Old Blue' Award was presented to David by Forest and Bird in 2003. He served two terms on the Waikato Conservation Board and was a founding member of the Pukekohe Tramping Club.

Of course he has not done all this in isolation. He has been able to enlist support and services from those around him, particularly his wife Lynne, or people at the office. Indeed, often has this Trust, as well as other organisations, been beneficiary of efforts by the staff at Madsen Lawrie Consultants.

In 2005 David was made a Member of the New Zealand Order of Merit (MNZM) for services to ornithology. This Order is awarded by the Monarch to those 'who in any field of endeavour, have rendered meritorious service to the Crown and the nation or who have become distinguished by their eminence, talents, contributions, or other merits'.

This citation is awarded to David Lawrie for the exemplary and enduring service he has given to the Pūkorokoro Miranda Naturalists' Trust since 1974. At this 50th celebration he could be regarded, as Stuart Chambers notes, as the 'sea anchor which has guided the good ship to its present success.'

Moving the Stilt Hide

on your next visit to Pūkorokoro Miranda you may wonder what has happened to the Stilt Hide on the east side of the Stilt Pools. Well, the observant among you will notice it has migrated - 'go west old hide go west'. - and so, it has. We have moved it about 10m closer to the Stilt Pools partly to allow visitors the chance to get a little closer to the birds but also because the wonderful growth of the new planting had started to restrict the view to the north and south of the hide. The new location should lead to better viewing. Naturally the birds' wellbeing comes first but we are confident they will accept the hide's new location. Of course, we want visitors to get the best experience from their visit, so we hope the move proves to be worthwhile.

We had been approached by Counties Energy who, as part of a team-building initiative, wanted to bring a group of staff members to volunteer at the Shorebird Centre. As moving the hide had already been scheduled for September, this offer was accepted with alacrity.

The hides are all built with the idea they can be moved easily when needed without requiring big machines. They are made in five sections, front, back, two sides and a roof. The panels are just bolted together. However, when the Stilt Hide was first erected some years ago someone got carried away with a nail gun on the roof panel. Eventually we removed the back panel and were about to start de-nailing the sides when the presence of the dozen Counties crew proved highly beneficial.

They reckoned they could pick the rest up and move it in one go. And so, lining up along the inside they moved the structure forward. From the outside it appeared to move on its own driven on by some mysterious force. A wonderful effort and the hide was operational in its new location before the fish and chips had arrived for lunch, and the first visitors were already inspecting the view from its new location with approving comments.

Many thanks to the Counties Team and Peter Fryer, who had driven up from Taranaki for the event and Tansy for planning and orchestrating the move.

Adrian Riegen



Contact Energy crew moving the Stilt Hide ADRIAN RIEGEN



Digger work at Pūkorokoro Robert Findlay Reserve TANSY BLISS



Stilt Hide approaching its new location ADRIAN RIEGEN



Auckland Conservation Board

Keith Woodley reports:

The Auckland Conservation
Board held its September
meeting at the Shorebird
Centre. This continued a long
tradition in that it was at
least the fourth time the
board had met at Pūkorokoro.
Two of those were joint
meetings with the Waikato
Conservation Board.



Conservation Board meeting KEITH WOODLEY

Greater Protection for the Hauraki Gulf

At its meeting at the Shorebird Centre the Auckland Conservation Board received an update on the Hauraki Gulf Tikapa Moana Marine Protection Bill. The Bill passed its third reading in October. It has been a long time coming, and PMNT participated in its genesis back in 2012. In October 2013, under the auspices of the Hauraki Gulf Forum, a Stakeholder Working Group (SWG) representing those sectors that

Stakeholder Working Group (SWG) representing those sectors that have an impact on, or an interest in, the Hauraki Gulf Marine Park, began work on drafting a marine spatial plan for the Gulf. Members of the group, which included Mana whenua, recreational and commercial fishing, farming, aquaculture, industry, community, and environmentalists, had been selected through a series of hui held the previous year. I represented the Trust at the hui.

In 2017 the Stakeholder Working Group produced Sea Change
– Tai Timu Tai Pari, a Marine Spatial Plan for the Hauraki
Gulf. It has sat with central government ever since.

The new legislation creates 12 new high protection areas, five new seafloor protection areas, and two extensions to existing marine reserves. It will increase the protected area of the Gulf by 20 times, from 0.3 to 6 per cent.

But while it will be the largest network of coastal marine protected areas in the country, it still seems rather modest given the overall state of the Gulf. The Bill is certainly somewhat diluted from the recommendations made in the Sea Change Tai Timu Tai Pari, but at least is a step forward.

For what is in the Bill go to:

www.legislation.govt.nz/bill/government/2023/0282/latest/LMS882703 For the latest State of the Gulf report go to:

www.gulfjournal.org.nz/wp-content/uploads/2023/08/SOER-online.pdf
I made a presentation to the board on PMNT activities including

our work in the Flyway, restoration of the Findlay Reserve, our aspiration to achieve greater protection for the Pūkorokoro Coast, and nomination of Manukau Harbour as a Flyway Network Site. The board subsequently produced a letter suporting that nomination.

The District

Recent issues have catalogued the immense changes at Pūkorokoro over the last few decades. Since my arrival in 1993 the district too has undergone considerable change.

Coming back from Kaiaua after dark in the early 1990s you could see a few lights sparsely distributed along the hills to the west and south. Now there are long strings of them. The road past the Centre was once quiet, the traffic extremely sporadic. That too is now very different with a steady stream of vehicles every day. It is well established as an alternative route to and from Auckland: the scenic route versus the southern motorway.

Various local landmarks and attractions have changed or gone. The Miranda Hall for one. The venue for early Trust meetings, open days and fund raising events, it sat prominently at the corner of East Coast and Miranda Roads, until it disappeared in the mid-1990s. Found to have asbestos which was uneconomic to remove, it was demolished. Miranda Hot Springs, once the major attraction - drawing people from great distances, and putting the region on the map, is no more. In the 1990s it was separated into separate businessess, with the Miranda Holiday Park putting in their own pools.

The Hot Springs closed a year or so before the pandemic, and there are currently no indications of it reopening. Meanwhile the holdiay park is now part of the Tasman chain. Another regional icon, the Miranda Valley Cheese Factory, is also no more.

Banners Theatre, a private facility tucked away on the coast at Waharau, held music and variety shows which brought regular busloads of community groups such as Probus and U3A, most of whom would also visit the Shorebird Centre. While it is now long gone, just north of Banners is the Dragons Nest where pottery dragons and other objects continue to be available.

The Bayview Hotel at Kaiaua has gone through several transformations but remains a drawcard for the district. Under its current management it is extremely popular, with dinner reservations essential at weekends and holiday periods. Kaiaua Fisheries has also changed hands several times, but it too remains well patronised by locals and visitors. Then there is the new, such as the advent of Miranda Farm Cafe and Gallery.

The Shorebird Coast today can be a bustling place. There are often a few dozen campervans parked up at Rays Rest, with more in pockets further up the coast - adjacent to the Bayview Hotel, on the northern edge of Kaiaua, or further north at Waharau. With the Hauraki Rail Trail now well established, the growth in cycling traffic has been exponential. Barely a day goes by without bikes parked outside the Centre. Further afield there was a small village called Pokeno which remains our postal address. This always seemed an oddity

to me, especially after my lenghty spells working at the Wellington Mail Centre, where Pokeno was sorted to South Auckland Foward. A further source of disconnect was that from the Centre you can see Thames across the bay. Yet the reality was, as I quickly learned, that making any reference to the Firth of Thames in our address, was a gurantee your mail would be misdirected. Now Pokeno is a burgeoning suburb of the metropolis. Northbound on the southern motorway the morning tailback would occur near Papakura: it has since steadily moved south beyond Drury – with much of the increase from the likes of Pokeno.

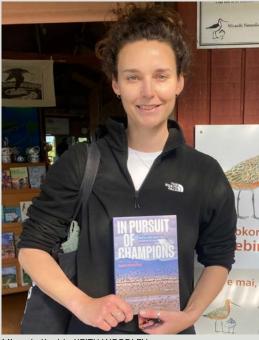
Keith Woodley

Miranda Keeble

A visitor from the UK in late September revealed a 45-year-old link with Pūkorokoro Miranda. Miranda Keeble said her father Ed had visited in 1981 and was so taken with the place he had named his daughter after it. She said he was involved with shorebird banding on The Wash. This was of considerable interest to Adrian Riegen who was here at the time, for he had started his bird banding on The Wash. Ed emailed to say his visit had been facilitated by Beth Brown and Tony Habraken. He was noncommittal on whether he would encourage his daughter to change her name to Pūkorokoro.



Ed Keeble photographing Wrybill in 1981



Miranda Keeble KEITH WOODLEY







Our 50th anniversary commemorations continued with a member's lunch in late August. Unfortunately, limited space meant demand for seats far exceeded capacity. The Sibson Room was very cozy with 74 people seated.

Guests included past and present council members, along with other long-time supporters. Two of those people linked the event to the very beginnings of the Trust. Gillian Eller was an inaugural council member in 1975. David Lawrie did not join council until 1976, although his involvement predated the actual formation of PMNT. A presentation was made to David, acknowledging his more than 50 years of contributions to the Trust. The citation is printed (on page 5). Jennifer, our regular caterer, and her team served up a very fine meal.

1 Tables set for lunch ADRIAN RIEGEN.

2 clockwise L-R Lynne Anderson, Jean Coe, Joy Gough, Martine Darrou, Ted Owens (obscured) Marjorie Owens. ISABELLA WILSON

3 L-R Janice Riegen, Stuart Laurenson, Bob Rigter, Estella Lee, Adrian Riegen ISABELLA WILSON.







4 With 74 seated the Sibson Room was cozy ADRIAN RIEGEN

5 Clockwise from left Emma Salmon, Kevin Barker, Olga Brochner, Louise Sinclair, Ian Southey, Gillian Vaughan (obscured), Cathy Catto, Ian Higgins ISABELLA WILSON

6 Inaugural PMNT council member Gillian Eller and Bruce Keeley ISABELLA WILSON

7 L-R Lyle Millar, Alison Chambers, Stuart Chambers, Trudy Lane, Wendy Oey, Kate Ellis, Martin Saggers ISABELLA WILSON



MOP Tidal Flat Initiative

We are hoping that key shorebird habitats in the East Asian-Australasian Flyway will soon receive greater protection.

incoming tide Yalu Jiang NIGEL MILLIUS.

new initiative on tidal flats and ecologically associated wetlands, will be presented at the 12th Meeting of Partners in the Philippines in November. This measure, which is being co-sponsored by PMNT, is a welcome step given the critical importance of tidal flats for migratory shorebirds, and the increased threats they face.

Tidal flats are among the most dynamic and biologically productive coastal ecosystems on earth. Being shallow they are exposed to light and warmth. They are both saline and brackish ranging from purely marine, to a mix of freshwater and seawater. They are also nutrient rich from the sediments washed downstream or arriving in other ways. The net result is huge biodiversity factories producing high densities of shellfish, crustaceans, worms, and fish along with microbial life such as biofilms. This in turn supports a diversity of shorebirds and other waterbirds, often in large numbers.

Tidal flats are critical to migratory waterbirds for feeding and building energy resources for their annual journeys. But it not just the tidal flats themselves. Integral to the use of such areas by migratory waterbirds in the EAAF, is their use of associated coastal wetlands during part of their daily or monthly cycle. This includes natural wetlands systems like saltmarshes and salt-plains, wetlands used by shell fisheries and for harvesting of other products such as seaweed, and cosmetic mud, as well as saltpans, ash-settling ponds of thermal power plants, and aquaculture. Even seawalls are used as vital high tide roosts when the feeding and roosting grounds of the birds are covered by water.

Unvegetated tidal flats are the most widely distributed coastal ecosystems globally, providing an interface between vegetated coastal wetlands and the marine environment. Their vital link with migratory species also makes them the most connected ecosystem on Earth. That interface between land and sea includes other more vegetated coastal ecosystems such as between mangroves and the sea, and between sea grass meadows and the land. Connected through the flights of the migratory birds that depend on them, they span the globe. They connect inland and northern breeding grounds with tidal flats to the south, and in the southern hemisphere they connect nonbreeding grounds with tidal flats further north.

A large proportion of the globally threatened and near-threatened migratory waterbirds largely owe their threat status to loss of tidal flats and associated habitats in the EAAF.

The Flyway's mudflats are among the most important in the world, as recognized by the World Heritage Listing of large areas of tidal flats in the Yellow/West Sea of China and the Republic of Korea, as well as Ramsar Sites in the Democratic People's Republic of Korea, and the fact that five of the eight top countries covering half of the world's total area of tidal flats - Indonesia, China, Australia, the United States, Canada, India, Brazil and Myanmar – are in the EAAF.

Unfortunately, tidal flats also have a more dubious distinction: they are the most threatened coastal ecosystem with rates of loss that rival or exceed those of coral reefs and mangroves.





Former tidal flats, Saemangeum KEITH WOODLEY.



Oystercatchers foraging on the ebbing tide KEITH WOODLEY



Development underway Bohai Bay China ADRIAN BOYLE.



Interactions birds and people South Korea JAN VAN DE KAM

With continuing development, including land claim of coastal areas, sea level rise and coastal erosion, and more recently the drive for inappropriate mangrove plantation, the extent of global tidal flats has reduced by over 16 per cent (>20,000 km²) since 1984, with 38,630 km² lost since 1970. The area of tidal flats in the EAAF has halved in the last fifty years and continues to decline. Tidal flats are further degraded by threats such as sediment loss due to damming of rivers, encroachment by invasive alien species like spartina, unsustainable harvest and pollution.

Widespread loss and degradation of tidal flats and associated working coastal wetlands, puts biodiversity at risk, including millions of migratory waterbirds which are among the most threatened groups of migratory birds in the world. It also threatens the provisioning of vital ecosystem services:

Tidal flats have high carbon sequestration capacity like that of vegetated coastal ecosystems, especially in estuaries where the hydrodynamic environment promotes carbon burial and riverine sediment supply provides large quantities of organic matter, although research on their carbon capacity is neglected relative to vegetated systems.

They have an important role in climate adaptation including disaster risk reduction, coastal protection, flood defence, not least as sea levels rise and extreme weather events become more common.

Tidal flats and associated working coastal wetlands also provide a range of other critical ecosystem services to coastal communities, such as fisheries and other food production and tourism.

Despite their critical importance, tidal flats and associated working

coastal wetlands remain underrepresented in international policy and conservation frameworks. No international organisation is currently effectively championing their conservation internationally along the EAAF or globally.

The initiative to be presented at the Cebu MOP aims to:

'increase the area of priority well-functioning and sustainably managed tidal flats and associated working coastal wetlands in the EAAF to maintain or recover migratory waterbird populations that depend on them. The role of the Initiative is to facilitate concerted, coordinated, cooperative, connected efforts to protect, sustainably manage and restore tidal flats and associated working coastal wetlands such as saltpans, aquaculture and sewage ponds in the Flyway, including through securing their ecological connectivity.'

Objectives of the Tidal Flats initiative

Assist in resource mobilization for priority actions by EAAFP Partners. Monitor the implementation of the work plan and submit progress reports to Meetings of Partners. Facilitate connectivity of effort, including through communication and exchange of information, experience, best practice and

know-how.

To ensure cooperation between EAAF Partners and others to promote connectivity among tidal flats and associated working coastal wetlands of the Flyway, to the benefit of shared migratory waterbird species.

Compile information on the status and trends of tidal flats and associated working coastal wetlands in the Flyway, including importance for waterbirds and threats to tidal flat integrity and connectivity, opportunities for their conservation, and evidence on the effectiveness of interventions.

Promote research into functioning of mudflats as an ecosystem, and a critical habitat for waterbirds, to support sustainable management and restoration

Support identification and designation of priority tidal flat Flyway Network Sites as Ramsar Sites and World Heritage Sites.

Support human connectivity between tidal flat Flyway Network Sites supporting their protection, sustainable management, restoration and ecological connectivity.

Build capacity for evidence-based delivery of sustainable management and restoration of tidal flats and associated working coastal wetlands through training trainers e.g. in the Ramsar Regional Centre for East Asia

Work with the Communication, Education and Public Awareness Working Group to raise awareness of the importance of tidal flats and associated working coastal wetlands and engagement, among key stakeholder groups, for example through developing campaigns and celebrations.



Our role in education

In our final series of features looking back at Trust history, Keith Woodley records the Trust's role with school visits. From the very beginning an education role was envisaged for the Shorebird Centre. Dick Sibson through the King's College Bird Club was a pioneer in encouraging students to visit. So was school science adviser John Charteris, who was bringing students to the area even before the building was here. John subsequently brought many groups to visit, and I learned a great deal from him. While school visits preceded my arrival, once the centre was permanently open, there was a marked increase. We were proactive in approaching schools. We offered teacher workshops and, in 2000, Sue Reid and I produced an education resource kit 'Shorebird Migration'.

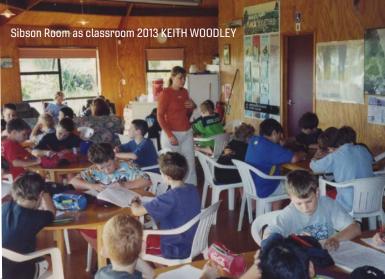
The location of the Shorebird Centre within an hour's drive from much of Auckland, or ninety minutes from Hamilton, is a distinct advantage. Within that catchment are a large number of schools, many of which have visited the centre at least once. Others have come regularly. Morrinsville Primary first visited the year before I arrived, and they have remained an annual fixture ever since; only Covid in 2021, was able to break that chain. Likewise, we welcome Year 13 students from Trident High School, and Otumoetai College annually.

From the mid-1990s to 2010, school visits were almost daily, particularly in the first and last school terms. But then the number of visits dropped. A range of factors were responsible: There were curriculum changes. The cost of bus hire had become prohibitive for many schools. Health and safety requirements placed a greater burden on teacher preparations. Changes in work patterns in society and an increase in the number of households with two working parents made it difficult to make up the mandatory adult–student ratios on school outings.

The Trust response to these challenges was to seek ways of making school visits easier. We created a role of educator tasked with presenting material in schools and facilitating future visits to Pūkorokoro. We commissioned a new education resource kit for teachers and distributed it to schools. Both the resource kit and a six-month pilot scheme for the educator role were funded from a bequest. The Trust appointed Krystal Glen, an experienced young teacher, to the role of educator. Immediately the quality of school visits improved. A year later she was succeeded by Alex Eagles-Tully, who brought similar skills to bear.







Once the initial pilot programme had ended, the Trust continued to fund the educator role from its own resources — but this was draining our financial reserves, and quickly became unsustainable. Education is still a core objective of the Trust but, in the absence of specific targeted funding, at the beginning of 2020 the educator role was reluctantly placed in hibernation. We continue to receive school visits however, especially from within our immediate region such as Parawai in Thames, Turua, Kerepehi, Kopuarahi, Mangatangi and Maramarua.

Meanwhile, In April 2004 our education role went international, with the signing of the agreement establishing a partnership with the Yalu Jiang National Nature Reserve in China. Raising awareness of shorebirds within local communities was one objective of the agreement, and visits to local schools was a way of doing that. The upshot was that I soon found myself standing before a class of seventy senior students at Dagushan Middle School No. 2. Our presentation was well received and followed by many questions. Some were about shorebirds, but many more were about us, and New Zealand. The students were learning English and were desperate to practise on us. And to get autographs. It was a highly rewarding experience, that was to be repeated many times at different schools during subsequent visits. A further milestone was achieved in 2019 with visits to two schools in Pyongyang.

Evident during such visits was how migratory shorebirds can provide direct connections with other cultures. Below the geo-political layer are opportunities for tangible and visible links with people. Using spotting scopes to show individual banded or flagged birds to Chinese of Korean students, is very satisfying. Even more so when you can confirm a particular bird to be from Pūkorokoro.

In early 2022 our education outreach went even wider. We received an invitation to connect with Hooper Bay school in Alaska. Situated on the coast of the Yukon-Kuskokwim Delta, it is in the core breeding range of Bar-tailed Godwits. Via Zoom, Chelsea made a well-received presentation about migratory shorebirds, and there have since been connections with other schools in western Alaska.

Yet more tangible links through shorebirds.



Young observers, Taramaire 2007 KEITH WOODLEY





Constancy over time

Tansy Bliss has been Kaitiaki Ranger for three years, but her connection goes back much longer.



When Keith asked me to throw together a few words about my relationship with Pūkorokoro Miranda, I thought it would be a simple task starting with the afternoon I sat on the front steps in winter sunshine and talked to Maria Stables-Page who was perched in that same pool of light doing her embroidery while also managing the shop. It was less busy back in the early 2000's.

However, from that moment of initial connection, it all gets blurred and the golden thread that has stitched me into the fabric of the Pūkorokoro landscape twists back and forth, repeats itself, breaks, re-emerges, fills in gaps, loops around, tightly weaving me into a world that has become an essential part of my life.

Despite all the different stitches woven over time, there is an overriding consistent element. The birds and their movements fill me with joy and inspire me to write. I am therefore sharing some of the words scratched in my notebooks during my time at Pūkorokoro.

Monday 4 June 2011 – helping to cover for the Pūkorokoro team while they attended the OSNZ (as it was then) conference.

In the grey dawn the birds huddle on the Stilt Pond murmuring and fidgeting as daylight picks out their individual shapes, their mottled plumage reflected so perfectly in the still water. My gaze slips from one to the other not knowing who is who, until an enormous swell of energy plucks bodies from reflections, casts them helter-skelter against a dull grey sky and scatters them across the mud flats. Instantly heads are down, deep in mud, and out, and on with a pace depicting some urgency and purpose that had not existed moments before.

Shellbank and spoonbills KEITH WOODLEY

The morning passes, watching birds, checking the knot flock for a stray Arctic migrant. Back and forth I go mimicking the birds themselves as they pace the mud flats not looking up or being distracted by the stationary forms of other birds, solid on one leg, bill under wings, orientated into the wind.

I follow suit and weave between the birds, noting bill length, underbelly jizz, until finally I see it, an obvious intruder; the belly is clean white, body held horizontal, back a scalloped black and grey, legs short and black, moving rapidly as it picks its way across the mud flat. It lifts its wings revealing a prominent white wing-bar, a leading edge. I smile in relief; the Sanderling is mine.

Sometime later, after watching spoonbills stir from their slumber and march to the dropping channel for a morning preen, I turn into the cold wind and retrace my steps to the ponds. A White Heron strides nonchalantly from the drain and into the pond beside the old hide. I stop to watch, and he strides on into the rushes and starts fishing without so much as a glance in my direction. He fills the screen of my scope, his head is crystal clear, the neck curled, the eye searching and a drop of water is flicked from his bill as he swallows his prey.

He is pure white, his feathers totally smooth, nothing is out of place until I come to his legs, a raw pink on the inside especially on the upper portion. The exterior is an acceptable tough scaly black. It seems like an intrusion of privacy to be examining him with such intimacy, so I swing the scope up and continue to watch his fishing. The wind is cold; my hands are numb. The heron continues to fish.

Late afternoon and the mud flats are empty, the birds still feeding out in the Firth. I sit in the sun, out of the wind, my back against the old hide facing the Stilt Ponds.

My telescope stands idle; I lean back to relax but in doing so spot the first of many small flocks of godwits and knots bound for the pond. The godwits come in twos or threes, sometimes a party of five or six, flapping in unison until they slip into an equally synchronised glide and start dropping towards the ponds. They plummet in an irregular fashion from the sky. I follow them with my binoculars and watch the wings go up and the legs come down as they fall unceremoniously into the ever-increasing flock. Knots come in larger groups, ten, twenty, thirty or more, a godwit slipsliding on the edge. The knots flight is faster, their descent quicker and they leave a faint drumming sound as they flash overhead. It goes on for almost an hour until the pond is packed with birds, preening, resting, feeding, shuffling.

I stand beside them now, the sun has gone, and a full moon has risen behind me, huge and yellow emerging from clouds that smother the Coromandel ranges. As she climbs, flocks of South Island Pied Oystercatchers and Caspian Terns lift from the shell bank and fly across her light in an unending stream until I'm past counting and just watch.

Suddenly there is a roar on the ponds. All the birds are in flight, near two thousand forms fill the sky above me, black against a deepening blue. They toss and turn, interchanging direction, height and spacing. I stand mesmerised as they continue on and on, not wanting to come down to rest in the now near blackness of the ponds. Finally, they settle, lit only by moonlight and a subdued murmuring fills the still night.

16 May 2021 – A totally different morning. Grey overcast skies and dampness from overnight rain mark the edges of today. A skein of Canada Geese fly north, their tight V formation morphing into a loose line as they disappear into the greyness. Low cloud drifts in, cloaking the hills behind me. A thrush sings from the mangroves. A repetitive morning song. A Fantail squeaks and a Grey Warbler utters a few refrains. A Myna flies past. The majority of the teal are sleeping, but one bathes and then drifts away on the still water. Background noise is stilts and teal, quiet murmurings and calls above which the Skylark sings, invisible in the enveloping misty rain. Swallows already hawk the water's edge, flying low, skipping delicately between forward flight and insect catching dips over land and water.

A White-faced Heron stalks prey in the drooping fennel flats, before retreating to the water's edge. Stilts fly over and drop into the pond. Pied Oystercatchers labour through the sky and keep going presumedly to some wet paddocks under the mist. There is a bit of wind, dragging the clouds south, leaving moisture hanging in the air. The day unfolds and the birds keep coming.

Christmas morning December 2024 – Birds on the mud flats, distant in the Firth. Black marks on a slivery gold shimmering plain. Thick, irregular, abundant.

There is an intensity of feeding that seems to deepen towards the dark solid bank of mangroves softened by taller trees on the plain, emerging ethereally out of the early morning mist. Stilts call incessantly closer by. A White-faced Heron utters a guttural cry, while Skylarks sing from the forest of wild carrot tops, skimmed by swallows.

A cluster of spoonbills work the shallow at the edge of Pūkorokoro stream, only just touched by sunlight, dappling their stark white plumage.



February 2024 – Restless birds beat their wings against a cloudless sky. Dropping down they sweep their shadows across the tapestry of dry grass, rushes, sedges, shell and mud. Their numbers are such, one feels the air pushed aside as they pass.

Calls accompany them. Shapes are familiar, distinctive, merging as one, then separating out as they come to land. Stark black and white wheel and take up their position, landing almost on the run, giving rise to a momentary advancing flood of birds, spiked with colour, bills and legs in motion, then suddenly still and partially tucked away.

Cascading out of the flock are small groups of fast flapping silver shapes, spinning, glinting, scarfing until they too are down, travelling across the mud as if thrown and rolling to rest.

Longer shadows cross the land, morph upwards into birds and pour onto the mud. Long legs arrest the forward motion, and equally long bills are quickly tucked away. With minimal jostling they assume an alert but roosting pose.

Compact arrow heads are also in flight. It seems rapid, more direct and on landing in moist muddy channels and flats they choose to feed. Its looks frenetic, bills hoovering through the mud, heads down, bottoms up they work a patch and move on. Eventually they too will preen and rest.

A group of scattered elegance claims its own patch of mud. They must have come from the flock, but suddenly they are there, heads up bearing golden breasts and backs to the sun. A moment later, unnoticed, some are in full resting position, sitting with legs tucked away, their golden splendour somehow blending beautifully with the dull mud.

It doesn't stop, the movement, the motion, the marvel of so many birds, roosting and feeding together.

As dusk settles with the flock, long shafts of evening light amplify the fresh flush of breeding plumage on those birds soon to head north. Subtle tones of orange, reds and russet browns replace the flat greys and fawns displayed for the last four months.





The agreement between PMNT and Yalu Jiang National Nature Reserve in China, first established in 2004, has been renewed and updated. Trust member and former Flyway Officer Bruce McKinlay signed the Memorandum of Agreement on behalf of the Trust Council in Beijing on 29 September.

Hosted by the National Forestry and Grassland Administration (NFGA), others in attendance included New Zealand ambassador Jonathan Austin, NFGA officials from Beijing and Liaoning, the Vice Mayor of Dandong, and EAAFP CEO Jennifer George.

Bruce reports that LI Yunqing, Vice - Administrator of NFGA, stressed the importance of this work and relationship, delivering a clear message to Liaoning NGFA officials to give it priority.

The original agreement produced some good outcomes for migratory shorebirds. Annual bird surveys by PMNT members and Reserve Staff between 2004 and 2010 confirmed the critical importance of Yalu Jiang as a migratory stopover site. We also participated in various activities to raise local awareness of the site's international significance, including seminars, school visits and bird festivals. Visits to the region since 2010 revealed a higher level of public awareness and official recognition

of the value of shorebirds, including the use of bird images in tourism publicity campaigns for Dandong. This elevated profile for shorebirds in the region undoubtedly contributed to the nomination of Yellow Sea sites for World Heritage listing. But since the 2014 publication of the joint report Yalu Jiang Estuary Shorebird Survey Report 1999 - 2010, the partnership with Yalu Jiang entered a hiatus. This resulted from several factors. Having established a successful survey program, we envisaged further monitoring of shorebird populations in the region could be done by Chinese researchers. From 2014 PMNT shifted its focus to engagement with DPRK, although with China the main gateway, most visits to North Korea also involved visiting Yalu Jiang.

While in Beijing, Bruce had discussions with Ambassador Austin and embassy staff. He noted how the previous MOA 'had waxed and waned over time but was an important commitment by Pūkorokoro and had delivered a lot of good work in the past.' So the renewal of the agreement was welcome.

He also mentioned Ambassadors for Nature, an initiative by former ambassador Clare Fearnley to mobilise support for shorebirds among the embassies of flyway countries. Bruce noted this as an important example of New Zealand leadership which should be maintained. New Zealand Embassy Staff remain committed to supporting PMNT work at Yalu Jiang. It is noteworthy that all New Zealand ambassadors to China since 2014 have visited the reserve. Jonathon Austin's visit in April 2025 'means that Yalu Jiang must be the most visited nature reserve anywhere by New Zealand Ambassadors.'

The Trust is looking forward to reengaging with Yalu Jiang to help strengthen the reserve's ability to protect shorebirds from the many pressures facing them during migratory stopovers, be they human induced, or changes from global warming and sea level rise. Ecological damage around the Yellow Sea has drastically reduced available habitat for millions of shorebirds migrating in the Flyway, and it is vital that urgent action is taken to secure remaining habitats, of which Yalu Jiang is probably the most important, especially for Bar-tailed Godwits from New Zealand. It is in our interests to assist the reserve in ensuring lasting protection for them and their epic migrations.

Photo: MOA signing Beijing 29 September L-R Sun Hongyan, Wang Weisheng, Xia Jun, Li Yunqing, Liu Yang, Jennifer George, Bruce McKinlay, Jonathon Austin, Terry Townsend, Jennifer-Lee Pritchard NFGA

Pūkorokoro Miranda Naturalists' Trust



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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), by direct credit to bank account 02-0290-0056853-00 or call the Centre with your credit card details. Contact 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















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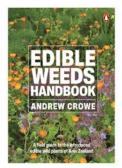
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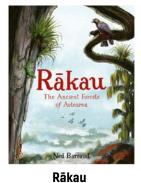
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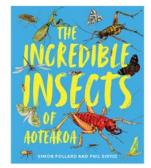
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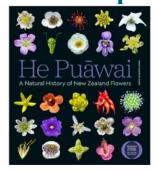


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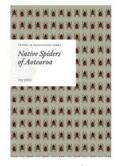


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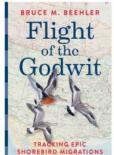
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