

Pūkorooro Miranda News

Journal of the Pūkorooro Miranda Naturalists' Trust

May 2022 Issue 124

Will Perry off on a new adventure

New funding
provides
opportunities

The stars of
Pūkorooro
Miranda



Collaboration provides five years of opportunities

Ngāti Paoa and Pūkorokoro Miranda Naturalists' Trust have collaborated on a funding application aimed to enhance and protect a precious taonga, the estuarine and coastal habitats of the many shorebirds that are found on the Pūkorokoro - Wharekawa Coast. **Gillian Vaughan** reports that in late March exciting news arrived when Foundation North advised that our application was successful.

The application was to Foundation North's GIFT fund and was to allow us to employ someone in a ranger role for up to 5 years to accomplish three key aims.

- Direct restoration and management of habitats
- Formalise the exchange of information and ideas between Te Āo Māori and conservation science.
- Increasing engagement with the wider community

G.I.F.T. - the Gulf Innovation Fund Together is a fund run by Foundation North to support organisations like ours "entrepreneurs, innovators and catalysts" to test, scale and create new systems to restore the mauri of Tikapa Moana/Te Moananui ā Toi (the Hauraki Gulf).

The aim of the fund is "to deepen the collective understanding of connections, interdependencies and long-term intergenerational perspectives that will restore and increase the mauri (life force, vitality) of our whenua (land), our awa and roto (lakes and rivers) that feed into the Tikapa Moana / Te Moananui ā Toi and our tangata (people)."

Our application met those aims with its change of focus. Historically, despite common commitments to protect and restore the natural world, mana whenua and tangata tiriti have tended to work separately, informed by different world views. There is growing recognition of the need to work differently, together, using the best of both systems for the sake of the natural world, and for people, who are part of that world.

PMNT and Ngāti Paoa will work together (and with other agency and community partners) to restore and enhance the Mauri of this part of Tikapa Moana. Our long-term objective is to encourage collaboration among all landowners on the coastal strip between Pūkorokoro and Wharekawa, including DOC and Hauraki District council. Restoration and enhancement of biodiversity should be a common goal of all. Enlisting engagement from the wider community as stakeholders in the health

of the coast is a further objective. The Pūkorokoro Kaitiaki/Ranger will play a key coordinating role in working towards these objectives.

As well as having a role in community engagement the person in this role will have a direct role in

- co-ordinating continuing planting and management of existing plantings on the Robert Findlay Wildlife Reserve,
- expanding and managing areas suitable as high tide roosts for shorebirds Identifying areas along the coast up to Wharekawa Marae that are under management by other agencies (Council, DOC) that would benefit from additional protection or enhancement and contributing to a program to help restore and protect these.
- contributing to restoration plans, then starting work on restoration of a further block of land owned by PMNT.

Next steps

Since the advice our application was successful we've met with Foundation North to talk about their expectations for the next five years. Our next steps are to convene a group from PMNT and Ngāti Paoa, make sure we are all in agreement on the shape of the role, finalise a job description and advertise.

We'll also be looking at what other funding applications we can put in to support the role. This funding application is designed to allow the role to have a significant positive impact even if all other funding applications fail. However better progress will be made with extra funding!

Exciting times ahead - watch this space!



A Ngāti Paoa perspective

Frank Rawiri of Ngāti Paoa writes on the perspective of Ngāti Paoa, their role in protecting the Gulf and the importance of taonga species such as kuaka.


The mahinga kai of Tikapa Moana and all its water tributaries; and the northern food bowls are areas of ecological importance to Ngāti Paoa, being areas of habitat and breeding ground for rare and threatened native bird species and marine life.

Ngāti Paoa believes that all natural resources share a common genealogy. All things (animate and inanimate) descend from Ranginui and Papatūānuku. Their many children are the Atua, or kaitiaki (deities or gods) of the various resources. This shared whakapapa means all things are connected and the individual mauri (life force) of resources is inseparably and inextricably connected with all other natural resources.

Accordingly, Ngāti Paoa is interested in enhancing the ecological value of the cultural landscape. This is not only for the physical and cultural sustenance the area can provide, but also for the relationship of the flora and fauna, and water to Ngāti Paoa.

The footprint of Ngāti Paoa on the whenua of Pūkorokoro gives us a strong taha wairua with the land which provides our people with a sense of meaning, connection, and purpose for the kaitiaki stance we hold in relation to the kuaka. As kaitiaki within this rohe it is the responsibility of the Iwi, hapū, and whanau to work towards a common goal of 'listening to the cry of the kuaka' and restoring their habitat to ensure the migration to the shores of Pūkorokoro continues.

The Naturalists' Trust have been taking care of the kuaka for decades. The scientific studies undertaken have provided a wealth of knowledge for all to share and we as Ngāti Paoa will introduce our mātauranga practices to enhance the awareness of the fragile hold kuaka currently hold in our environment.

The sheer strength, tenacity, and resilience of these small birds to travel from the other end of the world to our coast using the winds to assist their journey, we as kaitiaki have a duty to the kuaka as a testament to their wairua. 

Thanks for everything Will!

Keith Woodley reports that Will Perry, our Chairperson, long standing council member and regular volunteer shore guide is about to head to the deep south.

At the recent AGM Will Perry advised is stepping down as PMNT Chair and from PMNT council. Will's wife, Holly, has accepted a position at the Otago Medical School, so they are moving to Dunedin. It is a great opportunity for Holly, a new experience for the family, but a sad development for us.


If it seems to me that Will has always been around, the evidence bears this out. He has been involved with Pūkorokoro for slightly longer than I have. A visitor book for 1991 confirms his first visit pre-dates mine by seven months. Subsequently he and Holly and their son Emlyn were regular visitors, staying many times at the centre. Indeed, it was a family affair as Will's parents Lyn and Elizabeth were also regular guests during their frequent visits from Wales and Dai Stacey, a regular volunteer over the summer period in pre-covid times is Will's brother-in-law.

Will has served the Trust over a long period. After joining council in 1995 he succeeded Pam Agnew as secretary in 1999 and retained the role for the next 19 years. In 2018 he succeeded Gillian Vaughan as Chair and has recently been leading council through a series of discussions about the next twenty years.

Will has been a regular on the Firth of Thames wader census for many years and contributed to our Flyway work, joining survey teams to China in 2007 and the DPRK in 2019.

I hold an enduring memory from a visit to a school classroom in Dandong. The senior students were practising their English and, keen to learn about us, peppered us with questions. Will mentioned he belonged to the Auckland Welsh Choir, which immediately resulted in an invitation to sing. Hence a lullaby delivered in Welsh. Will also bought his love of music to the Shorebird Centre, bringing the Auckland Welsh Choir to the Centre for a performance of the song the Journey of the Kuaka, reminding us all that there are many ways into engaging with the environment.

Will's presence around the council table will be missed. We do however expect to see him visiting the Centre and reserve from time to time, scope in hand.

Thanks for everything Will - all the best with your next adventure. 



Top photos, Will Perry in the DPRK, helping with building hides. Survey at Yalu Jiang, becoming Chairman. Photos A Riegen, W Hare, J Eagles, Unknown.



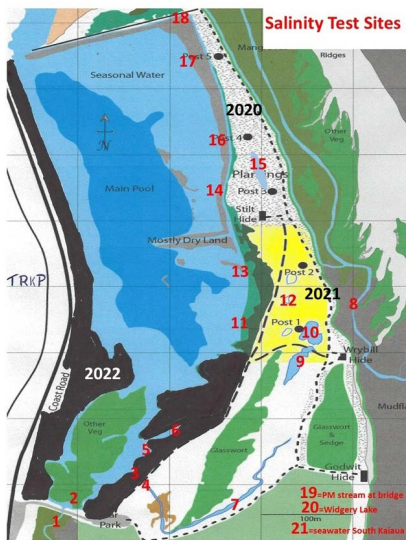
COVER: Will Perry stepping out for survey work in the DPRK. PHOTO Adrian Riegen

Building knowledge

Not content to simply be responsible for running a massive planting programme Ray and Ann Buckmaster have been out on the reserve sampling salinity levels, starting to build up baseline data for a key piece of knowledge. Understanding how salty the area is, and how that changes over time, will inform a lot of decisions about management of the area.

Salinity of seawater varies but 34.5 grams per litre is a mean value. On the first day of sampling (after March rain) the Stilt Pond were hyper-saline, with measurements as high as 44.8 grams per litre. When the pond previously dried up a salty residue would have remained, which would have dissolved when the pond was filled by the recent mini storm surge.

Salinity in Widgery Lake on the same day was 10.2.



Bad luck is catching

The bad luck associated with the Pacific Golden Plover project continued, with a final attempt in early March producing the now regular results. No PGPs were caught. On the same night we were hoping to catch Red Knot, Phil Battley from Massey University was up with the aim of putting transmitters on knots. Unfortunately the results of that were no better. It appears that the Golden Plover curse is contagious.

Rushes on the Stilt Ponds

There was serious concern for a few hours when something that might be Spartina was discovered on the Stilt Ponds in mid-March. Luckily expert help was not far away, identifying the culprit as a sedge

rather than a grass. The biggest indicator was that the sample had a triangular stem which makes it a sedge because 'sedges have edges'.

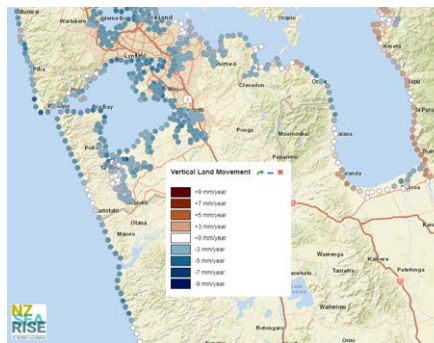
"To identify spartina from other grasses you can run the edge of the blade over your lip and it won't catch - hairless, smooth and pointed. Almost the only smooth-edged, salt-tolerant grass." However our expert also made it clear they took no responsibility for any lip injuries taken from following this advice!

Sea level rise

With land and a building on the coastline, and with a focus on shorebirds and coastal ecology at the heart of what the Trust does it is no surprise that the impacts of sea level rise are discussed regularly at the Shorebird Centre.

A new tool released by Takiwā plots which parts of NZ's coastline are gradually moving up, which are moving down, and which are static. A point every 2km is shown on the map. The variation ranges from 5mm of uplift a year to more than 8mm of subsidence a year.

On the map below a brown dot is uplift and blue is subsidence. In general

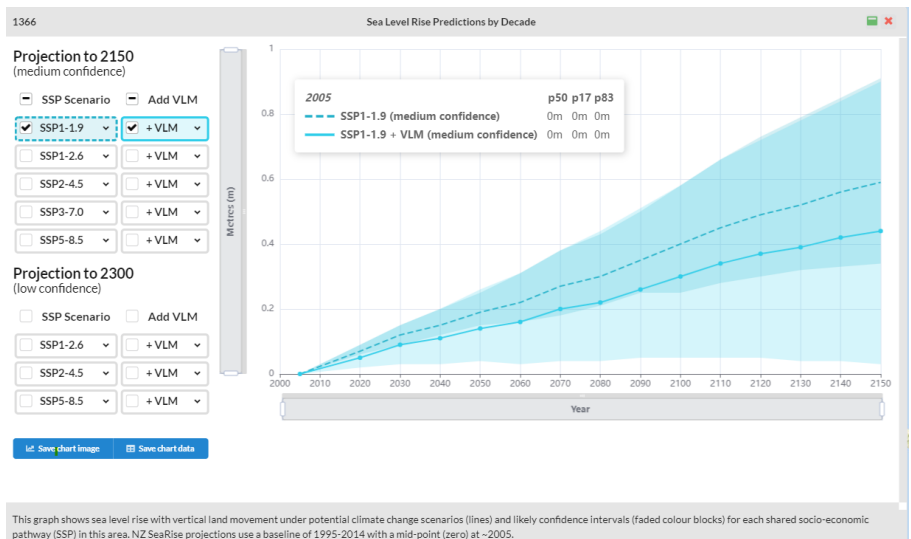


the Firth of Thames area is stable or rising, white and brown dots, while the Manukau Harbour is dropping.

You can then select a point and review the implications of each of the future scenarios from the Intergovernmental Panel on Climate Change. Using the IPCCs most optimistic forecast (warming of 1.5C) the implications for the Pūkoro area are that the expected sea level rise, around 19cm by 2050 and 27cm by 2070, will be offset by land movement and the effective sea level rise will be 14cm rising to 20cm. The graph puts a lot of confidence intervals around these numbers, showing how certain they are.

The website shows that sea level rise is forecast to be relatively similar around NZ, but that land movement can really change the impacts. Just up the road at Kaiaua under the same scenario effective sea level rise is predicted to be 7cm higher than at Pūkoro by 2050 and 9cm higher by 2070. Similarly the Kidd's shellbanks, an important wader roost on the Manukau, are predicted to have effective sea level of 26cm by 2050 and 36cm by 2070. If you look at the other IPCC scenarios, depicting more severe and possibly more likely climate change scenarios you will find higher predicted sea level rise.

This tool will be immensely helpful in planning for the future. As information becomes more certain and available we hope to see decisions being made taking these factors into account. Check on your area or local wader roost at <https://searise.takiwa.co/>.



This graph shows sea level rise with vertical land movement under potential climate change scenarios (lines) and likely confidence intervals (faded colour blocks) for each shared socio-economic pathway (SSP) in this area. NZ SeaRise projections use a baseline of 1995-2014 with a mid-point (zero) at ~2005.

THE FUTURE OF THE COASTLINE. Images from NZ Searise - searise.takiwa.co reproduced under Creative Commons licence.

Save the date

After having to cancel in 2021 due to COVID new dates are being set! AWSG have decided to hold a virtual conference from 29-30 October 2022. Keep an eye on www.awsg.org.au for more. Closer to home we've set the date for the next Field Course, 19-25 January.

Shorebird Centre Poet Laureate

Amanda Hunt, well known to regulars after two seasons as Shore Guide, is also an excellent poet. A recent work on Red Knot has been published in the New Zealand Poetry Yearbook 2022 which is on sale at the Centre. Amanda has been kind enough to let us show her work as part of the Centre displays, with artwork by Keith Woodley and photography by Johan Kok completing the display.



Help Wanted - The Editor

If you've got a hankering to be a reporter, love playing with layout then contact Keith at the Centre to talk about how you might be able to help with some or all of the magazine. We need you!

What's on at the Shorebird Centre

Saturday and Sunday 25 and 26 June Planting weekend. Planting is 9am to 12pm with a good lunch! Come no matter what but if you can let the team at the centre know you are coming that will make organising easier. *Note that because of weather and Covid events are subject to change - keep an eye on emails and the website.*

Sunday July 3rd Firth of Thames Wader Census Whether you are highly experienced or brand new you'll be welcome meet at the Shorebird Centre at 8am. Keep up to date with any changes by checking in at the Centre.

Saturday 6 August working bee and potluck dinner. Join in on some or all of this annual day.

Sunday 30 October Spring Migration Day. We'll update you on the speaker as we get closer.

SAVE THE DATE
29-30 OCTOBER 2022
THE AUSTRALASIAN SHOREBIRD VIRTUAL CONFERENCE



HOSTED BY THE AUSTRALASIAN WADER STUDY GROUP WITH THE QUEENSLAND WADER STUDY GROUP

Recent sightings at Pūkorokoro

Arctic Migrants
510 Kuaka - Bar-tailed Godwit
Huahou - Red Knot

NZ Species
2300 Ngutu parore - Wrybill
2500 Tōrea - SI Pied Oystercatcher
553 Poaka - Pied Stilt
4 Moho pererū - Banded Rail
42 Kōtuku ngutupapa - Royal Spoonbill
470 Tarāpuka - Black-billed Gull
Tara - White-fronted tern
Kōtuku - White Heron
Tūturiwhatu - NZ Dotterel
Taranui - Caspian Tern

and the regular contingent of waterfowl!

Piako Roost


Keith Woodley reports that work to transform the Piako roost site is almost done. The mangroves have been cleared and most of the farm infrastructure removed.

Once work on strengthening the stop banks and installing a new floodgate is signed off, the area will be reopened to the tide.

It is a win-win situation for all concerned. The 10.5 ha area of farmland had been enclosed within stop banks, one of which breached in the wake of tropical cyclone Gita in 2018. Almost immediately the flooded area began to attract thousands of shorebirds. Just as quickly, however, mangroves began encroaching so that within just two years they threatened its viability as a roost site. Meanwhile, Waikato Regional Council had acquired the land to boost flood defences. Three floodgates on the true right bank near the mouth of the Piako River were nearing the end of their useful life. The floodgates provided protection to 850ha of good agricultural land and the communities within. The council began work to rationalise these into one floodgate asset to reduce replacement and ongoing operation and maintenance cost as well as ensuring the level of service is maintained along with options for longevity of flood protection.

Once we drew their attention to the land's value as a shorebird roost site, the council approached the Trust for advice on what needed to be done to maintain it for the birds. We indicated the mangroves needed to be removed, and that raised roosting areas should be installed within the enclosure.

And the great shorebird flocks should return to using it. The Council is aware that ongoing management will be required. Mangrove seedlings will need to be controlled, and roosts regularly weeded. We will monitor how birds use the site, before recommending where bird hides should be positioned.

For WRC this work is part of the Piako River green corridor project, which aims to create wetland habitat linking the Firth of Thames with the Kopuatai Peat Dome. Both Te Kapa Moana the Firth of Thames and the Kopuatai Peat Done are Ramsar sites, sites of international ecological significance. This work sits alongside riparian fencing and planting and pest control. 



COMPETITION: While still used regularly as a roost this photo from 2019 shows the rapid mangroves growth. The photo below shows the area in April 2022 with diggers building small islands for roosting on higher tides. Shelters for the cycle track and some remaining farm infrastructure. PHOTOS / Above Janie Vaughan BELOW Keith Woodley



From the Literature

As we continue to follow our godwits on their journey, learning more about them with every passing day others around the world are also discovering more about their birds. Gillian Vaughan shares some of what she's seen come across her Twitter feed recently.

There are days when I enjoy a good solid scientific paper - getting deeply immersed in all the details. But there are other days where I feel like Twitter is the best way to keep up - no matter what people say it has to be pithy - but there are usually links if I want to know more. If you are reading this electronically click the images to go to the source. Otherwise google a few of the key terms, include the word Twitter and you should get there!

Scottish Dotterels and Climate Change



Understanding the implications of climate change on migratory shorebirds is work that is going on in many areas. Dotterels that breed in Scotland are breeding at the southern edge of the species range, and as temperatures increase and habitat changes (e.g. vegetation growing taller, changes in insect abundance) their breeding range is shrinking. The population may have dropped by more than half over 25 years. But it seems more complicated than simply the direct impact of climate change at the breeding site.

One new area of investigation is into whether hot, dry years in North Africa, where the Scottish population of Dotterels migrate, has a larger impact on young birds and may stop them from joining the breeding population for a year. As Morocco continues to break temperature records, with a temperature of 45.7C on the 20th of May being the hottest ever temperature recorded in May, it is becoming increasingly important to understanding the impacts of climate change at the non-breeding grounds as well as on the breeding grounds.

In fact if you like waders, are on Twitter and aren't following Graham - you should start now!

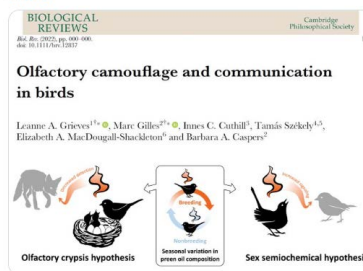
Preen oil, smell and predators

When you see birds rubbing their heads on their lower backs before preening their feathers what they are doing is picking up preen oil. Preening oil into their feathers is an important part of a

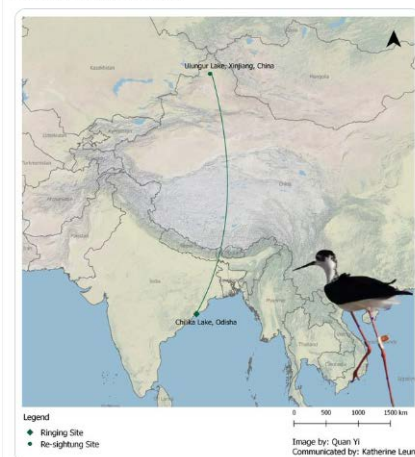
birds feather cleaning and maintenance. But what else?

For 20 years people have been studying preen oil, it contributes a lot to the scent of the bird, so is that doing anything - probably yes. In many species preen oil smell changes seasonally. It is thought that the scent is part of the mate selection process - and Marc Gillies suggests that the change in preen oil of ground-nesting birds - like shorebirds - might reduce scent at the nest protecting against predation.

Migration or Dispersal?



In 2017 the Bombay Natural History Society marked a Black-winged stilt with a band and flag. In April / May 2022 this bird was seen in northern, inland China, at Ulungur Lake. They've had other re-sightings from Russia, Afghanistan etc. In the same feed - A Common Redshank flagged on the other side of India was



seen near Altai, southern Siberia. Their is still so much unknown about the Central Asian Flyway.



Its not all shorebirds

This thread about an American Robin that carried a satellite transmitter shows how much can be learned from a single bird- and how the story of a single bird can sometimes connect with people in a way that stories of populations might not. Warning - at the time of writing there was no update on how the story ends.

Alex Lees short summary on the state of the worlds birds, 9 tweets with pictures makes interesting if somewhat depressing reading. The red list index shows a steady deterioration in the conservation status of birds worldwide, and that proportionally the temperate



areas are doing worse than tropical areas.

And its not all Twitter. So much is happening in community conservation and while its deservedly got a bad rap you can find out so much on facebook. I learned so much from <https://www.facebook.com/BandeddotterelstudySBay/> this year. Look them up!

Oriental Plover

Keith Woodley reflects on a recent, long-awaited visitor to the area.



UNOBLIGING AND UNACCOMMODATING The Oriental Plover came and went on its own timetable, never present reliably, and never posing well for photos, or birders. Photo / Scott Brooks

The wader wall display at the Shorebird Centre has been in place since 2003. I always refer to it during the countless talks I have given since, pointing out its key features: birds are depicted life size and all species of shorebird recorded on the Firth of Thames are included. There are the most common such as stilts and oystercatchers, godwits, and Wrybill. There are those that occur regularly in small numbers such as Sharp-tailed Sandpipers and Red-necked Stints. Then there are the rarities, the most prominent of which is Oriental Plover, for which there was but one record, albeit of 10 birds that were last seen in January 1955. So, there it sat as a prominent outlier towards one end of the display.

Then on 5 February a photo was posted online showing a strange bird on the dry Stilt Ponds at Pūkorokoro. Taken the day before by 12-year Caiden Binzegger from Hamilton it was a zoomed up, fuzzy image of a bird standing behind some godwits. Despite the quality, there could be no mistaking it to be an Oriental Plover, the first record on the Firth in 67 years. It was seen again only twice, on 18 February and 21 February, and always on the Stilt Ponds

It is a particularly handsome species, tall, upright, and elegant with comparatively long pale legs. In non-breeding plumage, which is more likely to be seen in New Zealand, it is drab mottled brown above, pale buff-brown on the face and upper breast, and white below. The underwing is dark brown, and there is little or no pale wing bar on the upper wing. Like many waders

however, in breeding plumage it is transformed. Across the breast there is a broad chestnut orange breast band with a black bar below. The face is white though in some males almost the whole head is white. Leg colour varies from pale yellow to pink or brown.

In non-breeding plumage it may be confused with New Zealand Dotterel. However, in body size it is slightly smaller while its upright stance, long legs and dark under wing are distinctively different.

There have been about 19 accepted sightings in New Zealand since the first sighting of 3 birds in the Kermadec Islands in April 1908. Subsequent

records have covered the country, from Parengarenga in the Far North to Waituna Lagoon in Southland, from Greymouth to the Chathams. Two birds were seen in the Manukau Harbour in March 1994, but all other records are of single birds. Except those 10 in 1955. The most recent New Zealand sightings were one at Port Waikato in September-October 2013, and one at Ohiwa estuary, Bay of Plenty, January-March 2016.

There is something cryptic about these birds. According to HANZAB, no bird has been recorded at a location in New Zealand for more than a few days. A description applying to its normal non-breeding range -- 'Gregarious in




HANDSOME in breeding plumage. This Oriental Plover, photographed in April 2016 at Ohiwa Harbour was more approachable Photo / Ian Southey

small parties, or flocks of hundreds (occasionally thousands) certainly does not apply to the odd vagrant recorded in this country. But it goes on to describe where they may occur: 'on dry grassland and thinly vegetated plains and inland areas, mainly northern Australia...and often seen far from water.' Here may be a clue as to why the Pūkorokoro bird was not regularly seen, apart from those three records.

Unlike many other vagrant waders that depend on estuarine habitats, and which can reasonably be expected to be deposited in front of the viewer by the tide, Oriental Plovers could disappear anywhere into surrounding pasture. There they are less likely to be observed by 'reverent eyes' as Dick Sibson would say. So, this bird could have been anywhere around the Firth.

But it is not just here that they are elusive. They breed across southern Siberia, Mongolia, and northeast China, otherwise very little is known. 'The nest, eggs and chicks were first described as recently as 2006.'

- www.nzbirdsonline.org.nz Melville, D.S. 2013 [updated 2017]. Oriental dotterel. In Miskelly, C.M. (ed.) New Zealand Birds Online. www.nzbirdsonline.org.nz
- HANZAB Vol 2. Pp 877-883 

What's in a Name?

After writing an article on Plovers which references an article on Dotterels **Keith Woodley** was obliged to investigate.

Ornithology can be a linguistic minefield. There are numerous examples where confusion over bird names may occur. Take the Oriental Plover for instance, or Oriental Dotterel if you prefer. What is the difference?

In *Shorebirds of New Zealand: Sharing the Margins* I addressed the issue as follows: 'The terms 'plover' and 'dotterel' are often used interchangeably to describe some members of the Charadrius family, and both seem to originate in the realm of myth and misconception.'

Plover is derived from the Old French plover that, in turn, is probably from

the Latin pluvia meaning rain. In 1728 Linnaeus attended a lecture by Swedish explorer and scientist Olof Rudbeck the Younger, in which he referred to Golden Plovers as regnipipare, or rain caller. They were believed to gather together and call before rain. Linnaeus later bestowed the golden plover genus with Pluvialis. Alfred Newton in his monumental Dictionary of Birds (1896) was somewhat dismissive of all this. The association with rain 'is not in accordance with modern observation, for in rainy weather Plovers are wilder and harder to approach than in fine.' He pointed out that others thought the name derived from the spangled upper plumage of the golden plovers, spotted 'as though with rain drops.' (Newton 1898.)

In any case, plover was the name eventually given to the majority of species of the family Charadriidae.

Landsborough Thompson in his equally monumental New Dictionary of Birds (1964) writes: 'A few members of the family have particular names, and one of these, 'dotterel', is sometimes transferred (especially in Australia and New Zealand) as a substantive name of other species.' So, are we Antipodeans responsible for much of the confusion?

Perhaps so. For instance, earlier names for New Zealand Dotterel were Dusky Plover or Red-breasted Plover. Oliver (1955) referred to a central Asian species that regularly straggles to New Zealand as Large Sand Dotterel. Today it is more likely to be known as Greater Sand Plover. Australia has its Inland Dotterel and Red-kneed Dotterel and has given us our Black-fronted Dotterel.

But then there is the case of our Banded Dotterel. Endemic to this country because it breeds nowhere else, a substantial proportion of the population breeding in the southern half of the South Island migrate to Australia, during which a curious thing happens. Halfway across the Tasman they undergo a name change and arrive as Double-banded Plovers. A reverse alchemy occurs during the return journey.

And the name dotterel? It has less benign origins than plover, being, according to Newton, a diminutive of 'dolt' because of its alleged stupidity. This possibly comes from the energetic courting and distraction displays of the Eurasian Dotterel *Charadrius morinellus*, where

it simultaneously stretches out a wing and leg. The science name bestowed by Linnaeus was first used by Caius 'with a double meaning – being a diminutive of morus, a fool, and having reference to Morini, the ancient name of the people of Flanders, where he had found the bird common.' Newton however, dismissed the whole idea of the bird being stupid.

Within the plovers there is still more confusion to be found. Another significant group in the family are known as lapwings. The English name was originally given to the Lapwing *Vanellus vanellus* and refers to the rather slow wing beat. 'The lapwings are generally 'medium to large noisy plovers with broad rounded wings.' Characters frequent among the lapwings, but not found in other plovers, are 'a crest, facial wattles, and wing-spurs; the last correlate with the aggressive nature of the birds.' (Terres 1980.)


Does that sound like a bird most of us know well? It does indeed, yet not all lapwings are known as lapwings. Spur-winged Plovers first established in New Zealand near Invercargill in 1932. They subsequently expanded northward, only reaching Northland in the 1980s. For any New Zealand resident of a certain age, it is a bird that would have first appeared as an exotic presence in their neighbourhood. But another trans-Tasman anomaly arises, this time in the opposite direction to Banded Dotterels.

In Australia they are generally known as Masked Lapwings, appearing in field guides as such. However, there are two subspecies in eastern Australia, and the southern form, from which the New Zealand birds are believed to have originated, are sometimes referred to as Spur-winged Plovers. Of course, this is not to be confused with the Spur-winged Plover *Vanellus spinosus* which is a very different bird, occurring in central and north-eastern Africa.

W.R.B. Oliver 1955. *New Zealand Birds*
Alfred Newton. 1896. *A Dictionary of Birds*.

Sir A. Landsborough Thompson. 1964. *A New Dictionary of Birds*.

James A Jobling. 2010. *Helm Dictionary of Scientific Bird Names*.

John K Terres. 1980. *Audubon Encyclopaedia of North American Birds* 

Stars in our eyes

Astronomy: the science concerned with the stars and celestial bodies.

Birdwatching: the observation of feathered bodies.

Far removed you think... yes I guess, but there are birds in astronomy. **Olga Brochner** tells the story

Let me begin by explaining the inspiration for this article was Jim Eagles. He was telling us about setting up mist nets in the dark, on a moonless night, while trying to catch the elusive Pacific Golden Plover. Although that wasn't successful, Jim recalled how amazing the night sky was. So then Kevin (Barker) and I started telling him about some bird constellations... and so here we are with a discussion about those astronomy birds.

First regarding constellations: they are patterns / shapes of stars as seen from the perspective of Earth. That is, if you were on another galaxy far, far away, (or even not so far away), those same stars would not appear in the same shape, as they are not bound together. The idea of grouping stars together into constellations is not new, and Indigenous cultures recognize other star patterns / constellations. But the birds I'm "looking at" are those in the 88 patterns recognized as constellations by the International Astronomical Union in 1930.

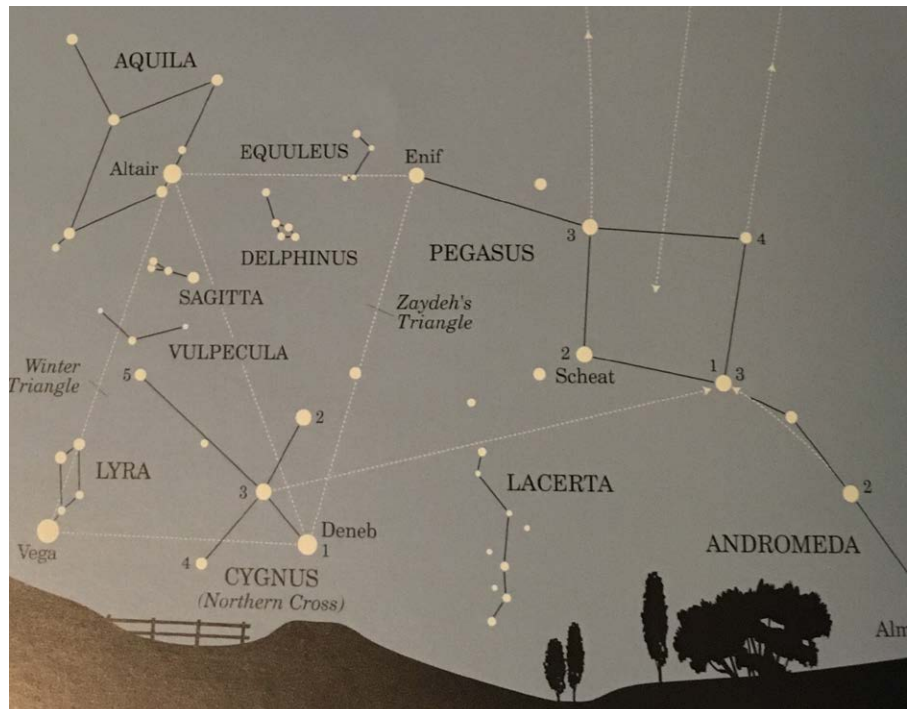
Also, this isn't astrology. Constellations are just like suburbs in the sky and useful for different reasons. For example some use them to guide when to plant crops, to signify seasons, or to help with navigation. And for amateur astronomers constellations are like landmarks to help you find your way around the sky; and pointers find the area of the sky where other astronomy objects are. That includes galaxies, nebulae, planets and even other constellations. Constellations are observed unaided - so called "naked eye". That is, you can see all or some of the stars making up that constellation just by going out and looking. But some do not include many bright stars, so appear faint and hard to see even in the dark skies of Pūkorokoro. And if you want to see any galaxies and alike, binoculars and telescopes are required. A bit like watching the birds from a Pūkorokoro hide, you'll see more with viewing aids. As you know, you can rent telescopes from the Shorebird Centre to enhance the view of the birds, but these scopes are not exactly ideal for astronomy due to their mounts. Binoculars are very useful but they need to be at least 8 x 40mm. And of course you can get bigger "binos", but then they are harder to hold steady. If you have more questions about binoculars -

talk to Kevin. For now back to those bird constellations.

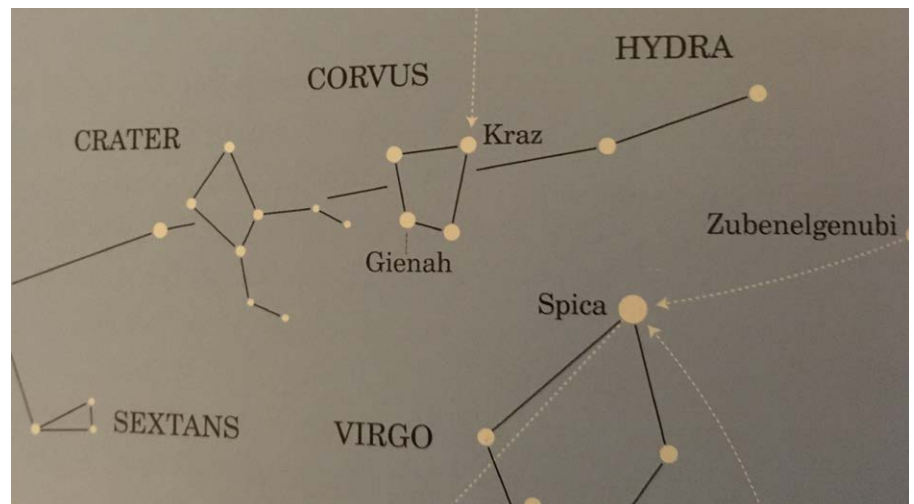
In honour of Jim we'll start appropriately with Aquila - "The Eagle". This constellation sort of has a vague shape of a bird. It is an ancient Greek constellation representing the eagle that belonged to Zeus. I know that may go against DOC regulations, but Zeus was a God! In NZ we see Aquila best in winter, which will confuse those from the northern hemisphere where it is a summer constellation! So although other northern migrants (godwits, knots etc) have flown north, we get the eagle Aquila. Aquila is in a very rich star field, as it is near the centre of our galaxy the

Milky Way. Naked eye will show you the brightest star in the constellation known as Altair (an Arabic word for "the flying one" or "flying eagle"). If you look at a star map, like the image below of Aquila, you'll note the brighter the stars the bigger their "dots". And, as with star Altair, many bright stars in constellations have names, and stories to go along with their name.

Cygnus also looks sort of birdlike. Latin for swan, it is a large constellation and contains a bright star known as Deneb meaning "The tail" as it sits at the tail end of Cygnus. This constellation is best seen in NZ's spring time night skies, but it is low down for us in the south. Of



AQUILA AND CYGNUS our winter and spring stars



LEGENDS IN THE SKY: The Crow, in the centre of the story as always!

course it does fly higher in the Northern Hemisphere, but with a good northern horizon (like one gets at the Shorebird Centre), we can see Deneb. There's a bunch of Roman mythology tales concerning Cygnus, but I like the tales that link Cygnus with friendship.

Next Corvus "the Crow". You can see this constellation on a clear night now: although to my eye it looks more square-like than birdlike (see figure 2). It is supposed to represent the crow who gave water to Apollo, bringing the water to him in a cup. However, Corvus dallied a little and on his return to Apollo he blamed a serpent (who he had also brought back to Apollo!). Apollo apparently knew Corvus was lying, and no doubt wondered about the serpent. Nevertheless, Corvus was placed in the sky along with the cup (constellation Crater), and the serpent (constellation Hydra). Ok I can hear some groaning, but me, I love a good mythological yarn. Plus it reminds me of the Māori story of the Kokako giving water to Tane in his battle vs the Sun. Which sort of fits, as the Kokako was known as the blue wattled crow. Another link, according to New Zealand Birds Online, is there may be and previously were, colonies of Rooks in the Pūkoro area.

Grus: named for crane, is a large constellation (Figure 3). It is a southern constellation, but (according to Levy Skywatching) the crane was the symbol of astronomers in ancient Egypt. Grus dominates our skies in spring and is still visible in summer. With some imagination you can see big wings I guess, as it has a sort of T shape. Plus with a few bright stars in the Grus group, even I can sort of work out where it is. The most informative New Zealand Birds Online states there have been 4 records of cranes in NZ, most likely Brolga or Sarus Crane.

Many of our southern sky constellations were not recorded by Europeans until they ventured south of the equator, so they have no ancient Greek yarns attached. These next bird constellations are circumpolar so always visible in NZ. But depending on the time of year, they may appear higher/ lower in our skies.

One of my favourites Tucana, which is visible now. Tucan is Latin for "toucan", but the constellation itself is not as showy as the Toucan birds. It is in the same area of the sky as the SMC, Small Magellanic Cloud. The SMC and LMC, Large Magellanic Cloud, were named after the Portuguese explorer Ferdinand Magellan

(1480 - 1521). They are galaxies "near" to our own Milky Way galaxy. Remember near is relative as there's plenty of space in space. The Large Cloud is 160,000 light years away, and the Smaller is 190,000 light years away. They are easily seen naked eye in a dark sky and look like what they are - a cloud of stars. Back to Tucana as the constellation has the gem 47 Tucanae, "47 Tuc" for short. It is a globular cluster, that is an ancient group of stars closely related in age. 47 Tuc contains a million or so stars, all so close together you can't separate them even with a telescope. (Thanks Ian Cooper for the photo). Talk about diamonds in the sky - 47 Tuc is marvellous, but to see this in its splendour, you really do need a telescope and a dark sky. Kevin and I had a great view of the SMC and 47 Tuc on a recent visit to Pūkoro.

In our southern constellation group there is also Pavo "The Peacock. This constellation is labelled "modern" as it was not published until 1603! The large constellation Pavo does not bear any resemblance to a peacock, but there are wonders in Pavo like a peacock's fancy tail. A telescope allows you to see another globular cluster with the inspiring name of NGC 6752. (That stands for the New General catalogue.) And there are the Pavo galaxies too. And the brightest star in Pavo is called - you guessed it, "the peacock".

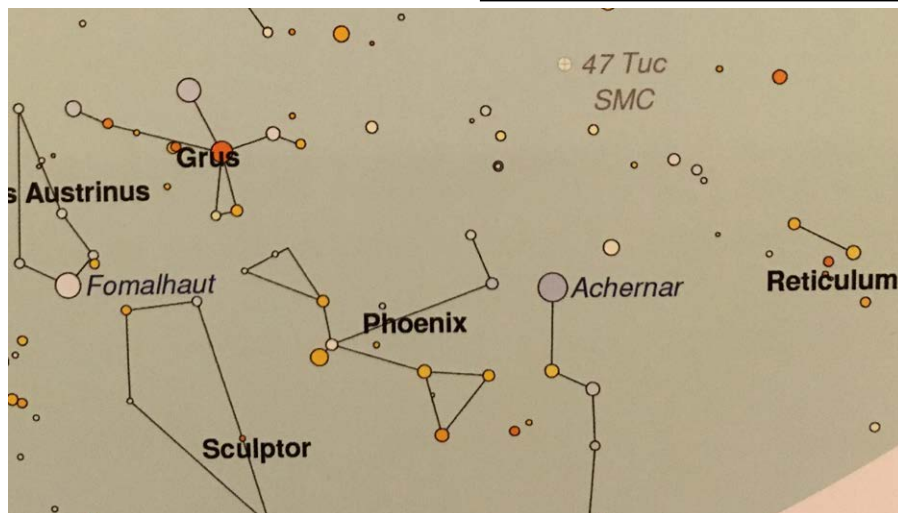
"Apus" is supposed to represent India's Bird of Paradise. It is a really faint southern constellation, and even in a dark sky I have to use other constellations to work out where Apus is. Also faint is "Columba" - the dove, which is supposed to represent the dove Noah sent from the ark to find dry land. We have some doves in our garden, and they are a lot easier



to see than the Columba constellation. I could really stretch now and mention the constellations "Pegasus" (a winged horse), and Phoenix the mythological bird consumed by fire only to be reborn. But Kevin argues these last two are not real birds and definitely more fiction than science. So it is time to fly off.

However, on a final note, for more night sky information the Shorebird Centre shop has 2 handy "books" for purchase. A glow-in -the dark water proof map "New Zealand's Night Sky" compiled by the Auckland Stardome Planetarium to work out what-is-where in the night sky. And there's the "How to gaze at the southern stars" book by Richard Hall (part of the "How to" series of books which also include the fun Steve Braunias "How to watch a bird" book). You can also check in with your local astronomical society, or planetarium / observatories of which a there are a few in NZ. For smart phones there's a variety of star map apps. However, just like bird watching, even if you don't know all the names or shapes, I encourage you to go out and see if you can n^out any birds in amongst those stars.

Find out more:
 "A Nature Company Guide: Skywatching", Levy, David. H
 "Brilliant Stars" Moore, Patrick
 "A Walk through the Southern Sky" Heifetz, Milton D. & Tirion, Wil.



GRUS: The Crane - imagine the wings outstretched. All star maps from Patrick Moore's "A- Z of Astronomy"

2022 migration and sites of interest in DPRK

Tony Habraken has been following the godwit migration and when checking in on where the birds are landing in the Yellow Sea, finds familiar places.



SHOREBIRD HABITAT IN THE DPRK. This photo, taken at Ryong Rim-ri during the 2016 survey shows some of the habitat and conditions the birds might be finding in the DPRK. Photo / Adrian Riegen

With each migration, north or south bound, there is much to discover and learn, and this year has been no exception during north migration. Tracking the 2019/20 juvenile cohorts has opened a new chapter in discovering what they are doing in their formative years as they progress to adulthood.

These birds are now in their third year of life and reaching adulthood, we are currently tracking 12 of these three year olds, birds which can be followed on Adrian's regular updates through Facebook.

The cohort was bigger last year as some transmitters have failed during the year, - last year thirteen godwits migrated as second year birds, 10 arrived in the Yellow Sea and while seven reached Alaska, there was no sign of them breeding. Of these 13 we are still tracking seven and await with interest what choices these three-year-olds now make and if any of them will show signs of breeding once they reach Alaska this year.

Five birds that did not migrate last year joined the ranks of the migrants this year. We're interested in how they cope in this their first north migration, and if they have different behaviour than the

early starters.

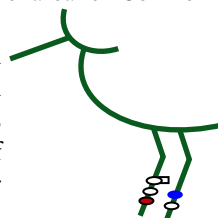
But before they get to Alaska they reach the Yellow Sea, or its boundaries, and it is intriguing no - exciting - to see the sites they have descended on.

The most interesting are of two birds 4BWWR and 4RBBB who have reached their Yellow Sea landing in DPRK, North Korea. No problem for birds accessing the DPRK shores but there is a greater hurdle for people to enter!

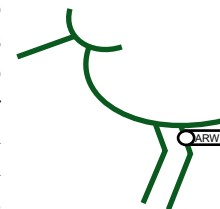
We know from previous survey work in China and tracking that many birds cross the Yalu River to spend time refuelling on the mudflats surrounding Sindo Island in DPRK. It's almost uncanny that the sites these 4BWWR and 4RBBB have descended on have been visited by the joint PMNT DPRK survey teams, the inaugural visit of 2009 and the later visit in 2016.

4BWWR

4BWWR's arrival in DPRK was on the 2nd of April in the area of So Ho-ri and Ryong Rim-ri (visited in April 2009), two small fishing villages near the mouth of the Taeryong River

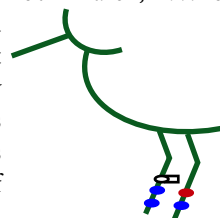


where it flows into the Yellow Sea. The So Ho-ri mudflats consists of large soft looking mudbanks just off shore where locals were seen heading out on boats on a falling tide to gather shellfish. The fishing village of Ryong Rim-ri, 10kms to the south, had a number of salt ponds being used as wader roosts where good numbers of banded and flagged wader species were seen including three flagged godwit from Pūkorokoro Miranda. One being 'ARW' who is still being seen at Pūkorokoro Miranda - 13 years on. There were also another 6 colour banded birds seen from NZ (Golden Bay (2), Otago, Southland, Foxton and Pūkorokoro Miranda). It is quite possible she is also roosting at this site.



4RBBB

4RBBB arrived on 15th March, NW of the Zhongak-Ku ponds, a site that was visited by the 2015 team is around 90 kms to the south of



So Ho-ri. This area is in a reclamation that was completed in the early 1990s. In 2015 there was still a shallow water lagoon with several low bare islands used by roosting shorebirds. The area is adjacent to a tidal estuary where many of the shorebirds moved to feed on the falling tide. Though no NZ flagged or colour banded birds were seen that year there were godwit from NW Australia and Queensland present.

In mid-May 4RBBB was reporting from a saltworks in this area, unfortunately our DPRK team had been unable to get permission to visit this saltworks in earlier visits.

It is great to see that the two birds mentioned above are adding to the knowledge and importance of DPRK sites in the flyway.

In the unlikely event of receiving images of either bird while in DPRK it seems an opportune moment to reflect on these sites, on probably much unchanged habitat where they are likely spending time refuelling before the next leg of their flights to the arctic.

What about the others?

Northward migration of the satellite tagged godwits started on 07 March, with 4RBBB departing Foxton Beach in what was possibly lovely evening light.

4BWWW

4BWWW had returned to Pūkoro Mirando, turning back after flying about

2500 kms and passing Vanuatu. While we waited to see if she would make a late second attempt to reach the Yellow Sea she decided to remain in NZ this winter and mid May was still reporting in from Pūkoro Mirando. Her return mid-migration was an unexpected move from one who actually made it to the arctic last year, albeit as a 2nd year bird. For whatever reason she decided to return, it is just one of the developing discoveries we long to learn more about.

4RBBY

A second bird 4RBBY has also opted out of continuing to the Yellow Sea after flying just over half way north east of PNG. Instead of returning to NZ she flew directly south crossing PNG to land on the SW coast where she still remained roaming 100 kms of coast line for over a month. Mid-May it looked like she was on the move, heading east, but this came to nothing and she returned to West Papua. It is intriguing to see what each bird makes of their situation!

Heading to the breeding sites

On 16 May the first two of the satellite tagged godwits left the Yellow Sea heading for Alaska This included 4BBWR, the world record holder for non-stop flights first in 2020 and again in 2021.

There are still so many questions.

We have two years of migration tracks for the two adults heading for Alaska now - will they make it, will they go direct? Will they breed successfully this year and - what are the chances will we be able to follow them back to NZ again?

Birds with Bling

Gillian Vaughan gives quick refresher of how to read and report a colour band. The way they are presented here (e.g. 4BWWR) is just shorthand - it allows us to identify and record them easily - but it can be confusing.

You can interpret the combinations if you know the code - the flag position comes first followed by the colour bands in order - left to right top to bottom

4BWWR has a flag in position 4 - above the bands on the lower part of the right leg. The bands are then read left to right - top to bottom

Blue above White on the left

White above Red on the right.

All birds should also have a metal band. For godwits and knots we don't include these in the combination - but some species (like NZ Fairy Tern) do.

You don't need to know the shorthand to report a bird - but you do need to be clear about what you saw. Your notes could read:

Birds right leg - white flag above white band above red band,

Left leg - white band below blue band.

Metal band on left leg above the leg joint.

Then head to the DoC website to report your band - <https://www.doc.govt.nz/non-gamebird-band-report-form> (or just search DoC banding office - it'll take you here) where you can fill in the details and report your bird. If you get stuck just send your report to the Shorebird Centre. The team will help you find the right place for it.

A DIFFERENT WORLD: the photo shows typical habitat on the outer YKD where many godwits first arrive. A world of low lying tundra with ponds, pools, lakes and meandering rivers. This is part of the wildlife refuge that is as big as the North island of NZ south of Auckland. PHOTO / Adrian Riegen



GODWIT TIMES



Tēnā koutou

Welcome back to the Godwit Times! I hope you all had a great summer!

Most of my godwit friends are heading north right now, heading for Alaska where they can have kids of their own! Did you know godwits, might be able to have babies when they are only 2 years old?

While my friends are away I thought it would be a good time to look at your art! Isla Bowden drew us the picture above. What's your favourite bird? We'd really like to see your drawings of birds - especially shorebirds! If you draw us a picture and get your parents to help you send it to godfreygodwit@shorebirds.org.nz we'd really like it! And we might even be able to publish some more drawings!

Don't forget if you have been on any adventures, just send Godfrey an email godfreygodwit@shorebirds.org.nz

See you at Pukorokoro!

Nga mihi,

Godfrey

Pūkoro-roko Miranda Naturalists' Trust



The Shorebird Centre

283 East Coast Road
RD 3 Pokeno 2473
phone (09) 232 2781
admin@shorebirds.org.nz
www.shorebirds.org.nz
www.facebook.com/
MirandaShorebirdCentre

Manager: Keith Woodley
Centre Assistant: Chelsea Ralls

Pūkoro-roko Miranda Naturalists' Trust Council

Chair: To be elected at upcoming council meeting

Deputy Chair and Banding
Convenor: Adrian Riegen
riegen@xtra.co.nz
09 814 9741

Secretary: Trish Wells
Trishwells1@gmail.com
0272 688 057

Treasurer: Kevin Vaughan
kandjvaughan@gmail.com
09 817 9262

Council members: Ann and Ray
Buckmaster. Anne Gummer, Wendy
Hare, Trudy Lane, David Lawrie,
Bruce Postill, Bob Rigter, Gillian
Vaughan.

Magazine

Pūkoro-roko Miranda Naturalists' Trust publishes *Pūkoro-roko 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.

Editor (temporary): Gillian Vaughan
gillianrv@gmail.com
0272399737

See the birds

Situated on the Firth of Thames between Kaiāua and the Miranda Hot Pools, the Pūkoro-roko Miranda Shorebird Centre provides a base for birders right where the birds are. The best time to see the birds is two to three hours either side of high tide, especially around new and full moons. The Pūkoro-roko Miranda 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 Pūkoro-roko 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.

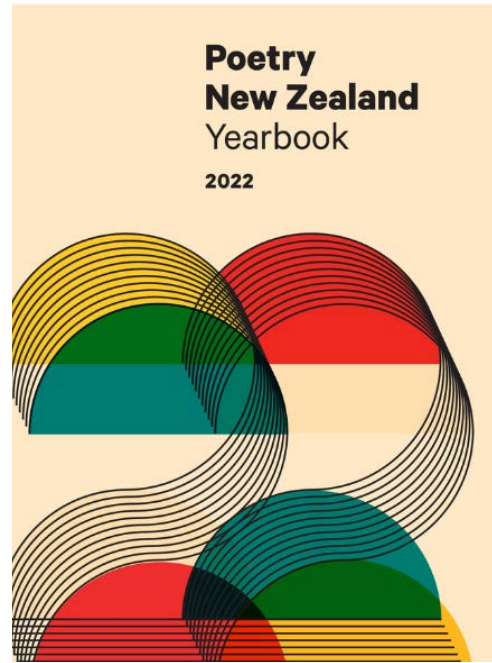
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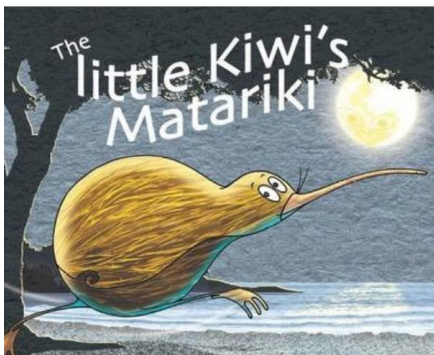
Sean and Annie Wilson's
Miranda Farm
Shop • Cafe • Gallery



Support the work of PMNT and order from the Centre or online.



Journey with the Godwits or Journey through your imagination. Limited run tea-towels \$15.NZ Poetry yearbook including our own Amanda Hunt, \$37



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