

Pūkorokoro Miranda **News**

Journal of the Pūkorokoro Miranda Naturalists' Trust

February 2019 Issue 111

Welcome to the Year of the Wrybill



**Rare shells
found in
a ditch**

**Unique local
shags
dying out**

**PGPs beat
Trump
shutdown**



WRYBILL OUTFITS: (from left) Liam Tully models a Wrybill suit made by his mother, educator Alex Eagles-Tully, as an aid to telling school pupils about these amazing birds; Ann Buckmaster wears one of the Year of the Wrybill shirts she designed, while cuddling the campaign mascot, Riley Wrybill. Photos / Alex Eagles-Tully, Jim Eagles

All set to celebrate the Wrybill

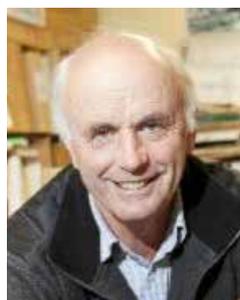
It's going to be a big year for the Shorebird Centre. First it is the Year of the Wrybill which will conclude with a campaign to make the Wrybill the Bird of the Year in the annual Forest & Bird poll. Later this month we will be joined by world experts on Pacific Golden Plover, or Kuriri, as we try to catch 10 and fit them with satellite tags to see where they travel. In May a PMNT team will head for North Korea again for the final leg of the first ever wader survey of this coast. In October it is hoped a team from the Nature Conservation Union of Korea will visit to learn about wader conservation and cement our working relationship. In autumn we will begin trial plantings in the Robert Findlay Wildlife Area as an initial step in the long-awaited rehabilitation programme. And there's a whole lot more going on.

The Pūkoro Mirānda Naturalists' Trust has joined forces with BRaid – the Braided Rivers Aid group which protects the Wrybills' habitat – to declare 2019 to be the Year of the Wrybill when we hope to spread the word on the challenges facing our unique Ngutu Parore.

As in 2015, which we named Year of the Godwit, we hope it will culminate in the Wrybill being voted as Forest and Bird's Bird of the Year. But that campaign for votes won't gather momentum until August-September and there will be much more happening in the meantime.

However, we are already looking for a celebrity to front our campaign and attract lots of votes. If you have a personal

connection with someone famous and with a big social media following please get in touch.



BRaid and the Ashley-Rakahuri River Care Group.

Nick will give a presentation on the work of BRaid using the Ashley Rakahuri

The Year of the Wrybill will be formally launched at our Autumn Migration Day on 10 March when the speaker will be Nick Ledgard (at left), chair of both

Rivercare Group as an example of the practical riverbed management of breeding shorebirds by a community group.

'Last year,' he points out proudly, 'we won the Practical Management Award (2018) offered by the Australasian Wildlife Management Society. In December I went to their conference in Hobart to receive the Award on behalf of the Group.'

There is plenty of additional information on the BRaid website (www.braid.org.nz).

Before Nick's talk there will be a performance by two groups of musicians from the Auckland Philharmonia Orchestra's Young Achiever's Programme. The highlight will be the world premiere of A

Photo of a Wrybill and chick in the bed of a braided river by David Fraser.



WRYBILL MUSIC: (from left) Young composer Kirsten Strom visits Pūkorokoro to see the Wrybills that have inspired her new composition, *A Flung Scarf of Wrybill*, which will have its world premiere at the Shorebird Centre on 10 March; the Orbit trio which will play the piece for the first time. Photos / Ray Buckmaster, Auckland Philharmonia Orchestra

Flung Scarf of Wrybill, composed by APO young composer in residence Kirsten Strom, who has visited the Shorebird Centre to see the birds, and played by Orbit, made up of two violinists and a flutist.

If you visit the Centre you'll find a banner proclaiming that this is the Year of the Wrybill and – as you'll see in the advertisement on the back page – the shop has several items in stock including Year of the Wrybill shirts designed by Ann Buckmaster, Wrybill soft toys, mugs and books. And if you're very lucky you might even meet the Centre mascot Riley Wrybill.

Educator Alex Eagles-Tully is planning to make the Wrybill a big part of this year's programme and to really get the message across she has made a Wrybill suit for pupils to wear.

Security cameras

The security cameras which were installed in the car park of the Robert Findlay Wildlife Area a year ago to deter thieves seem to have been too successful for their own good. Since the cameras arrived and the Trust started keeping the entrance gate closed the rash of break-ins to parked vehicles has virtually stopped. However, last month someone managed to climb the pole on which they were mounted and

remove both cameras. The theft has been reported to the Police and the cameras have been quickly replaced, this with precautions to deter any further theft.

Korean contacts

This is also going to be a big year on the North Korean front.

On 1 May a PMNT team will head for the DPRK for the seventh time,

hoping to complete the last and most sensitive section of our wader survey of the coastline, this time covering the area adjacent to the Demilitarised Zone and the border with South Korea.

The team will consist of Adrian, David Melville, Gillian Vaughan and William Perry.

The visit will mostly be paid for by a grant of \$15,000 from the Living Water

What's on at the Shorebird Centre

24 February, Special Event

2pm Speaker Wally Johnson, leading authority on Pacific Golden Plover, who is here for our PGP tracking project.

10 March, Autumn Migration Day and launch of the Year of the Wrybill

11am Performance by two ensembles from the Auckland Philharmonia Orchestra Young Achievers including the world premiere of the specially composed *A Flung Scarf of Wrybills*.

12.30 Break for lunch.

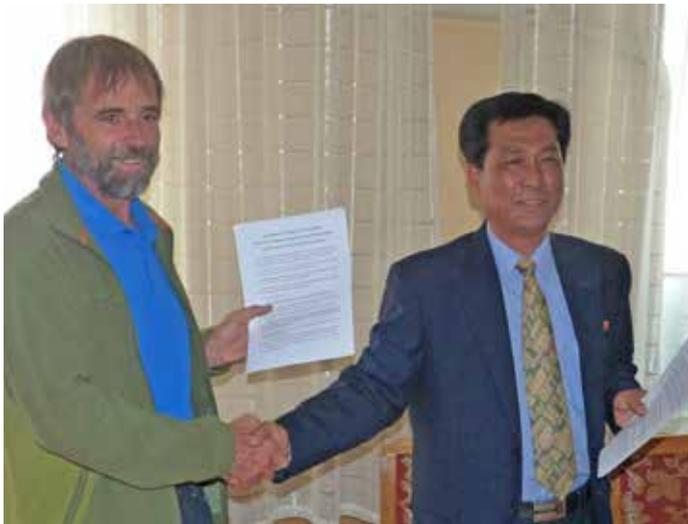
1 pm Speaker Nick Ledgard, chair of BRaid, will discuss its work to protect the South Island's braided rivers, breeding ground for many endemic birds including the Wrybill.

April 12-14, Print Making Workshop

Learn the techniques of etching onto plastic plates or the relief process of lino printing from noted artist Sandra Morris. Details from the Centre.

26 May (revised date) – Annual General Meeting

10am Guest speaker Mick Clout, chair of the Kakapo Recovery Group, will talk about this highly successful programme. Birdwatching afterwards.



VISITORS FROM KOREA: (from left) Adrian Riegen shakes hands after signing an agreement with Kim Song Nam, vice-president of the Nature Conservation Union of Korea; Ju Song I and Kim Ji Hyang, who have worked with PMNT in North Korea and are now coming to New Zealand. Photos / Keith Woodley, Adrian Riegen.

Partnership between Fonterra and the Department of Conservation.

Then, if all goes well, a team of four from the Democratic People's Republic of Korea will arrive here in October to learn about conservation, including netting and banding, improve contacts between the two countries and encourage the DPRK to do more to protect its birds.

The team will be led by Kim Song Nam, vice-president of the Nature Conservation

Union of Korea, with whom PMNT signed the agreement in 2014. Adrian Riegen says, 'He could be very valuable in getting better conservation outcomes in Korea for the waders as he can talk directly to the Korean government so having him here is really good.'

The other team members will be Ju Song I, who has planned most of the Trust's work in the DPRK and been a good friend; Kim Ji Hyang who joined last year's

visit; and Jo Kyong Sam of the NCUK Foreign Relations Department.

The visit has been delayed a couple of times, most recently because by the time the DPRK authorities approved the itinerary it was too late to get the team's visa applications processed through the New Zealand system before they were due to arrive, so the hope is that putting it off until October will allow ample breathing space.

The plan is for them to be here for about two weeks, initially staying at the Centre, visiting Manukau and Kaipara, and taking part in the Farewell to the Birds before heading to Nelson and Wellington. Most of the costs will be covered by a US\$5000 grant from the East Asian-Australasian Flyway Partnership.

Ngatea pupils create a floating roost

When Ngatea Primary School pupils Lavanya Sahu and Hanne Vanhoovels were asked to come up with a topic for their year 7 environmental endeavour project they immediately thought of the Pūkoro Mirānda Shorebird Centre.



Their initial idea was to build nesting boxes for endangered shorebirds. But after hearing from educator Alex Eagles-Tully that that shorebirds nest on the ground they had to come up with another concept. The precarious nesting of Black-billed Gulls on the shellbank, where eggs and chicks are often washed away by storms, inspired them to design a floating nesting platform.

A prototype of the floating platform was constructed out of reused drink bottles and old palettes with the help of school principal Neil Fraser. The completed platform model was then piled with shells and tested in an old water filled barrel (see the photo at left).

It performed exceptionally well but the girls plan to attach another reused drink bottle to raise the level of the platform and then use rope and weights to anchor it to the sea floor in order to test it in simulated wave action.

The two girls will continue with the project in 2019 and already have aspirations to build a 10m wide platform using a pile of old pallets and mussel farm buoys sitting at the school.

PGPs trump Trump

Even United States President Donald W Trump can't stop our Pacific Golden Plover Project from going ahead . . . though he did try.

The \$20,000 needed to buy the 10 satellite tags has been raised thanks to grants from the Ron and Edna Greenwood Environmental Trust, the Mazda Foundation and Birds NZ plus donations from members, including John C Black and Jeanne Kleyne from Washington State, USA. The tags have now been made by Lotek Wireless Inc in Canada.

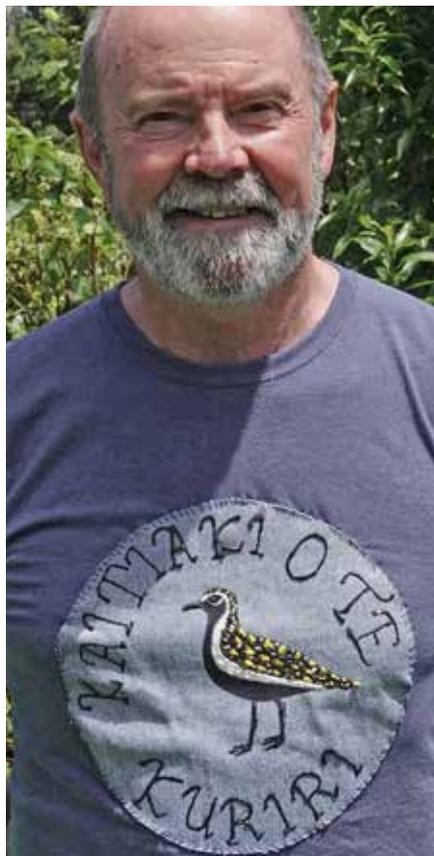
Then the plan was to ship them to the Alaska Science Centre in Anchorage to be programmed – to talk to the Argos Satellite system the way we want them to – by Lee Tibbits of the US Geological Survey who has done the same job for numerous projects including the famous flight of the Bar-tailed Godwit E7.

Unfortunately – and this is where Trump comes in – the Science Centre was one of many institutions to be closed for several weeks by the President's shut-down of the federal government in a bid to force Congress to let him build a wall across the border with Mexico. For a while we were worried that Lee wouldn't be able to do the work.

But birders can do anything and Lee arranged for the tags to be sent to her home where she could programme them anyway. Maybe that's when Trump realised he wasn't going to win and ended his shutdown. In any event, the programmed tags were safely shipped to Hawaii, where PGP expert Wally Johnson from Montana State University, and his team of five plover catchers from Brigham Young University – Hawaii were assembling. So when Wally and his team fly into Auckland on 17 February they will have the tags with them all set to go.

Meanwhile a big team of volunteers, headed by JoJo Doyle, has spent the past few weeks collecting an incredibly detailed picture of what the 106 plovers counted at Pūkorokoro so far have been up to. Thanks to their work we now have an amazing amount of information about where they go at different times of the day, stages of the tide, heights of high tide or weather conditions which should make it much easier to catch them. It has been a tricky job.

So far they've been spending a lot of time hanging out in their favourite place



GUARDIAN? Pacific Golden Plover project coordinator Jim Eagles has got so excited that his family made him this shirt for Christmas.

of previous years near the start of the boardwalk from the car park to the hides. They are also regularly seen on the mud-flats well out in front of the Godwit Hide and now and again they pop up near the

mouth of the Pūkorokoro Stream. From time to time they've been visiting a couple of farm paddocks over the road and sometimes they just disappear. They've even turned up near the manager's cottage at the Centre. And it has all been assiduously recorded.

As Centre manager Keith Woodley says, 'We now know far more about what these plovers do when they're here. That's extremely valuable information not just for this project but also for our knowledge of the birds generally.'

For the catching, Wally and his group will be joined by a team of New Zealand's leading banders, led by Adrian Riegen, who will have 10 days to catch sufficient suitable birds, using mist nets or cannon nets, and fit them with the tags.

Then in late March-early April, when the golden plovers head back to the Arctic, we will be able to see where they go.

Throughout the project there will be regular updates on how we go with the catching and where the birds travel to on the PGP project page of the Miranda Shorebirds website and on Facebook.

Birding film stars

If you aren't able to see our Pacific Golden Plover project in action you will be able to watch it on video.

Project coordinator Jim Eagles said from the outset he was very keen to have the work videoed for a wider audience. 'I've always thought how wonderful it would have been to have a film of E7



COLOURFUL WELCOME: When all the experts arrive at the Shorebird Centre later this month to join the effort to fit 10 Pacific Golden Plovers with satellite tags they will be welcomed by these golden plovers made by pupils from Kaiaua School. The children coloured them in, cut out them and glued them using patterns made by Centre educator, Alex Eagles-Tully, as part of this year's campaign to improve knowledge of these mysterious but beautiful birds. Then Centre assistant Chelsea Ralls (in the photo) and summer shoreguide Amanda Hunt hung them up. If you or your children or grandchildren would like to make a bird to join the collection you can pick up a sheet from the Centre or print one out using the link on our project page to; www.miranda-shorebird.org.nz/wp-content/uploads/2018/12/Make-your-own-paper-PGP.pdf. Chelsea will be delighted to set them flying in the Centre. Photo / Jim Eagles



COMMUNITY OPEN DAY: A small but enthusiastic group of locals turned out for an open day aimed at explaining what the Shorebird Centre is all about. Keith Woodley gave one of his famous talks about PMNT, Jim Eagles explained the Pacific Golden Plover Project and there were plenty of questions. Another open day is planned for March.

Photo / Jim Eagles

being caught, fitted with a tag and freed again; the route the satellites recorded as she flew to Alaska; then the wonderful drama of E7's batteries holding out just long enough for her return flight to New Zealand and for Lee to tell us she had landed near the Piako River. But all we've got is a photo by Keith showing E7 being held at arm's length by vet Dan Mulcahy in front of a white wall.'

Initially Jim couldn't find anyone to do the videoing so he started teaching himself and even made a quaintly entertaining video of the Kuriri in action near the Limeworks which you'll find on the PGP Project page of our website.

Then Johan Kok, a photographer and filmmaker originally from South Africa

but now based in Auckland, offered to take the project on, partly because he just loves birds, but also to promote his video company, Wildimages. You can see some of his work at www.wildimages.com.

Johan's first short video on the project involved interviews with Jim and Keith about why we want to track the Kuriri and how the project has developed, plus some footage of the birds at the Limeworks and of Jojo Doyle and shoreguide Amanda Hunt monitoring them. You can see it on our website and on Facebook.

Johan plans to record progress in the project, including catching the birds and fitting them with tags, and their progress as reported by satellite, to create a complete documentary. 

Educator's report

This year is shaping up to be a very eventful year on the education front. Numerous schools have confirmed that they will be studying shorebirds in 2019 with the first booked in for a visit at the end of February only a few weeks after the start of the new school year.

Early on a select few schools will be invited to name each of the Kuriri that will carry a satellite tag. And of course eager young eyes will be watching the website to follow the path they take as they traverse the globe.

Dozens of schools have already asked to be involved in The Flock 2019, which will be focussed on the Bay of Plenty, and as you read this hundreds of wooden birds will be getting cut out. The plan is for all of the small flocks to appear throughout the year on the front lawns of schools, then in parks around the country, before gathering together in Tauranga at the end of September just before the school holidays. School holiday programmes will also be running where people of all ages will be welcome to purchase and paint their own bird at the Shorebird Centre. Watch this space for more information.

And last but not least, look out for a visit from a giant Wrybill, coming to a place near you to help spread the word about the Year of the Wrybill.

Alex Eagles-Tully



LIGHTS, CAMERA, ACTION: Johan Kok films JoJo Doyle and Amanda Hunt in action. Photo / Jim Eagles



VISITORS: (from left) Pateke on Widgery Lake; Chestnut-breasted Shelducks on the Stilt Ponds. Photos / Lisa Fraser

Festive birding at the Shorebird Centre

Walking out from the car park to the Godwit Hide on Christmas Day it was easy to see why no waders were visible. The king tide had completely flooded the Limeworks and pushed water into the area north of the boardwalk leaving no space for Pacific Golden Plovers.

Access to the Wrybill Hide and the trail north was under water. The shell spit was split in two. Several hundred godwits and a few SIPO roosted precariously on the end of the main spit. So where were the main flocks?

The answer was to be found back at my cottage. Some of the adjacent paddocks had been ploughed within the last few days, the last of it completed on Christmas Eve, and it had also been very wet.

With the naked eye could be seen several broad strips of rough bare ground with large pools of water, a few Spur-winged Plovers and a scattering of Pied Stilts. But a spotting scope on the rear deck of the cottage revealed a dense mass of godwits and knots.

Observations over the next hour revealed a splendid array of entries for the 'seen from the backyard list.' Actually, the presence of godwits and knots (an estimated 4000 of them) along with stilts and spur-wings and a sprinkling of SIPO were not entirely surprising. I have often seen flocks roosting in these paddocks, particularly following really wet weather.

This time however, there were at least 33 Golden Plover. Most likely there were more, but one thing that we have discovered this season about these birds is they are adept at disappearing.

Along with them were 2 Variable Oystercatchers, 2 Curlew Sandpipers, 2 Sharp-tailed sandpipers, 5 Banded Dotterels and 2 NZ Dotterels.

The bounty continued in the New

Year. Broad-billed Sandpipers are one of the most striking of the smaller Arctic waders. Between a Red-necked Stint and Wrybill in size, its 'double' supercilium gives the top of its head a striped appearance. But perhaps even more distinctive is the heavy-looking and slightly de-curved bill that appears out of proportion to the size of the bird.

Breeding in northeast Eurasia and migrating to South-east Asia and North-west Australia, they are a regular straggler to New Zealand, with one or two turning up every few years. The Firth of Thames and the Manukau are where most records have occurred so it was not altogether sur-



prising to see one turn up in late December (shown at left in a video still by Johan Kok). Since then there have been

several sightings, although it has not been regular in its habits, so not everyone coming to see it has been successful.

The two Chestnut-breasted Shelduck on the Stilt Ponds in early January were a further drawcard for many. Stragglers from Australia, these stood out like neon beacons among the flocks of Grey Teal.

But of greater significance for the Shorebird Centre was the addition of another new species record for Widgery Lake. While there have been several Pateke seen on the Stilt Ponds over the years, the seven that were present in December constituted a large flock for the area. And the solitary bird seen in front of the Centre on 8 January was a very exciting development.

Keith Woodley

Recent sightings at Pūkorokoro

Arctic Migrants

5000	Bar-tailed Godwit
1250	Red Knot
9	Ruddy Turnstone
106	Pacific Golden Plover
5	Sharp-tailed Sandpiper
1	Red-necked Stint
1	Curlew Sandpiper
2	Pectoral Sandpiper
1	Broad-billed Sandpiper
3	Black-tailed Godwit
1	Sand Plover (greater)

New Zealand species

2200	Wrybill
2300	SI Pied Oystercatcher
800	Pied Stilt
250	White-fronted Tern
150	Black-billed Gull
130	Caspian Tern
33	Royal Spoonbill
39	Banded Dotterel
5	Variable Oystercatcher
3	NZ Dotterel
7	Brown Teal
Australasian Bittern, Australasian Shoveler, Banded Rail, Chestnut-breasted Shelduck, Hybrid Black Stilt, Pied Stilt, Spur-winged Plover	



NEW RESERVE: An aerial view of the new Repo ki Pūkoro during recent floods, showing the Pūkoro Stream and areas likely to be easy to turn into wetlands, with a largely flooded Robert Findlay Wildlife Reserve over the road. The dotted line indicates the approximate boundary. Photo / Living Water

Vision for coastal strip starts to take shape

The creation of a new Repo ki Pūkoro reserve over the road from the Findlay Reserve has boosted hopes of transforming the coastal strip into a mosaic of habitats for shorebirds, land birds such as crakes, rails, bitterns and Fernbirds, endangered reptiles and insects, and rare plants, writes **Jim Eagles**.

PMNT has taken the first solid step towards realising its longterm vision of rehabilitating the coastal strip by agreeing to spend \$1000 on plants for a test planting on the 27ha Robert Findlay Wildlife Reserve this autumn.

That may not sound like much but, as Neil Armstrong might have said, it's one small step for the Trust but one giant step for the coastal strip, because a great deal more is going on behind the scenes.

*The Crown has purchased 19.6ha of low-lying land over the road from the Findlay Reserve, from the Dalton and Coxhead families, to be developed as wader roosts, wetlands and coastal habitat. It is now called Repo ki Pūkoro (RP) or Wetlands of Pūkoro.

*The PMNT Council will decide at its meeting on 16 February whether to join the Trust to administer that land which is called Tiaki Repo ki Pūkoro (TRP).

*Work planned by the Living Water partnership between DOC and Fonterra over the next five years, with support from landowners and partners like the Western Firth Catchment Group, should see the Pūkoro and Miranda Streams progressively fenced off, the adjacent riparian areas planted, and freshwater ecosystems

improved dramatically.

*The Department of Conservation, which administers much of the coastal strip as far north as Kaiaua, last year planted some 3000 shrubs and rushes in the Taramaire Wildlife Refuge and will shortly commence an extensive rehabilitation programme, partly in conjunction with construction of the Pūkoro to Kaiaua leg of the Hauraki Cycleway.

*PMNT is starting to work its way through the tortuous process of getting a resource consent to clear out the silted up drainage channel for the Stilt Ponds so the water level can be properly managed.

The test planting just agreed to by the PMNT Council was proposed by Ray Buckmaster who has done extensive research on how best to develop the Findlay Reserve. Ray and wife Ann are raising 300 ribbonwood plants from seedlings gathered in the Centre grounds and he told a recent special meeting of the Council that \$1000 would allow him to buy 300 more plants of various species.

The plan is to hold a planting day in autumn on a small block just north of the Stilt Hide, running from the Stilt Ponds across the track to the Centre to the edge of the estuary, which Ray and Jim Eagles

have already cleared of fennel.

Ray said recent plantings at Taramaire and on the Centre grounds plus walks on the coastal strip 'have given us a pretty good idea of what plants will succeed there but doing a proper test planting will add weight to our decisions'.

Looking ahead, Ray and fundraiser Alister Harlow are working on an application to the DOC Community Fund for a substantial grant to cover the cost of redeveloping the Findlay Reserve, including major drainage work and a three year planting programme to start in the winter of 2020.

There are various options for acquiring the plants for this work including buying them in, establishing a small nursery in the grounds of the Centre and asking supporters to care for small lots of seedlings.

Meanwhile, the Council gained a huge amount of new information about plans for the Pūkoro-Miranda Stream catchment from a recent walk over the recently acquired Repo ki Pūkoro Reserve with Tim Brandenburg, North Island manager of Living Water, which has played a key role in the project.

Tim explained that the Crown had now bought a 10.62ha strip of land

across the road from the Findlay Reserve, essentially between the road and the Pūkorokoro Stream, from the Daltons (this is Area C on the map). It had also purchased 8.99ha on the other side of the stream which was formerly part of the Coxhead property (this is Area B). In addition, DOC is seeking Crown funding to buy a further 3.39ha from the Daltons to round off the block (Area D).

After many months of discussion, including a series of facilitated meetings, the process of setting up the TRKP Trust to administer this land is almost complete, he said. The draft Trust deed provides for the Trust to be made up of representatives of Ngāti Paoa, Te Whangai Trust (set up by the Daltons on their dairy farm to provide employment training for at-risk youth at a native plant nursery), the Dalton Hapu Trust, the Western Firth Catchment Group (representing local landowners), the Miranda community (currently represented by Council member Trudy Lane) and, it is hoped, PMNT.

The deed also provides for a seventh representative and Council members suggested this position should be offered to EcoQuest, the environmental education and research organisation based at Whakatiwai, to provide more weight for conservation interests. Tim said that option would be investigated.

Living Water has promised initial funding for the project of \$50,000 a year until 2023. 'Nothing is guaranteed after

that,' he said, 'but I would hope the funding might continue.' It is assumed that TRP will also seek grants from community funding providers to carry out ecological restoration of the new reserve.

Council members asked about the original proposal by the Daltons, that the project would include a museum commemorating the attack on the Pūkorokoro pa by HMS Miranda in 1863, a display area covering wetlands and waders, and a large café and training complex to provide local youth the chance to develop skills needed in the tourist industry.

Tim said that was not part of the PRK project and, given that the land was now designated as a Wildlife Management Reserve, there was little chance of a building being erected on it. There was the possibility of the Daltons putting up a building on their land adjacent to the reserve – though the current District Plan rules would make achieving that very challenging – and if that happened the TRP Trust could if it wished become involved. 'But that would be in the future and entirely up to the new Trust.'

Tim also explained that the RP wetland was only a part of the Living Water vision which was intended to run 'from the mountains to the sea' – or, to give it a local flavour, 'from the forest to the firth' – rehabilitating the whole Pūkorokoro-Miranda streams catchment and stopping silt from the rivers affecting the marine area round the Findlay Reserve.

Living Water was, Tim said, also facilitating enhancement further up the catchment. Trudy commented that 'there has already been a lot of riparian planting further up in the catchment' and Tim added that the Western Firth Catchment Group had been given \$150,000 from the DOC Community Fund for riparian planting.

In addition, Tim said, Living Water was working with Hauraki District Council, Waikato Regional Council and the two farmers adjoining the TRP block – the Daltons and Crooymans - to develop a suitable drainage scheme. These farmers wanted a bund and a drainage ditch along the boundary of the new reserve to protect their land from future flooding events that could be influenced by the ecological restoration of the new reserve. The Hauraki District Council indicated this would have to be paid for by those who benefited.

Questioned about why the streams in the new reserve had still not been fenced, Tim said only farms covered by the Sustainable Dairy Water Accord were required to fence their waterways and there were only two dairy farms in the catchment. The rest of the properties in the Pūkorokoro and Miranda Stream catchments were beef farms – as was the case with the Coxhead farm – forestry or lifestyle properties. 'However,' he said, 'the intention is to encourage all the landowners to fence their waterways before any riparian planting is carried out.'



LAND DEAL: A plan of the dispersal of land following the sale of the Coxhead farm.



AT HOME: Wrybills have learned to cope with the swift-flowing waters of their braided river breeding grounds.

Photo / Steve Attwood

Lessons from 4 decades of Wrybill banding

The banding programme for New Zealand Wrybill, or Ngutu Parore, has now been running for nearly 40 years. Unfortunately, reports **Adrian Riegen**, catching wrybills has proved difficult in recent years. But we have learned much about their movements and that they can live for over 22 years.

With 2019 being designated Year of the Wrybill to help raise public awareness for this unique species, perhaps it is time to review briefly what we have learnt about Wrybill from the banding programme.

The first Wrybills were banded in 1980, but it wasn't until 1988 that a good number were caught. In that year 179 were banded at Jordan's Farm on the Kaipara Harbour where most of the early banding was done.

The aim was to look at survival rates and longevity, which can only be determined by banding, but rather than use colour bands on hundreds or possibly thousands of Wrybills, we decided to just use metal bands. Of course this meant they would not reveal anything unless the birds were found dead or recaptured. But if we caught a sample of the population each year, some were likely to be previously caught birds and we could start to determine the age structure of the population and eventually, longevity.

We were able to catch good numbers at Miranda in the 1990s, usually on the shellbank, which was at least a kilometre shorter than it is today and was always favoured by Wrybill when roosting, as was the south side of the Taramaire Creek.

These habitats have changed considerably over the past 30 years and nowadays the Wrybills, along with godwits and knots, tend to roost in the Stilt Ponds. These ponds barely existed back then and were little more than



TAKEOFF: Wrybill with its wings spread.

Photo / Steve Attwood

puddles. A small amount of seawater did enter the ponds at the southern end but the flap gate kept most of the sea out and water drained out freely on the dropping tides.

However, for some years the flap gate was broken, allowing more water in, and the outlet stream became choked with mangroves, which slowed the rate at which water could recede, and this is still the case today. As a result, the Stilt Ponds are now much bigger and rarely dry, which is fine for waders to roost in but far from ideal for catching birds. In addition, Wrybill rarely use Taramaire as a roost site any more. As a result, fewer Wrybills have been caught in recent years.

The Birds NZ wader counts undertaken each June show that the Manukau Harbour and Firth of Thames are still the strongholds for Wrybills as they have been for many years with around 90% of the population found in those two sites during the non-breeding season.

The population appears steady at around 5,000 individuals, thanks in part to the great efforts to protect and improve their breeding habitat in the braided rivers of the South Island. We will hear more about that during this year.

Of those 5,000 birds, around 2,000 or 40% of the population are usually found at Pūkorokoro Miranda from January to August, after which they migrate to the South Island to breed.

In 1997 Stephen Davies wrote a paper, published in *Notornis*, in which he analysed the data we had gathered between 1987-1996. During that period we banded 2,383 Wrybills, mostly at Jordan's on the Kaipara Harbour and at Pūkorokoro Miranda. Of these, 690 were recaptured on 830 occasions. About 30% of the birds recaptured were at least five years old and the maximum aged bird was 16 years old.

We had hoped to continue catching a sample of 300-400 each year to look at the longterm survival rate and longevity but the catching problems in recent years have stopped us achieving this. Since 2014, when 645 were caught, only 46 more have been banded. The small catches of course mean less chance of recaptures.

Another problem the programme faced was that in the early days we were required to put the metal bands on the lower leg so they would be more visible should they be found dead. Normally a band on the lower leg would not be a problem but Wrybills spend a lot of time



A HARD LIFE: A female Wrybill sitting out a storm. Photos / Grant Davey

The challenge of being Wrybill parents on a braided river

Life can be hard if you are a member of the nationally vulnerable Wrybill species and are trying to nest on the bed of the Ashley-Rakahuri River.

Over recent years fewer pairs have been able to find suitable nesting sites because of weed infestation. However, during winter and early spring 2017, there were some exceptional floods which created the large areas of clear shingle needed for successful Wrybill breeding. Unfortunately, the last of these floods occurred at the wrong time for several nesting pairs and eggs were washed away.

One pair at the Smarts site had been followed since they first arrived on the river in mid-September. Their two-egg nest was found on 3 October, but was washed out by the large flood on 9 October. Hours before this happened, Ashley-Rakakuri Rivercare Group member, Grant Davey captured a photo of the female bird trying to sit out the storm. But the nest went under during the subsequent night.

Three days later the male bird was spotted close to the nest site, but it was not until the end of the month that the

female had built up enough reserves to lay two more eggs close to the old nest site. Both birds were particularly trusting, and if Grant crawled on his belly he was able to get close enough for good images of the birds on eggs. Grant was keenly awaiting hatching and a chance to follow the chicks feeding on a nearby braid.

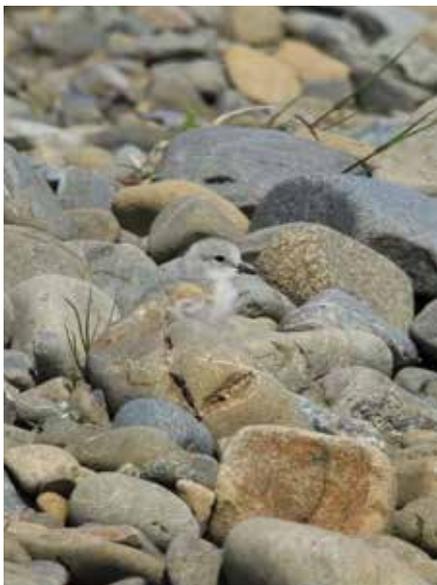
However, just before hatching, a colleague reported vehicle signs in the area so Grant went to investigate. Near the nest site, fresh 4WD tracks were obvious, and a wheel had gone right over the nest, crushing a recently hatched chick and cracking open the just-about-to-hatch egg. This was within 100m of signs notifying the presence of nesting birds and requesting visitors not to proceed further.

A couple of days later, the male bird was seen nearby, but as the nest loss happened late in the season the pair did not try again. Two birds, most likely the same pair, did return in the 2018-19 and nested within 100m of their previous site. They were successful in fledging a single chick.

Nick Ledgard



TRAGIC: A nest crushed by a passing vehicle.



CAMOUFLAGE: Wrybill chicks blend into the rocks of braided rivers.

Photo / Steve Attwood

in glacial rivers where the sediment in the water is quite abrasive and the stainless steel bands were wearing out before the birds did. After a few years the numbers on the bands were becoming illegible.

We had great difficulty identifying many of the individuals we recaptured and most had to have new bands each time they were caught. A few have been caught five times and had five different bands. Eventually we got permission to put the band on the upper leg where it is harder to see but lasts considerably longer so hopefully valuable age data will not be lost in future due to band wear.

In spite of all this, since 1987 we have banded 6,526 birds using 7,517 metal bands. Of these 2,052 have been recaptured, either by us or by researchers in the South Island who have added colour bands to some of them, and a

small number have been found dead. On one occasion five Wrybill bands were found in one Stoat den in a South Island braided river.

As for longevity, well we have improved on the 16 years Stephen wrote about and now at least three birds have reached 22 years of age, one reached at least 21 years, three reached 20 years, three got to 19 years, nine to 18 years, five to 17 years, and seven reached 16 years. Of course that means at least 30 reached 16 years. Overall, 745 reached at least five years of age which is around 36% of all those recaptured.

Hopefully this year we will get a chance to recapture a Wrybill which exceeds the 22-year current record. In the meantime, don't overlook these wonderful little birds on your visit to Pūkorokoro Miranda. They're well worth a look. 🐦

Celebrating the last banded Wrybill on the Ashley-Rakahuri River

The Ashley-Rakahuri Rivercare Group monitors bird breeding through to the fledging of chicks because it is only then that we judge breeding to have been successful. But it is much harder to monitor adult survival, as it is impossible to individually identify adults unless they are banded. So leg banding is important.

Since 2000, 25 Wrybills have been banded, but for various reasons that has not been possible over recent years. BW-BW (photographed at right by Grant Davey) has two coloured bands on both legs, both blue over white, and is now the only banded bird left on the river.

He was banded as a breeding adult in 2010, when we reckon he was aged three, so he is currently at least 11 years old. Two other banded birds have reached a greater age on this river (12 years), but on average we only see banded birds for about four years. We do not know why they don't last longer when the oldest Wrybills recorded have reached over 20 years.

When BW-BW was banded down at the railway site, he was with a banded female, WO-GO. We know they were together for at least three years, but even though they annually laid the usual two eggs and chicks were hatched, we never saw any chick reach the flying stage.

WO-GO then disappeared, presumably died, and next season BW-BW appeared with a female up at Groyne Two near the airport, where



he has returned ever since. But as his mate is unbanded we don't know whether she is always the same bird.

Even though their nest has been washed out by spring floods at least twice, they have done well up there, raising a total of 11 chicks.

In the 2014-15 season they even double-brooded, that is had two nests in the one season and fledged three chicks. That does not happen very often on the Ashley-Rakahuri.

This season, the pair's nest was located on 14 September, and four weeks later ARR member, Steve Attwood, returned to look for chicks. 'The parents were down by the water,' reported Steve, 'and I knew the chicks would be hidden somewhere in the

nearby stones. However, I had to lie still on the ground for over half an hour before I saw a chick raise its head above the stones.' At that time, there were two chicks, but one disappeared soon after.

The remaining chick did well and was still on site with BW-BW at the time of our annual survey on 24 November. On the survey day, a total of 20 Wrybill (all flying) were seen. However, a flood two days later cleared the river of almost the lot.

BW-BW has not been spotted since – but he may be up in his Pūkorokoro Miranda winter quarters, where he has been recorded on more than one occasion.

Nick Ledgard

New course will teach low cost home printmaking

As well as her regular nature journaling course, artist Sandra Morris will also be holding a course in printmaking at the Shorebird Centre in April this year.

A new course on how to do low cost printmaking at home will be held at the Shorebird Centre this year by artist Sandra Morris.

Sandra has been holding courses at the Centre in nature journaling, water colour and drawing techniques, and painting in the field. But this year, as well as her regular nature journaling course, she will run one covering both intaglio and relief printing processes.

This will mainly involve participants drawing the birds and plants of the Pūkoro area on paper and then using an etching tool to scratch their work on to a plastic plate which can be inked and printed on a small portable handpress. Sandra says the beauty of this intaglio process with the etching tool on plastic is the ease at which the image can be transferred onto the plate.

If there is time the course will also look at the option of using the relief process of lino printing. 'Both processes,' she says, 'are possible to do on the kitchen table at home and do not involve huge costs. As well as using a hand press we'll also be learning how to print with a hand roller or the back of a spoon.'

Sandra gained a Master of Fine Arts degree at Elam School of Fine Arts in Auckland in 1990 and in 1995 attended the University of Newcastle in Australia to complete a post graduate diploma in plant and wildlife illustration.

She is an award winning author and illustrator of children's natural history books as well as a botanical artist.

A dedicated supporter of community education, Sandra holds many art workshops for adults, including children's book illustration, botanical drawing and painting and nature journaling. She has also taught many workshops on botanical watercolours and nature journaling with children. 'My aim is to engage people both young and old back with nature as a restorative and enriching experience.'

Sandra has longstanding links with Miranda, having made many trips there to sketch and paint the flora and fauna, and in 1999 she was on the PMNT Council. 'It has become one of my favourite places in New Zealand with its wide expansive skies, and rich bird life.'



PRINTMAKING: (from top) intaglio printing using an etched plastic plate and a small press; lino printing; Sandra Morris painting at Pūkoro Miranda.
Photos / Sandra Morris, Lesley Alexander



ENDEARING: Cooperative Shore Plover on Motutapu Island.

Photos / Chelsea Ralls

Learning to love an endangered wader

Centre assistant **Chelsea Ralls** volunteers to join a research programme aimed at finding out why so few Shore Plovers chicks survive on predator-free Motutapu Island, learns to admire the brave little birds . . . and fears she's becoming a birder.

I often warn visitors to the Shorebird Centre about the risk of turning into a birder if you spend too long at Pūkoro. But it became apparent that I'd suffered the same fate when I took a holiday in November and spent 10 days volunteering for a project monitoring Tūturuatu/Shore Plover on Motutapu Island. And loved it!

I had the good fortune to be introduced to Mac McKay, a conservation biology masters student at Massey University, when he took part in the Dotterel Management Course with John Dowding at the Shorebird Centre. Then I saw a call for volunteers on the island to help with the study he was doing in partnership with DOC seeking to understand why so few Shore Plovers survive on Motutapu given it's a mammalian-predator-free island.

I was drawn to the idea of helping to observe these critically endangered shorebirds and collect the data needed to properly understand the threats they face and then develop plans to save them. It was also a great opportunity to spend time observing shorebird behaviour and learning about the effort that goes into keeping our rare species from disappearing.

The first task upon my arrival on

Motutapu was to watch the release of two 4-week old kiwi that had been delivered from Rotorua. What a treat! Hazel Speed from DOC explained that this had all been organised in honour of my arrival but I had some serious doubts about that.

That afternoon was spent getting a tour of the island and familiarising myself with the monitoring spots and the birds. There were six pairs of Shore Plover and a few singles, including the one chick who was the sole survivor of last year's breeding on the island. The overall idea was to observe the two nests that had already been found, watch the remaining pairs and look for signs of their nests.

Once we'd discovered a nest Mac would set up cameras, one at a distance capturing an image at regular intervals, and another right in front of the nest operated by a motion sensor. Meanwhile observers would carry out monitoring of the nest and an area about 50m around for two hours at a time, making notes every two minutes about what each of the birds were doing (feeding, incubating), any agitated behaviour they showed and any other birds or mammals in the immediate area.

The most unexpected result of

this work was the sense I got of the personalities of the birds and the couple dynamics of the pairs. It's such a contrast to the waders of Pūkoro who are in flocks of thousands, making it hard to single out one bird and spend time observing its behaviour. But each evening we'd discuss what we'd noticed that day, making anthropomorphic judgements about the birds and imagining how well this would go down as a reality tv series.

There was the pair of plovers who had the surviving chick from the previous season that seemed to stay quite close and play a part in the role of looking over the nest; there was the pair who seemed to split the time incubating quite evenly between the male and female, a sharp contrast to the relationship at another beach where the male seemed to think his job was over after about five minutes.

They'd get quite close to you, too, if you were quiet. The observation points had been chosen to be able to watch from a distance with a scope and binoculars, but one bird would regularly hop on to the rock in front of us and stare quite calmly and inquisitively for quite a while. They're the kinds of birds that frustratingly get too close for your



VULNERABLE: New Zealand Dotterel on a nest and its eggs on Motutapu Island.

Photos / Chelsea Ralls

telephoto lens but endear themselves to you for their bravery.

The main form of transport on Motutapu is your own feet. The furthest beach was maybe an hour's walk from the volunteer accommodation. Initially, while learning the ropes, I was paired up with another volunteer. But once we had more nests to monitor we would head out on our own.

It quickly became apparent we would need to defend ourselves. The perils included inquisitive and playful cows, which made me a little nervous even though I'm a country girl. Then there were the magpies, which plucked up courage at the sight of a vulnerable lone human and dive bombed me. We started carrying walking sticks.

While I was there we managed to find another three plover nests. The birds rushing out from their hiding places when you arrived on a beach would give you a good indication to the general area they'd put their scrape. Unlike NZ Dotterels, who nest on beaches in the open, the Shore Plovers tend to build nests in banks, on rocky outcrops that you can't imagine any chick climbing and under driftwood debris along the high tide line.

By the time I left the island in early December we were monitoring 14 Shore Plover eggs. All were all still safe and well when I left although there was an incident with a very new New Zealand Dotterel nest in my final week. A piece of egg shell had been found on the beach but there wasn't any other sign

that made the culprit obvious.

Although the breeding season started well, updates from the island were full of trials and tribulations. By mid-January storms had washed nests and chicks away, chicks were taken by harriers, partners had flown the coop and only three chicks were still alive.

But there were also new partnerships, new nests and eggs and hope for a second chances for some of these pairs . . . and a matter of wait and watch and see . . . and hope.

Being on Motutapu wasn't all about the Shore Plovers. The island has incredible bird life, as you'd expect on a predator-free island.

We would wake to the sound of Tui, Bellbirds and Kereru in the trees

outside. We could often see a Banded Rail from the front window which also had stunning views of the causeway between Motutapu and Rangitoto and amazing sunsets over that iconic volcanic cone.

While heading out exploring the lava fields and marvelling at the very recent volcanic activity and the adaptability of the plant life growing out of the lava fields we often spotted other locals like Takahe, Saddleback and Whiteheads.

It's set a high bar for a good holiday. I will look forward to my next visit to the peace and quiet of Rangitoto and Motutapu and keep an eye out for any other projects where I can learn more about our birds and the people who are out there keeping them alive. 



TOUGH TIMES: Shore Plover chicks don't have a great survival rate.

Photo / Colin Miskelly, NZ Birds Online



PRICELESS: One of the rare *Microtralia insularis* shells found in a ditch near the Centre. Shell photos / Dave Fraser

Rare treasure found in a roadside ditch

When Ray Buckmaster found some shells in the ditch in front of the Centre, while cleaning up after the January storm surge, he sent a photo to avid shell collector **Geoff Foreman** to see if there was anything interesting. It turned out, as Geoff reports, that one was an extremely rare endemic shell whose discovery has got the shell world in an uproar.

Normally a roadside ditch would not be expected to hold any pleasant surprises but that changed following the massive storm surge on 5 January last year.

The ditch in question is between the road and the Pūkoro Mirānda Shorebird Centre. On this day the tide was a very high king tide which was further lifted by a low pressure zone and a strong NE wind driving the sea into the Firth of Thames, flooding Kaiāua, coastal farmland, the bird hides and walkways and the surrounds of Centre itself. A few months later with recovery well underway the roadside fence alongside the Centre was still in damaged condition.

PMNT Council member Ray Buckmaster, doing volunteer work clearing the fence line and replanting shrubs, gathered a handful of tiny shells he spotted amongst the debris in the ditch. Curious and wanting an identification he emailed the photos to me.

I could not identify the shells by photo but fortunately Raewynn and I were volunteering at the Shorebird Centre a week later, giving me a chance to gather my own handful or two of debris. Back at home, sorting through the material revealed the surprises.

I expected to find a couple of species, but there were six species of introduced land snail and two endemic pulmonates. Pulmonates have a mantle cavity employed as a lung. They can cope with a marine environment while living in a splash zone or upper tidal zone.

New Zealand has five similar species, four of them throughout most of the country, the fifth at Stewart Island and sub-Antarctic islands. A sixth, very common on the mudflats of Miranda is the mud snail, *Amphibola crenata*.

The following are brief notes about the eight species found.

The Brown Garden Snail, *Cornu aspersum* (Muller, 1774) also known as *Helix aspersa*, or *Cantareus aspersa*, the definitive name still being subject to resolution. This is the common garden snail found throughout the country, often eating its way through your vegetable garden. Originally from Western Europe this edible snail has been in New Zealand since at least 1860. The spent shells are often seen lying by the track to the hides. Living snails make their home under cover during daytime.



Prietocella barbara (Linnaeus, 1758). Height up to 12mm x 5mm. Native to the Mediterranean where it is found in dry exposed sites near the sea. In



New Zealand it was first discovered in Wellsford in 1983 and is now very common north of Auckland This was the most common shell in my sample and is, along with the brown garden snail, the only introduced species I could find listed from the Miranda area. I have now recently located it at Midway Beach,

Gisborne and it has apparently also been recorded at other east coast sites.

Oxychilus cellarius (Muller, 1774).



5mm high x 10mm wide. Native to eastern and central Europe and

western Mediterranean. First recorded in New Zealand in 1862 in Bay of Islands, by the early part of the twentieth century it was found to be widely distributed. It occurs in shaded areas, including gardens, caves and the edge of native forest. There were large numbers in my sample.

Cochlicopa lubrica (Muller, 1774).



7.8mm high x 2.5mm wide. Its natural range is Eurasia from Iceland, northern Europe and Siberia, south to north

western Africa and east to Japan. It was first recorded in New Zealand at Auckland in 1983 and is now widespread in the North Island, Nelson region and Raoul Island in the Kermadecs. In New Zealand it is most prevalent in moist shady places in gardens and often abundant in patches of remnant, modified forests.

Lauria cylindracea (da Costa, 1778).



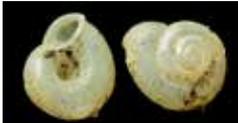
3.5mm-5mm high by 2mm in diameter. Widely distributed in western Europe, eastwards to the Caucasus and Asia



COLLECTORS: (from left) Ray Buckmaster with a handful of the shells he found in front of the Shorebird Centre; Geoff Foreman with a small part of his collection. Photos / Jim Eagles, Raewynn Foreman

Minor. This species was first collected in New Zealand at Thames in 1944 and is now widespread in the Auckland area and recorded from a few sites south of Auckland-Hamilton, Papamoa, Motueka Nelson and now Pukorokoro Miranda. It prefers rocky or stony walls, crevices in tree stumps and open areas and grassland.

Vallonia excentrica Sterki, 1893.



Shell up 1.2 mm high x 2.3mm in diameter. Native to

the Mediterranean, western Europe, Atlantic islands and North America, First authenticated record in New Zealand was 1893 at Auckland. Now known from numerous North Island sites and Nelson. It is usually found in grasslands and sand dunes.

Finally, the two endemic pulmonates: *Pleuroloba costellaris* (H. & A. Adams, 1854). Height 10.7-12.1mm, width 5.75 - 6.5mm. A common shell which lives near mangroves much of its life out of the water.



Native to the Mediterranean, western Europe, Atlantic islands and North America, First authenticated record in New Zealand was 1854 at Auckland. Now known from numerous North Island sites and Nelson. It is usually found in grasslands and sand dunes.

Microtralia insularis (Powell, 1933). Height 2.9 -3.7mm, width 1.4 - 1.9cm. This minute shell was totally unexpected. From my research and from what I have been told, it has only been ever recorded on Rangitoto Island. In fact, in Powell, 1979, this species was referred to as *Rangitotoa insularis*. It usually lives at the high tide mark in crevices on the underside of scoria rocks, resting on mud, in the zone of the maritime plant *Salicornia*. There may be suitable habitat north of the chenier plain around Kaiaua and further north. These shells, of which

I found five specimens, may have been washed southwards by the January flood surge of water. Indeed rare.

The presence of the shells in the ditch was the result of them being overwhelmed by the salt water which flooded their habitat. Did any of them survive? Or were they all wiped out? A thorough search of the ground between the sea and the shorebird centre and searching north to Kaiaua and beyond along the coast may result in living shells being found. I would hope the two endemic pulmonates survive. They live in a salt water environment and providing they were not washed out of their normal habitat may still be found alive and well.

My thanks to Ray Buckmaster for showing the curiosity of a true naturalist and allowing us to share his discovery. Special thanks to fellow PMNT member, Dave Fraser, who also lives in Gisborne, for his wizardry and expertise with microscope and camera in producing the photographs. Also, sincere thanks to Kerry Walton, Research Associate at Te Papa currently studying at Otago University, for confirming my identifications. Kerry was particularly surprised and excited to positively identify the rare *Microtralia insularis* and to hear it has been located in another area outside Rangitoto.

The discovery certainly created something of a sensation at a recent Wellington Shell Club Show and one Christchurch collector positively begged for a couple of the rare shells. Next time we are up we will have a look for her.

So don't be surprised if future months see the ditches around the Shorebird Centre crawling with people searching for rare treasures. 🐦

Hooked on shells, shorebirds and native plants

When Ray Buckmaster discovered some intriguing shells in a ditch he knew immediately that the person to ask about them was fellow PMNT member Geoff Foreman.

Geoff's interest in shells dates back nearly 50 years when he moved from Wellington to Wairoa.

A keen surfcaster, he soon took a fishing trip out to Mahia, saw the multitude of shells - he collected 125 species on that first day - and has been hooked ever since (along with his interest in shorebirds, in fact in all birds, not to mention native plants).

Today Geoff has has a huge shell collection which, Raewynn says, 'we box and transfer from house to house along with his very many cabinets'.

Over the years there have been a few moves, from Wairoa to Morrinsville, to Te Aroha and now to Gisborne 'our final settling place we hope'.

It is not just the collecting of shells that Geoff and Raewynn find so fascinating, but the localities where they are found and the changes that - as with birds, plants and insects - occur over time. Why, for instance, has a shell previously only found on Rangitoto now turned up at Pukorokoro?

Geoff says that in recent years a number of sub-tropical and tropical shells are appearing in New Zealand. Does this reflect climate change? 🐦

What's happened to the Hauraki Gulf's unique Spotted Shags?

The Spotted Shags which are among the most beautiful birds seen around the shores of the Hauraki Gulf are found nowhere else but if nothing is done to halt a calamitous decline in numbers they may not be around much longer, writes **Jim Eagles**.

Take a slow, careful drive along the narrow, winding coast road heading north up the Coromandel Peninsula from Thames in late spring, and you're likely to be treated to the magnificent spectacle of hundreds of beautiful Spotted Shags or Parekareka (*Stictocarbo punctatus*) roosting on the rocks near the road and fishing just offshore.

When in breeding dress, with their double-Mohawk hairstyles, striking nuptial filoplumes, blue-green faces and blue eye rings, elegantly spotted wings and yellow feet, these birds immediately look special. And they are, in fact, even more special than you might imagine at first glance.

For one thing, recent genetic studies by Nic Rawlence, of the University of Otago, and his co-workers have found that the Hauraki Gulf Spotted Shags are genetically distinct from those found abundantly around the South Island and Wellington. Moreover, Hauraki Gulf Spotted Shags are closer genetically to the endangered Pitt Island Shag (*Stictocarbo featherstoni*) of the Chatham Islands than to their look-alike southern cousins.

The other thing that makes Spotted Shags along the Coromandel coast road special is that they are threatened. There is a real possibility we may not be able to enjoy them for much longer.

Back in the early 1900s it was estimated that there were at least 10,000 of these birds in the Hauraki Gulf. In February 1977 Michael Taylor's OSNZ team counted a total of 3480 Spotted Shags during an inner Gulf cruise. The day's tally included 2215 birds on the Coromandel Islands and 754 at Tarahiki Island.

During the 1970s-80s, the survey team also used to see roosting flocks along the western side of the Firth between Tarata Point and the gravel pits at Wharekawa, where Spotted Shags often lined the gun-wales of the old *Hinau*.



A RARE BEAUTY: A Spotted Shag in full mating plumage at Tarahiki Island in the Hauraki Gulf.
Photo / Tim Lovegrove

By the 1990s the Hauraki Gulf population had probably declined to less than 1000 birds.

In 2013 Auckland Council Biodiversity staff and Birds NZ members began annual surveys of breeding colonies around the region. They found that of all the breeding sites, which once dotted the coastline - at places like Te Henga/Bethells and Muriwai on Auckland's west coast, Ngatutura Point on the Waikato west coast, the Noises and the Coromandel Islands, where there used to be hundreds of breeding pairs - just three sites were still being used.

The only active Spotted Shag breeding colonies found during the surveys were at two places at the eastern end of Waiheke Island, Anita and Hooks Bays, and on

Tarahiki Island (Shag Rock), north east of Waiheke.

In November 2013 the survey team recorded a total of 469 birds and 100 nests. However, it was clear during that survey that breeding had finished for the year, as the nests were inactive, and more accurate figures would be obtained by counting earlier in the season and recording active breeding nests to get an approximate count of the number of breeding pairs.

A survey in August 2015 recorded 702 birds and 306 nests at the three breeding colonies. In early September 2016 the tally was 608 birds and 261 nests. Last year's results were worrying, however, with no birds at all at the Anita Bay and Hooks Bay sites. The only active breeding colony was Tarahiki Island with 578 birds



HARD TO FIND: (from left) Chris Gaskin and Tim Lovegrove count the declining number of Spotted Shags in the Hauraki Gulf; one of the few remaining members of this genetically distinct group. Photos / Tim Lovegrove

and 309 nests.

Happily, in August last year the survey team found that birds had returned to Anita and Hooks Bays, with 552 birds in total at the three colonies, including 96 well-grown juveniles, and 280 nests altogether, which probably equates to a similar number of pairs recorded on the previous annual surveys.

Auckland Council ecologist Tim Lovegrove says the previous year's finding of no nests at the two Waiheke sites was ... 'rather odd. We don't know what happened. Maybe the birds had been disturbed.' But, he adds, 'the counts suggest that for some reason the Anita and Hooks birds moved temporarily to Tarahiki and now they've moved back.'

On the positive side Tarahiki, now the main breeding site for the species in the Gulf, does seem to be stable and quite productive. During the 2013 survey, for instance, it was noticeable that a high proportion of the birds seen ashore were juveniles (lacking the black throat marking of adults). A close examination of photos showed that about 85% appeared to be juveniles.

A report on that survey notes that Spotted Shag pairs have been recorded as generally producing 1.12-1.45 young per nest. 'Using the upper figure in that range (1.45), means that around 196 nests could have been successful in 2013. If this

is typical at Tarahiki, it is clearly quite a productive breeding site.'

Nevertheless, those two bits of good news don't alter the fact that a unique and beautiful Hauraki Gulf bird, which was once widespread in the region and numbered in the thousands, is now reliant on maybe 300 breeding pairs at just three nesting sites in one small corner of the Gulf.

So how has this happened? There are many reasons. In the early 1900s breeding colonies were shot out by fishermen, who saw the shags as rival fish-eaters.

In his 1951 book *Bird Secrets*, Geoff Buddle wrote ... 'I vividly remember 40 or more years ago cruising along the coast of Waiheke.... Spotted Shags, in those days not protected, were flying past in a constant stream all the afternoon, and, as is their habit, swerving in their course to try and pass ahead of the yacht. Two members of the crew armed with shot guns amused themselves for hours practising on the flying birds: shooting went on till all cartridges were expended and probably a hundred or more dead or dying birds were left lying in the water.'

Shooting is no longer a problem because, as with most other native birds, Spotted Shags are protected by law, although birds with gunshot wounds are still occasionally picked up on beach patrols around New Zealand.

Set nets are death traps for diving birds and are another major threat. Chris Lalas, in a study of Spotted Shags in Otago Harbour, found that set nets caused significant mortality.

Set nets probably played an important role in the recent extinction of Spotted Shags in the Manukau Harbour, where the last bird was seen at Port Onehunga in June 2008. Ray Clough, a long-standing Mangere Bridge resident and Birds NZ member, told Tim that he saw 13 drowned Spotted Shags in just two set net hauls by local recreational fishermen at Puketutu Island.

The Te Henga and Muriwai birds formerly wintered in the Manukau Harbour and, although the colony at Te Henga was quite strong with about 150 birds, even a large colony could not handle that level of mortality. Graeme Taylor saw the last breeding pair at Te Henga in 1999-2000.

Like many other seabirds, Spotted Shags have doubtless been affected by declining fish stocks.

Matt Rayner, of the Auckland Museum, has recently done some stable isotope analyses of Spotted Shag feathers, comparing feathers from skins in the museum's collection dating back more than a century with present-day samples. Matt's analysis shows that Spotted Shags in the Gulf are eating less fish than they used to, and other marine life such as squid



LAST REFUGE: Tarakihi Rock off the eastern end of Waiheke is one of only three remaining breeding sites for the Spotted Shag in the Hauraki Gulf. Photos / Tim Lovegrove

and crustaceans could now be forming a greater proportion of their diet.

Tim says that Matt Rayner's findings support what he was recently told by Dave Kellian, a commercial fisherman based at Leigh, 'who used to fish for anchovy and pilchards in the inner Gulf to supply the recreational bait trade, but gave up fishing for these species after those fisheries collapsed some years ago. A significant proportion of our recreational fish bait is now imported from South Africa.'

Another issue is human disturbance, and the shags probably still occasionally suffer disturbance at their breeding sites. This is what might have happened at the Anita and Hooks Bay colonies last year, where the survey team found numerous freshly-built nests but no sign of any birds.

Rats could also be a problem at the two Waiheke colonies. In July, Matt Rayner placed a game camera at the Anita Bay colony, and this revealed numerous Ship Rats. The Anita Bay stack where the shags breed, is separated from mainland Waiheke by a narrow channel only a few metres wide, a gap which rats can cross easily. Ship Rats could potentially prey on eggs and recently hatched chicks.

Tim says it would be interesting to examine the impact of rats by comparing the breeding success of the Spotted Shags at Anita and Hooks Bays, which are essentially mainland Waiheke, with those

on Tarahiki, which is free of all predatory mammals.

Climate change could be another factor. It is possible that warming seas as a result of climate change could shift the Spotted Shag's range, which once extended as far north as the Bay of Islands, increasingly southward.

To try to combat all of these negative effects and increase both the numbers and the range of Hauraki Gulf Spotted Shags, the research team has recommended a series of steps including continuing the annual surveys at breeding sites, working to keep them pest-free, banning set nets around the breeding sites and along the Thames coast, and educating people about the need to avoid disturbance.

The team has also raised the prospect of trying to reverse the loss of breeding sites and taking advantage of the apparent high rate of breeding success on Tarahiki, by re-establishing a colony on Otata in the Noises.

Spotted Shags used to breed at two sites at the Noises (David Rocks and Otata) until the 1970s-1980s. Recent sightings, including one in 2012 of c.140 birds on Otata by Mel Galbraith, indicate they may still roost there.

Tim says 'Otata is pest-free and the Neureuter family, who own the islands, are keen to protect and enhance the island's biodiversity, so the former colony site on

the northern cliffs of Otata could be a suitable place to trial decoys and acoustic lures. This has not been attempted with Spotted Shags before in New Zealand. However, there are a number of trials running at present with a related species, the gannet, to establish breeding colonies using this method. This should be tried with Spotted Shags.'

And what of the Spotted Shags we see along the Thames coast? Where are they coming from if they no longer breed on the Coromandel Islands?

In 2016 and 2017, while Tim and his team were surveying the inner Gulf colonies, Ian Southey carried out simultaneous counts along the Thames coast. When the breeding colonies were active in August, Ian saw very few birds on the Thames coast, but by November when breeding had finished, there were hundreds along the Thames coast.

It appears the same birds are commuting back and forth across the Firth from their breeding colonies at Tarahiki and Waiheke on the western side, to favoured feeding grounds along the eastern side when they are not breeding.

The annual display of Spotted Shags along the Thames coast is a rare chance to see these special birds. But unfortunately, if the collapse in their numbers is not halted, it's a chance that may not be available much longer. 



DECISION TIME: Council members explore the new Repo ki Pūkorokoro wetland reserve so they have the full picture before deciding whether to take part in the project. Photo / Jim Eagles



From the Chair

Important decisions to be taken

The PMNT Council faces some big decisions, on issues such as whether to join the proposed Tiaki Repo ki Pūkorokoro Trust or what to do about the Shorebird Centre building, which will impact significantly on the future of the Trust, reports chair **William Perry**.

Kia ora. Tēnā koutou katoa.

There is an exception to every rule, so the saying goes, but the rule itself is a paradox. I have been trying to find an exception to the rule that everybody you meet at Pūkorokoro is a good person, so far without success. There is something about the place that generates people who seem to be intrinsically good.

Maybe we are all better people when we are at Pūkorokoro. I certainly feel like a better person when I'm there.

Recently I was sufficiently impressed by a couple of visitors at the Stilt Hide that I allowed them to borrow my spotting scope and left it with them, expecting that they would return it to me back at the Centre. The Shore Guides were busy on the annual January Field Course and the loan scopes were also in use by the Field Course participants and therefore not available to visitors. The visiting birders did return my scope, of course, and they shared with me some interesting information about the use of radar for tracking migratory shorebirds.

We also had a genial discussion about the direction of bend in the Wrybill's bill (always to the bird's right). Apparently, European Crossbills hatch from their eggs with straight bills, which then develop either upper mandible to the right or upper mandible to the left, depending on which regional gene predominates. How fascinating is that? And what a great vibe

is created by discussions such as this at Pūkorokoro.

Maybe this vibe would work on some of our world leaders – imagine Trump and Putin, May and Merkel, Xi and Abe and the others all congregating at the Shorebird Centre for a summit meeting – they would be overwhelmed by the Miranda magic and solve the world's problems by lunch time.

Truth to tell, we have not even found the solutions to our own issues at Pūkorokoro. We still do not know how involved we shall be in the exciting Tiaki Repo ki Pūkorokoro project to establish a wetland reserve on the newly-acquired piece of land just to the south of the Shorebird Centre. We still do not know how on earth we are going to catch Pacific Golden Plovers on our patch to find out where they go when they leave our patch. We still do not know what changes we are going to make to our existing premises to be ready for future activity. **But we are working on all these things.**

The TRP Trust is on the brink of being formed and the Council of PMNT will consider carefully whether we participate in it or watch from a distance. The Shorebird Centre is buzzing with activity. Keith Woodley is at the centre of it all as usual and he is surrounded by the other people engaged in our work: JoJo, Chelsea, Amanda, Jim, Ray, Ann, Dai and others. The Pacific Golden Plovers are

now referred to as PGP's (and sometimes Kuriri) and their presence and activity and movements are being closely monitored by several people, as described elsewhere in this edition. Building plans are on the back burner but we will have to do something to prepare for the future. Apparently, the roof of the Shorebird Centre requires remedial work or replacement in the near future. We have also had our navel-gazing 10-year plan meeting and we need to follow up on what we learned from that and move that project into its next phase.

While all this is happening, the trans-equatorial migrants are out there on the mudflats feeding themselves to obesity in preparation for another epic flight to the Yellow Sea and then onward to their breeding grounds in the Arctic. Some of us will follow them again on this journey, at least as far as the Yellow Sea and we are particularly interested now in what is happening in the North Korean corner of this important migratory stop-over.

One of the many positive things to arise from our discussions of the new TRP Trust is increased use of Te Reo Māori at the Shorebird Centre. Full marks to Amanda Hunt, our summer shoreguide, for speaking Te Reo in her daily activity. Perhaps when we bid farewell to the god-wits and knots in the next few weeks we should say, 'Ka kite anō' instead of 'See you again soon'. Thus, we hope.

Ngā mihi, William Perry

GODWIT TIMES

Happy New Year Birders. Welcome to the Year Of The Wrybill!

When I was a little chick I used to get frustrated with how my sketching in the sand didn't look much like the thing I was trying to draw. But as I grew older I realised that my drawings were more realistic when I paid closer attention to what I actually saw rather than what I thought I saw. Careful observation is the key to identifying a bird species too.

Initially it is fine to lightly sketch a roundish shape for the head, an oval for the body, and a triangle for the tail and another for the bill (such as in the top drawing at right).

But then look at the length of the beak in comparison to the head. Is the bill longer than the distance of the eye to the beginning of the beak? Is it longer than the width of the head? How big is the eye? Is it smaller or larger than $\frac{1}{8}$ of the size of the head? How long is the neck compared to the head or body? Are the legs longer or shorter than the body. Record your measurement (as I have done in the second drawing)?

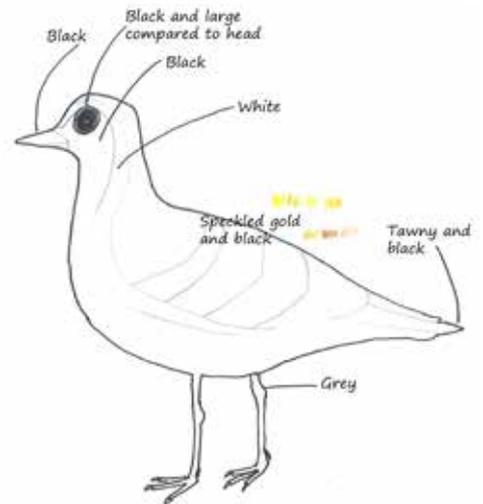
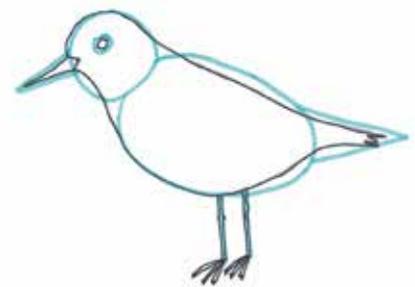
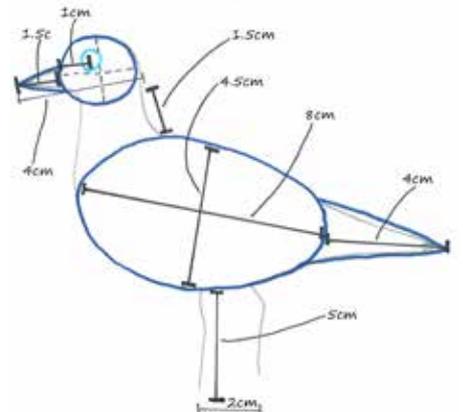
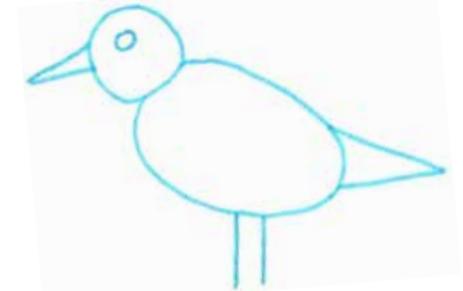
Go back over each body part and draw it more accurately going over your initial light pencil sketch (as seen in the third bird sketch).

Now look at the colours of each body part and the patterns on the bird. Sketch or note these beside your drawing (as I have done in the fourth drawing which shows the Pacific Golden Plover or Kuriri).

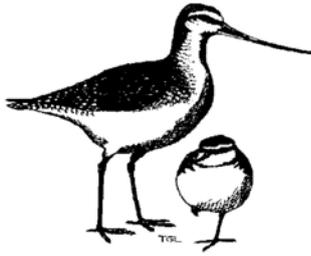
This will help you colour in the image or identify the bird later (as I have done for my drawing of a Wrybill or Ngutu-parore in the bottom figure).

Enjoy having a go at drawing and/or identifying birds this year. I'd love to see the results.

Ka kite ano
Godfrey Godwit



PŪKOROKORO MIRANDA NATURALISTS' TRUST



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Magazine

PūkoroKoro Miranda Naturalists'
Trust publishes PūkoroKoro Miran-
da News four times a year to keep
members in touch and provide
news of events at the Shorebird
Centre, the Hauraki Gulf and the
East Asian-Australasian Flyway. No
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See the birds

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

Low cost accommodation

The Shorebird Centre has bunkrooms for hire and two self-contained units: Beds cost \$20 per night for members and \$25 for non-members. Self-contained units are \$70 for members and \$95 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 \$65 for those living overseas. Life memberships are \$1500 for those under 50 and \$850 for those 50 and over. As well as supporting the work of the Trust, members get four issues of PMNT News a year, discounts on accommodation, invitations to events and the opportunity to join in decisionmaking through the annual meeting. You can join at the Centre or by going to our webpage (www.miranda-shorebird.org.nz) and pay a subscription via Paypal, by direct credit or by posting a cheque.

Bequests

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

Want to be involved?

Friends of PūkoroKoro Miranda

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

Long term Volunteers

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

Firth of Thames Census

Run by Birds NZ (OSNZ) and held twice a year, in June and November, the census days are a good chance to get involved with field work and research. Ask at the centre for details.

Contribute to the Magazine

If you've got something you've written, a piece of research, a poem or a photo send it in to PūkoroKoro Miranda News. If you want to discuss your ideas contact Jim Eagles.

Help in the Shorebird Centre Garden

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

You too can be a high flyer with our great new shorebird clothing



Flying godwit and knot tops (as worn by these cool kids)

Kids t-shirts \$19.90

Adult singlets \$23.90

Adult t-shirts \$29.90

Shorebird Caps \$29.90

Year of the Wrybill gear

Adult t-shirts (as worn by Ann

Buckmaster on page 2)

\$29.90

Hand-painted Wrybill mugs

\$39.90



Wrybill soft toys

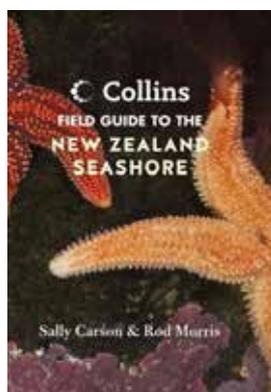
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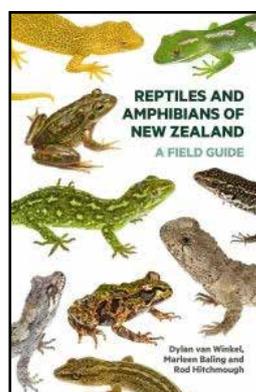
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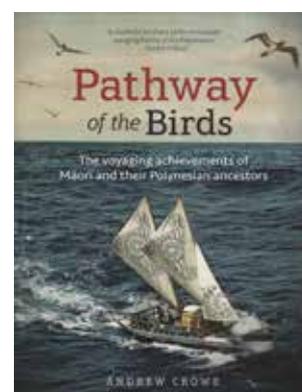
\$9.90



\$45



\$49.90



\$49.90

The Shorebird Centre is always worth a visit to see the birds, enjoy the displays and chat with Keith or Chelsea. But if you can't find the time to call in just go to our online shop at <https://shop.miranda-shorebird.org.nz/> or ring 09 232 2781 and ask.