

Pukorokoro Miranda News

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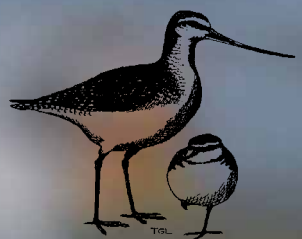


Our smallest migratory wader

Meet the Red-necked Stint

Sad news for Bird of the Year

In praise of fennel





CROSSING SAFELY: A Chinese weeding party returns from the shellbank, crossing the muddy creek without any feet getting wet, thanks to the amazing Riegen Bridge.
Photos / Jim Eagles

Shorebird Snippets

The Bridge on the River Kuwai

The shellbank opposite the hides has been given a massive spring clean to make it friendlier to both birds and cannon-netters . . . with mixed results.

In late November, 15 students from Pukekohe High, who were on a school camp in the Hunua Range, spent several hours weeding the shellbank, particularly removing the taller plants that get in the birds' sightlines.

Then in December, Council member Estella Lee brought a busload of about 50 Chinese from Auckland's Holy Grace Church for a day out, a chance to see the birds and a working bee on the shell bank.

The visitors got a good view of the birds and then went back to the Centre for a talk by chair Gillian Vaughan and Estella followed by lunch.

Meanwhile, master engineer Adrian Riegen, with a workforce of Jim Eagles and Ray Buckmaster, built a bridge across the muddy creek – nicknamed 'the River Kuwai' which means 'wet' – to the shellbank. In Adrian's words, 'An engineering marvel was designed and constructed in 30 minutes ready for the workers.'

Unfortunately, when the time came for the visitors to head for the shellbank after lunch their bus wouldn't start. Some of the older members decided it was a bit too far to walk. But most, including some highly energetic teenagers, took the path to the hides.

The bridge across the creek worked marvellously, allowing the weeders to get to the shellbank with their feet dry, but when about half the group was

across the dark clouds above opened and torrential rain and hail poured down. Those yet to cross crammed into the old hide for shelter. But everyone on the shellbank was drenched and, as Adrian – who was one of them – put it, 'We're like drowned rats.'

Still, work continued with great enthusiasm, and a remarkable quantity of weeds was removed. Adrian organised for a small bay to be completely cleared to create a pathway for birds to walk to the top of the shellbank and make it easier to catch them in a cannon net.

A couple of hours after the official departure time the bus still wasn't going so the group walked back to the centre for a reviving cup of tea. Finally, a replacement bus arrived and, with tired muscles but smiling faces,



SPRING-CLEANING: Members of the Holy Grace Church roll up a huge pile of weeds on the shellbank.

Cover: Photo of Red-necked Stint in breeding plumage by David Jenkins.

the Holy Grace group headed back to Auckland.

The birds win

The new arrangement had its first test a few days later when Adrian led a banding expedition hoping to catch Red Knots and Bar-tailed Godwits.

Alas – perhaps because the usual labour force of Jim and Ray was missing – the bridge was built in a different spot and in a different format and, well, it didn't quite work. At least one person fell off into the mud and most others decided it was safer to splash across the creek. Nevertheless the nets were spread out around the newly-weeded catching area and members of the team hid in the valleys of the shellbank to await the birds.

Sure enough, a cluster of knots and godwits gathered just offshore and, as the tide rose, one or two even entered the catching area. But most were wary and decided to go to the ponds instead.

After several hours, in desperation Adrian ordered one of the nets to be repositioned on to the seaward side of the shellbank where a large band of Wrybills had been frolicking. The Wrybills promptly moved to the ponds. Eventually Adrian gave up. 'The birds have got the better of us this time.'

Catching Oystercatchers

In early January it was decided to try again, in conjunction with the Miranda Field Course, but this time it was the forecast arrival of Cyclone Ula which disrupted things. Rather than risk having the team trapped on the shellbank in a storm it was decided to switch to Taramaire and go after South Island Pied Oystercatchers.

Two nets were set south of the creek which, with its nice shelly base, was a delight to cross, and to make things even better the bad weather stayed away. The southern net was fired over a healthy flock of SIPOs but a twist in the net meant only 28 birds were caught and about 50 got away. Most of the escapees flew north to the other net but, by the time it was ready to fire, most had moved off again and only six more birds were caught.

With so few birds to deal with, they were quickly extracted from the nets and there was plenty of time for



AT LEAST WE CAUGHT SOME: (from top) David Melville shows off a South Island Pied Oystercatcher's plumage; getting the birds from the net; new birder Jamie Tully discovers how tough an oystercatcher band can be.

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Shorebird paintings fly off the walls



A SELL-OUT: Shorebird Centre manager Keith Woodley and Miranda Farm Gallery owner Annie Wilson celebrate a highly successful exhibition of Keith's shorebird paintings. All 15 paintings sold, most of them at the opening, and there were several disappointed would-be purchasers. 'There seems to be enough interest to think about another exhibition in a year or so,' Keith said. 'This exhibition largely focussed on Arctic migrants but the next one will probably look at other birds as well.'

Photo / Jim Eagles

What's on at the Shorebird Centre

14 February, Andreas Kim from South Korea

1pm German researcher Andreas Kim, who is based in South Korea, is visiting New Zealand and has agreed to give a talk on his work. Andreas can speak about his monitoring of migratory birds, including some from New Zealand, at his local site and will also have updates of issues affecting waders in South Korea. Birding will be good from 10.30am.

28 February, Farewell to the Birds

10am Speaker Rachel Withington on what the Wrybill eat when they holiday up here. Birdwatching afterwards.

29 May, Annual General Meeting

11am Speaker Pip Wallace on The Nature of Protection: biodiversity law and planning. Birdwatching good from 2pm.

12 June, OSNZ Wader Census

All welcome. Contact Tony Habraken (09 238 5284) for details.

8-10 July. Printmaking from Nature Course with Sandra Morris

Details from the Centre.

27 August, Working bee and potluck dinner

10am-2pm working bee for the Centre and grounds. **2.30pm** high tide.

5pm Potluck dinner followed by speaker Emma Williams on the topic 'Once Bittern', a subject now of direct relevance to Pukorokoro.

6-8 September, NZ Dotterel Management Course

Details from the Centre.

24-25 September, Nature Journaling Course with Sandra Morris

Details from the Centre.

1-2 October Australasian Shorebird Conference

At Unitech in Auckland, not the Centre, but the Trust is involved in hosting the event and there will be lots of great speakers and displays.

field course participants to get detailed instruction about banding, wing moult and aging in a relaxed environment. There were no retraps and all 34 birds were released alive and well sporting shiny new metal bands.

Meanwhile, back at the shellbank, the Red Knots and godwits were taking full advantage of the nicely cleared area and no doubt chuckling to themselves.

Mist netting

The previous day, the mist netting also held as part of the field course, at Miranda Orchards, provided a good catch of birds, albeit with slightly fewer species than last year. The tally was: 20 Blackbirds, nine Song Thrush, 11 Silveryeye, four Chaffinch, one Greenfinch, 32 House Sparrow and one Sacred Kingfisher. There were two retraps, a Song Thrush banded in 2014 and a House Sparrow banded in 2013, and 78 new birds were duly banded.

Spotting scopes

The Centre's somewhat aged range of spotting scopes has been dramatically improved. Fonterra's environmental arm, Living Water, has provided funding and Photo Warehouse came up with a good price, making possible the purchase of 12 Hawk Endurance spotting scopes.

Join up online

Following considerable work on the website and online shop, PMNT members are now able to pay their annual subscriptions online, either by credit card through the security of PayPal, or through direct credit, which is the best option from the Trust's point of view as it doesn't have to pay commission on the payment. Of course those who prefer to post a cheque or pay at the Shorebird Centre can still do so.

The new subscription arrangement also allows newcomers, including overseas birders, to join online and early indications are that we have gained a few new members as a result.

Those who pay online will in future receive an automatic email reminder when renewal time comes around as well as the usual printed renewal notice in *PM News*.

The changes to the online shop are allowing it to run much more smoothly than was possible under the old system

and new assistant manager, Louisa Chase, has plans to expand the online operation to allow the Trust to sell to a much wider market (as you can read in her report on page 7).

Visit from Yalu Jiang

The long-awaited delegation from Yalu Jiang National Nature Reserve arrived last month, led by Yang He, deputy director of the Dandong agency overseeing the reserve, and accompanied by a representative of Wetlands International China.

The delegation stayed at the Shorebird Centre and had a good discussion with the PMNT leadership about ways the Trust tries to get people involved with the birds and how the Centre is run.

There was also the chance for the visitors to enjoy some excellent bird-watching followed by a traditional kiwi barbecue, both of which led to a great many photos being taken.

Unfortunately a car accident dis-

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FOLLOWING THE BIRDS: (above) Yalu Jiang delegation leader Yang He looks at some of the godwits which later this year will fly from Pukorokoro via Yalu Jiang to Alaska; (below) Gao Feng, Director of the Environmental Protection Bureau in Dagushan Economic Development Zone, enjoys a joke about the birds with Gillian Vaughan and Adrian Riegen. Photos / Jim Eagles



Award-winning film-maker wants to make godwits movie stars

Award-winning New Zealand documentary maker George Andrews joined the Yalu Jiang team at Pukorokoro to film interviews for a trailer for a documentary about the godwits.

George successfully pitched his idea for the film at an International Documentary Festival in Guangzhou. Buyers from the PBS network in the United States noted that the birds start their amazing 11,000km flight across the world in Alaska and expressed immediate interest. They're now working with George to attract support from their natural history partners in China.

George first learned how the godwits link Alaska, New Zealand and China in 2011 when PMNT Council member Estella Lee made a presentation to the Auckland Branch of the New Zealand China Friendship Society about the threats posed to godwits by rapid development at Yalu Jiang. As vice president of the society George successfully recommended that it

provide funding to assist Estella to travel as translator for one of the PMNT visits to Yalu Jiang.

He's confident the interviews he did with the delegation from Yalu Jiang will add the extra Chinese dimension his trailer needs to win support from Chinese broadcasters.

George has called his documentary 'The Godwit Group' and it is as much about the people as the birds.

In his promotional brochure he explains that birders from the three countries involved are collaborating 'to

save these remarkable birds. Godwits stop to refuel on their northward migration in the heavily industrialised Yellow Sea. More than half the mudflats they depend on have been destroyed in the last 50 years and development is accelerating.'



The picture shows George Andrews (centre) interviewing Wang Xiaofei, Technical Officer, of Yalu River National Nature Reserve.



COLOURFUL FLOCK: These gaily painted birds flock to Lancashire Beaches in England every year to mark World Shorebird Day. Now they could be on their way to Kaiaua as well.



Multi-coloured shorebirds

Next summer holidays a flock of multi-coloured shorebirds might sprout around the Shorebird Centre or on the beach at Kaiaua.

PMNT is considering taking up an idea from World Shorebird Day celebrations in Lancashire, England, by erecting a flock of cut-out wooden birds and inviting artists of all ages to decorate them.

In the Lancashire event, some 600 wooden birds modelled on the shapes of the Bar-tailed Godwit, Redshank and Ringed Plover, which are commonly found in the area, were put up on Crosby Beach and thousands of people turned up to decorate them and admire the colourful results.

Council member Ray Buckmaster suggested it might be an enjoyable holiday activity which would help carry the message about conserving shorebirds to a wider audience.

The key to making it work will be to find a way of producing large numbers of cut-out birds for local artists, children and anyone else interested to paint and Ray is currently investigating how this might be done.

rupted the end of the tour but the visit nevertheless succeeded in its aim of improving mutual understanding and strengthening relationships which can only be to the benefit of the birds.

Cycle trail

The Kopu to Kaiaua leg of the Hauraki Cycle Trail, which will pass through Pukorokoro on a route designed to minimise disruption to the birds, is apparently back on track after sorting out funding issues. The cycleway is now hoped to be up and running by next year.

Land purchase

Plans for the Trust to purchase the Findlay Wildlife Reserve are on hold pending further discussions with funding sources. The Lane family, which would prefer to sell to the Trust, has extended the deadline for the purchase to 31 March. Foundation North has agreed to fund half the purchase price of \$400,000.

Wrybills prosper

A small bright spot on the shorebird front is provided by the 2014-15 annual report of the Ashley-Rakahuri Rivercare Group which works to protect birds in the lower reaches of the river near the town of Rangiora in North Canterbury.

Since the group commenced its work of predator control, weeding, public education and river bed protection, there has been a small but steady increase in bird numbers. In the 2014-15 spring survey, for instance, the number of Wrybill recorded was 19, the highest yet, up from 17 the year before and an average of 14 over the 15 years counts have been done.

It was also a good year for Wrybill breeding with at least 10 pairs raising 13 chicks, the most productive season recorded. There was a record number of Black-fronted Terns, 263, compared with 156 the year before and a longterm average of 128. Numbers of other species were the same as

the year before and all well above the longterm average.

The one exception was the Black-billed Gull. The main colony of gulls was suddenly abandoned, for reasons yet to be identified, and as a result only 23 chicks were fledged, well below the 364 recorded the previous season.

Education Kit

The Education Kit (below), which will be the focal point of efforts to attract more school groups to the centre, has gone to the printers. The trust is now looking at employing a part-time educator to run the programme.





HAVE I GOT A BARGAIN FOR YOU. New assistant manager Louisa Chase welcomes visitors to the Shorebird Centre with a big smile and a Wrybill t-shirt. Photo / Jim Eagles

Big plans for Shorebird Centre shop

New assistant manager **Louisa Chase** has already made her mark on the shop and she has big plans to make it even more attractive to customers . . . including a Super Summer Sale.

New assistant manager Louisa Chase is now firmly ensconced at the Shorebird Centre and has already made her mark on the shop, fine-tuning the layout, looking to dispose of slow-moving or inappropriate products – hence the sale you’ll see advertised on the back page of the magazine – and introducing new ones.

Louisa and husband Neil have rented a house in Kaiaua and, if all goes well, may think about buying there. When she’s fully settled in Louisa also hopes to develop closer links between the Shorebird Centre and the local community, possibly by holding a community event in the Centre, and also by doing more to explain to locals what the Centre is all about.

For the moment, though, her attention is firmly on the shop, as she explains in this report:

Focus since I started in the new role:
1. Replacing the old system of re-using plastic shopping bags for customer

purchases with new brown paper bags sourced from Shardlow packaging. This is for two reasons: to give a more professional customer experience and to move away from plastics to biodegradable products and packaging.

2. Cleaning and re-merchandising the shop (with the much-appreciated help of Rachel Hufton).

3. Establishing current stock levels, past sales and orders, and amalgamating this information in order to see which product lines sell and are therefore profitable to stock.

4. Using the above information to earmark lines to be discontinued in the New Year. There are a small number of other products – mainly books – which are slow-moving but will continue to be stocked because they add diversity and depth to the range.

Over the next few months the focus will be on:

1. Clearing discontinued lines (hence the sale).

2. Re-stocking with more PMNT branded products and introducing new lines with a focus on the shorebird/bird theme.

3. Expanding and promoting our excellent natural history bookshop.

4. Expanding and developing the on-line shop.

5. Eliminating plastic products from the shop as much as possible, given the known polluting effect of plastics both in manufacture and disposal.

Long term focus and direction for the shop:

1. A move towards more locally-made products.

2. A move towards more environmentally-responsible products.

3. The development of a database of suppliers and product lines.

With all this I am very open to feedback from any interested members, volunteers or Council members, and I will welcome input and discussion now and in the future. 🐦



WORKING TOGETHER: New Zealand's Director-General of Conservation Lou Sanson and Wang Haiyang, Director-General of State Forestry Administration in Hebei Province, with a map of the crucial Luannan Coast.

Winds of change favourable to knots

PMNT deputy chair Adrian Riegen returned from the latest delegation to China – this time led by Director-General of Conservation Lou Sanson – feeling hugely encouraged that a strip of Yellow Sea coast crucial to our Red Knots may, indeed, be properly safeguarded.

Our mission in China was to raise awareness of the Luannan coast in Bohai Bay and its importance as the major staging site in East Asia for Red Knots on northward migration. We were investigating ways this 7km of coastal mudflats and the adjoining salt production ponds could be permanently protected.

Why do we want this? Well the number of Red Knots reaching New Zealand has almost halved in the past 20 years from around 65,000 to approximately 35,000 today. It would be no exaggeration to say that if the Luannan coast goes then we can expect to lose at least another half of our Red Knots and maybe more. For Red Knots to continue to be an important part of our estuarine biodiversity they need the Luannan coast in China.

The five New Zealanders charged with this task were Lou Sanson, Director-General of DOC, who led the group; Bruce McKinlay, a senior DOC manager, the government's Flyway Partnership representative and the driving force behind the week-long

visit; Gary and Ngapera Thompson, representing Ngati Paoa, who were making their first visit to China and found it quite an eye-opener, especially the air pollution, the likes of which they had never seen; I was there for the Trust.

The Department of State Forestry had issued the formal invitation for us to visit and they thought the visit was important enough to meet us on the air bridge at Beijing Airport as we disembarked and drive us to a VIP lounge while our passports were processed. It might seem excessive to be driven from the gate to the lounge but bear in mind that Beijing airport's Terminal 3 is 3km long and we were parked at the far end. I could very easily get used to service like that.

The fact that Lou, as Director General, was leading our delegation significantly raised its status and, as a result, we had meetings up to vice-minister level with State Forestry, State Oceanic Administration and Ministry for Environmental Protection. We also had a long meeting and very agreeable lunch

with State Forestry in Shijazhaung which, in these more enlightened times, was enjoyed without the traditional fire water liquor. Shijazhaung is the provincial capital of Hebei, where the Luannan coast is situated, about 300km south of Beijing, a distance covered in one hour five minutes on the train, slightly less time than the 15km ride from our hotel to the train station.

The meetings were very positive. In fact, I think, the most positive meetings I've ever attended in China. In the past year there seems to have been a major change in attitudes to the environment and conservation. Perhaps it's because the powers that be are reminded of the trouble caused by ignoring the environment every day in Beijing as they go to work through the suffocating smog. In the whole week we could barely see more than half a kilometre.

Businesses and ministries now have to make environmental protection initiatives a key part of their new five-year plans, so they are all looking for suitable projects, and our proposal may be small enough to be readily

achievable. They certainly gave the impression that they considered it eminently achievable.

There were lots of other indications that we really are starting to make progress. Last year we discovered that mudflats seem to be outside the sphere of any one ministry. But on this visit we learned that State Forestry and State Oceanic are talking together to sort this out. A positive resolution would be a great step towards getting mudflats properly protected.

We also have a better idea of how best to protect the Luannan coast under the Chinese system. A particularly useful piece of advice was that getting the support of the Governor of Hebei Province would make a huge difference. Wang Lutong, the Chinese Ambassador to New Zealand who is from Hebei, has really got behind saying that coast for the knots and other waders and has made two visits to Pukorokoro Miranda to better understand the issues (PMNT News 96 and 98). And, it seems, he is a good friend of the Governor. Ambassador Wang is working with Lou on possible courses of action.

Our current Ambassador to China, John McKinnon has become really interested in the story of the Red Knot and how these birds link New Zealand and China so beautifully as they have done for countless generations. Ambassador McKinnon plans to visit the Luannan coast next May when the Red Knots are present and he hopes to encourage some Chinese officials to join him. That can only help.

DOC and State Forestry have been working on an inter-agency Memorandum of Understanding covering joint conservation work but State Forestry now want to raise this to an inter-government MoU which would give it more clout . . . as long as the wording can be worked out in months rather than years.

During our visit we met with Chen Kelin, director of Wetlands International - China, a long time supporter of the Trust's work there, as well as folk from the Paulson Institute, Beijing Normal University and WWF. These groups were very keen for us to take on a bigger role in protecting the Yellow Sea but that is too much and we will focus on small goals that are more manageable. After all we are not



SMILES IN THE GLOOM: (above) A sunny day in Beijing; (below) meeting with China's State Oceanographic Institute (from left) Bruce McKinlay, Gary Thompson, Director General Zhang Haiwan, Department of International Cooperation, State Oceanic Administration, Lou Sanson and Adrian Riegen. Photos / Adrian Riegen



a large organisation.

All in all we feel much more positive this year that the Luannan coast can be protected and certainly the profiles of Pukorokoro Miranda and DOC have been given a considerable, and valuable, boost in China. There is still much to do but things are certainly looking up.


We should acknowledge that our trip was partially funded by Fonterra, as part of the Living Water project, which aims to improve the quality of New Zealand waterways and other environmental work. Pukorokoro Miranda is a significant beneficiary of this fund, with funding for various projects around the Firth of Thames and our work in China and North Korea.

As with our visit in 2014, we were fully supported by the New Zealand Embassy who arranged the meetings and got us to them on time, every time,

no mean feat in Beijing where traffic can be horrendous. They couldn't have been more helpful and were a real pleasure to work with.

Melissa Crawford and Huan He, from the Embassy met us on arrival and travelled with us to all the meetings, providing wonderful assistance throughout, which was very much appreciated by the whole group.

Much of the credit for the success of our visit must go to Bruce McKinlay and Ambassador Wang who are doing a fantastic job behind the scenes as well as in public. However, we should not underestimate the contribution PMNT has made to the flyway.

We have been there right from the very beginning in 1994, when a DOC senior manager asked me, 'What little club did you say you belong to?' That would be 'the little club that can and did and does'. 

Bad news for our Bird of the Year

After all the celebrations for the Bar-tailed Godwit being chosen as New Zealand’s Bird of the Year, **Gillian Vaughan** was brought back to earth with a thud when it was also included on the International Union for Conservation of Nature’s Red List of threatened species.

In 2015, Pukorokoro Miranda’s Year of the Godwit and the year that the Bar-tailed Godwit was chosen as New Zealand’s bird of the year, the Bar-tailed Godwit and Red Knot, as well as seven other migratory shorebird species that use our flyway, were added to the IUCN’s Red List of threatened species.

Two more species, Eastern Curlew and Great Knot, which were already on the list, have been changed from vulnerable to endangered.

The new total of shorebirds on our flyway which now have threat rankings is 11 (see table below). This has changed dramatically over the past 12 years, and it does not seem unreasonable at this point to expect the picture to get worse.

So how do species that have worldwide estimated populations of 900,000 to 1 million individuals get classified as near threatened? Alternatively how can a population that is estimated to decline nearly 57% over the next 20 years only be classified as near threatened?

The IUCN list is a global assessment of the conservation of species and is considered worldwide to be a key independent indication of how different species are doing. In looking at the status of a species they consider trends from the whole species, not just a single population. Species are reviewed regularly and the latest review published was near the end of 2015

For Bar-tailed Godwit, although the worldwide population is estimated to be around 1 million individuals, three populations are declining: *taymyrensis*, which migrates from Siberia to Africa, and from our flyway *menzbieri*, estimated to decline some 79% over the next three generations (27 years), and *baueri*, estimated to decline some 30% over the same time period.

Similarly, although Red Knot has a worldwide estimated population of around 900,000 individuals, most of the subspecies are in decline of some sort.

In particular the *piersmai* and *rogersi* subspecies that use the East Asian-Australasian flyway are declining the most quickly with an estimated



KING GODWIN: Under threat.
Artwork / Ann Buckmaster

population decline of 57% over the next three generations (21 years). But work by the Global Flyway Network indicates that with an annual survival rate of only 62% for Red Knots from North-west Australia the population can be expected to halve in the next four years.

Eastern Curlew and Great Knot, species confined almost entirely to our flyway, have been uplifted from Vulnerable to Endangered. Curlew are showing population declines of nearly 6% per year, equating to a loss of 81.7% over three generations. Similarly studies of the Great Knot show that it is declining faster than expected with an estimated 77% decline over three generations (22 years).

The reason for these expected declines is the loss of habitat in the Yellow Sea. Recent work out of Australia, which many members will have heard about at Richard Fuller’s talk in 2013, has shown not only the details

of declines in populations of species, but a 65% loss of intertidal habitat in the Yellow Sea in the last 50 years.

This habitat loss is driving the population decline of Bar-tailed Godwits and Red Knots as well as many of the other species on the list.

The Red-necked Stint is largely confined to the EAAF and the expected loss over three generations is 29.1%.

The Curlew Sandpiper is more widespread, however, the EAAF population is expected to decline by more than 80% in three generations. Once, 30 to 40 of these birds were regularly seen at Pukorokoro Miranda, the numbers that now occur are in single digits.

The overall picture of a species on a worldwide level does not, however, necessarily correlate to what is happening to that species locally. Care therefore needs to be taken when looking at the threat ranking of these species to take into account the context appropriate to the specific population. It is also important to be aware of when the rankings being used were last updated. For example, the New Zealand list, now based on information a few years old, shows Eastern Curlew as secure overseas.

Some of the rationale around the discussion is interesting reading and is available online. Visit www.birdlife.org/globally-threatened-bird-forums and search for the species you are interested in.

IUCN Red List of threatened species

	2003	2010	2015
Critically Endangered		Spoon-billed Sandpiper	Spoon-billed Sandpiper
Endangered	Spotted Greenshank	Spotted Greenshank	Spotted Greenshank Eastern Curlew Great Knot
Vulnerable	Spoon-billed Sandpiper	Eastern Curlew Great Knot	
Near threatened	Eastern Curlew Asian Dowitcher		Bar-tailed Godwit Red Knot Curlew Sandpiper Black-tailed Godwit Eurasian Curlew Asian Dowitcher Far Eastern Oystercatcher Red-necked Stint Grey-tailed Tattler



SURPRISE: Professor Theunis Piersma (at right) meets a fellow native of Friesland, in the North of Holland, Joe de Yong, these days a farmer on the Hauraki Plains and a longtime member of PMNT. Joe is holding a specially painted plate presented by Theunis and his partner Petra to mark the Trust's 40th birthday. Photo / Keith Woodley

Theunis Piersma brings his message to Miranda . . . and to the Conservation Minister

The visit late last year of **Professor Theunis Piersma** not only allowed PMNT members to meet one of the outstanding figures in shorebird research, it also saw a masterplan for shorebird recovery presented to the Minister for Conservation Maggie Barry. **Keith Woodley** reports.

Our final speaker for the Year of the Godwit programme was Professor Theunis Piersma, who sits at the centre of an extensive worldwide nexus of shorebird research. While based in the Netherlands, his global reach is clearly evident in our flyway: wherever you look his name seems to turn up.

Our knowledge of species such as Red Knot, Great Knot and particularly Bar-tailed Godwit increased immensely in recent years through work by Phil Battley and Jesse Conklin, both of whom completed PhDs supervised by Theunis.

He is involved with current research projects based out of Northwest Australia. As chair of the Global Flyway Network he is extensively engaged in the Yellow Sea region, both with students at Chinese universities and

through the work of Chris Hassell, Adrian Boyle and Matt Slaymaker on the Luannan Coast of Bohai Bay. It is the work of this GFN team that since 2008 has documented the critical importance of that stopover site for Red Knots, and which is now informing our joint efforts to preserve the area. He also works closely with colleagues in Alaska.

Theunis and his partner Petra arrive in late November, and we greet them as old friends. Petra is just as interested in the spoonbill tree opposite the Stilt Ponds as in the shorebirds. Indeed, it was spoonbills that determined their original itinerary for this visit and the reason we had to change the date of the Shorebird Centre function.

She had planned to attend a spoon-

bill group workshop in Tunisia before events in that country led to its deferment and changes of plan.

For several years now many people have argued that habitat loss around the Yellow Sea is the likely driver of shorebird population declines in our flyway. However, in my talks I have usually been careful to say the principal driver of decline 'appears to be' or evidence 'strongly suggests' this to be the case.

Despite an increasing consensus among many researchers, it has been difficult to produce the cause and effect chain that losing tidal flats in East Asia directly leads to shorebird population declines in Australia and New Zealand. The large-scale phenomenon we are concerned with – annual cycles

and migration routes that encompass a third of the globe – make finding the proof exceedingly difficult. But recent analysis of many data relating to three species (Bar-tailed Godwit, Red Knot and Great Knot) migrating out of northwest Australia, soon to be published, considerably strengthens the case that the Yellow Sea region is indeed the problem.

Those attending Theunis's talk at the Shorebird Centre on 29 November heard compelling evidence.

What is already known?

- Species in the flyway showing declining numbers are ones depending on the Yellow Sea

- Declining numbers are not explained by habitat loss in Australia

- While breeding success varies from year to year depending on variable conditions in the Arctic, there has been no widespread decline in breeding success.

The latest data analysis adds further evidence:

- Decreases in survival occur only during the season birds are using the Yellow Sea.

- Decreases in survival similarly occur in species with very different breeding grounds but which all share coastal staging areas in the Yellow Sea

- The *menzbieri* population of godwits that use the Yellow Sea during both northward and southward migration is declining at a greater rate than the *baueri* population that only stops there northbound.

- Intertidal habitat loss in the area and in the season with reductions in survival is ongoing.

The conclusion to the study is blunt. 'This study adds to an increasing body of evidence that habitat loss along the Yellow Sea shores explains the widespread declines in shorebird numbers along the EAAF and threatens the long-term prospects of several long-distance migrating species. To halt further losses, the clearance of coastal intertidal habitat must stop now.'

Untangling the Knot is a nature documentary featuring the annual cycle and migrations of two Red Knot populations on opposite sides of the Atlantic that originally screened in the UK in 1994. It has been a final night feature of every field course for the

last 17 years.

A number of now familiar names and faces from the shorebird world appear in it. One is Jan van de Kam - my campmate at Old Chevak in 2008 - who contributed most of the photos for *Godwits: long-haul champions*.

Another is a younger version of Theunis. My mention of this piques his curiosity for he has not seen it since it was first broadcast. Petra is also curious for it predates her meeting Theunis. As we begin to watch it my own curiosity focuses on how well (or not) it stands up to contemporary scrutiny. Remarkably it seems to do so very well: while some sections are clearly dated, most of the story that is told is still relevant, still ties together so many of the themes we cover during the field course.

On the day of his talk at the Shorebird Centre we have a surprise for Theunis. In attendance are Joe and Sietse de Jong, who farm on the Hauraki Plains near Te Aroha. They have been PMNT members for many years. But it is Joe's origin that is more significant for, like Theunis, he is from Friesland in the north of Holland.

In my experience, admittedly based on a very small sample size, Friesians are intensely proud of being Friesians. I enjoy standing at the counter watching the two of them connecting – in a language that underlines another

interesting feature: English is their third language.

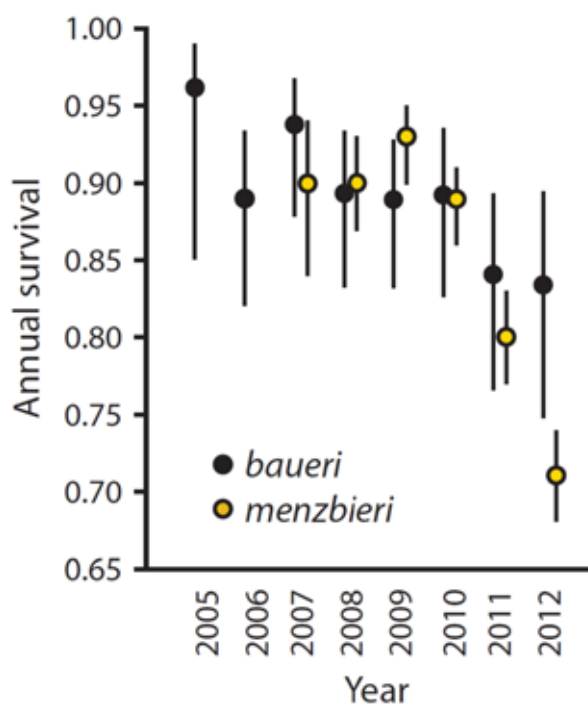
When Pavel Tomkovich and Lee Tibbitts were here we scheduled events elsewhere in the country, but there is no road trip this time, other than to Auckland University Tamaki campus.

There, Theunis gives an overview of many years of knot research, pulling together numerous strands of observations and countless field data. He speaks for just on two hours, yet it seems like a very short two hours. It is a class performance that deserved a larger audience.

During last year's visit to the Shorebird Centre by Chinese Ambassador Wang Lutong and Conservation Minister Maggie Barry I happened to mention to the minister that the chair of the Global Flyway Network was coming to New Zealand. The Minister expressed interest in taking the opportunity to have a chat with him and a meeting was subsequently set up.

To take full advantage of the opportunity, Theunis set out a briefing paper for the Minister – with a bit of input from me - entitled, 'A ten year programme for shorebird recovery, including New Zealand Red Knots and Bar-tailed Godwits' which he duly presented. This is it:

Since 2008 a consortium of scientists representing research institutions



Conklin, Lok, Melville, Riegen, Schuckard, Piersma & Battley (2016) *Emu* in press.

from Netherlands and China have concentrated research efforts on the ecology of the remaining mudflats at Luannan, northern Bohai Bay, and their use by Red Knots from non-breeding destinations in New Zealand and Australia (mainly the subspecies *piersmai*). This work was possible due to considerable research investments in personnel, fieldwork and advanced equipment from both the Dutch side (700,000 Euros) and Chinese side (200,000 Euros).

The work has established that the Luannan foreshore is a key site for the entire populations of both *rogersi* and *piersmai*, because it reliably offers good food resources (small shellfish), thus enabling the Red Knots from New Zealand and Australia to achieve adequate fuelling at least during northward migration (the southward staging has remained unstudied).

At the same time, the demographic work (focussed on Northwest Australia and Bohai Bay) has shown that from 2012 the summer survival of Red Knots has become dangerously low, to the extent that this species which is still numbered in the tens of thousands, is likely to become rare (numbering in the 1000s). The Red Knot population in New Zealand is now only half the size it was 20 years ago, confirming a rapid, widespread decline.

Safeguarding intertidal habitat and adjacent salt pans on the Luannan coast



CONSERVATION MINISTER Maggie Barry.

in Hebei Province is unquestionably critical, while at the same time, in view of the reduced survival in the presence of these habitats, we need to acknowledge that additional key areas along the flyway need to be found and safeguarded as well.

Pukorokoro Miranda Shorebird Centre, in association with the Global Flyway Network, proposes the following three-pronged approach to help diplomatic and political initiatives at national and international levels to turn around the fate of the Red Knots, Bar-tailed Godwits and other threatened long-distance migrating species relying on the Yellow Sea shores:

- Continuation during 2016-2025 of the monitoring of the Luannan

foreshores (ongoing since 2008) during northward migration (this includes doing bird counts, an intensive re-sighting programme of individually identifiable birds and the monitoring of the intertidal shellfish).

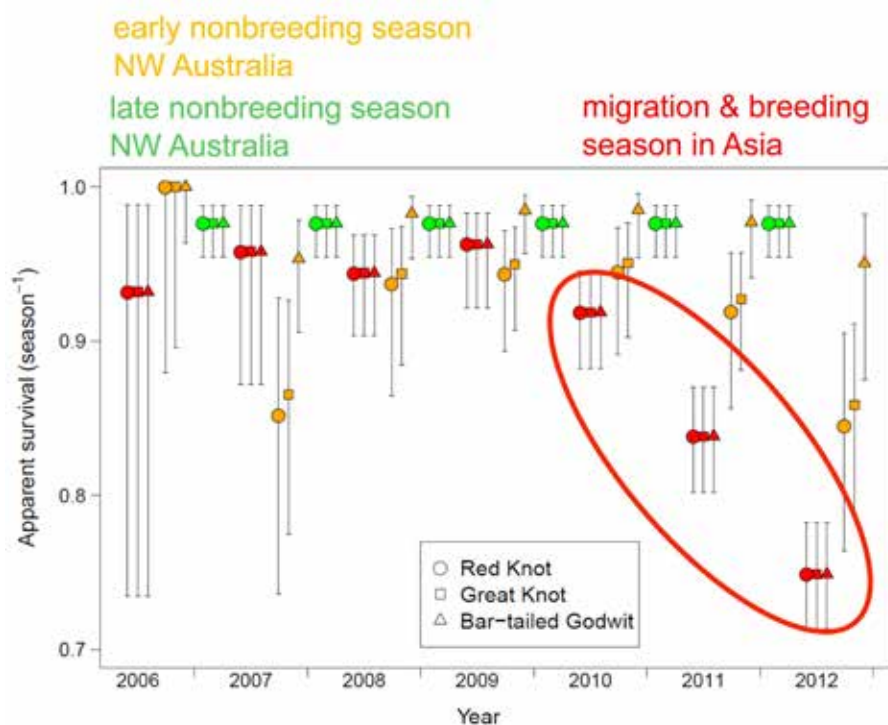
- Establishing a programme of hemispheric observation of shorebirds movements using the latest satellite tagging technology (from 2016 enabling the following of shorebirds as small as Red Knots) - this should lead to the discovery of additional critical sites on the flyway to help explain the low current summer survival rates and make the protection network more effective.

- Establishing a platform to make the individual tracking data available in real time to the general public, based on the successful 'follow-the-godwits' site developed within the citizen's initiative King of the Meadows in the Netherlands (<http://volg.keningfane-greide.nl/king-of-the-meadows-transmittersite/>). In this platform to achieve a healthy and sustainable future of Dutch dairy farmland, the Black-tailed Godwit (which entirely relies on this habitat for breeding, and is now the National Bird of The Netherlands) acts as ecological ambassador and central character of the narrative.

- Re-investments in the individual marking programmes of Red Knots and Bar-tailed Godwits in New Zealand enabling faster and more robust assessments of recovery parameters such as annual survival, recruitment and population size. This could involve post-doctoral or PhD students to work up the demographic and tracking data under direct supervision of Dr Phil Battley at Massey University, Palmerston North.

With regard to Red Knots, data obtained will provide guidelines for effective management of the reserve area for this species and other shorebirds on the Luannan coast. They should also inform public awareness measures engaging with local stakeholders as to the reasons why the Luannan coastal reserve is so important. A publicly accessible portal for tracking migrating birds will be a potent tool towards achieving this objective.

After meeting the Minister, Theunis was pretty happy with the hearing she gave him . . . so fingers crossed 🐦



A trio of curlews makes a rare appearance at Pukorokoro

Summer shorebird guide **Rachel Hufton** shares the excitement of seeing three curlews – the Eastern Curlew, the Whimbrel and the Little Whimbrel – at Pukorokoro at the same time.

Pukorokoro Miranda has been extremely fortunate this summer to have the rare opportunity of hosting a trio of curlews: Eastern Curlew (*Numenius madagascariensis*), Whimbrel (*Numenius phaeopus*) and Little Whimbrel (*Numenius minutus*).

All of the world's eight species of curlew breed in the northern hemisphere: Little Whimbrel, Whimbrel, Bristle-thighed Curlew, Slender-Billed Curlew, Eurasian Curlew, Eastern Curlew, Long-billed Curlew, and Upland Sandpiper. A ninth species, Eskimo Curlew, is probably extinct.

In all of these species the female is slightly larger and has a longer and more slender bill than the male.

Our Little Whimbrel first appeared on 21 December out in front of the main hide accompanied by a Pied Stilt and a single Bar-tailed Godwit. What first attracted my attention was its pale goldenness, unlike any other of the waders I had observed at Miranda.

Since then a Little Whimbrel has



SIZE COMPARISON: (from left) Eastern Curlew, Whimbrel and Little Whimbrel.
Artwork / Keith Woodley

been observed a number of times, including good observations during the Miranda Field Course on 10 January. The bird was observed at the stilt ponds amongst a flock of godwits. Regular high-pitched 'quer quer quer' calls were heard as the

bird was repeatedly intimidated by a number of godwits who didn't appear to be impressed by the presence of this unusual bird.

The Little Whimbrel is smaller than a godwit, larger than a Red Knot, and similar in size to a golden plover but



GREAT BEAKS: (from left) The biggest wader in the world, an Eastern Curlew, in flight at Miranda; the Whimbrel is smaller but also has an impressive curved beak.
Photos / Bartek Wypych, Phil Battley

slimmer with longer legs. The striped head markings are distinct, as is the case with the Whimbrel, with a pale supercillium and dark eye stripe and a slightly decurved bill. The body is streaked brown and warm buff with greyish legs.

It is a rare migrant visitor to New Zealand, first recorded at Lake Ellesmere in June 1900. The first record at Pukorokoro was in 1964, and it was seen again in 1994, 2005, 2008, 2012, 2015, 2016.

It is known to be quite an opportunist feeder, depending on habitat, with a diet concentrated around small insects but also seeds and berries.

The Little Whimbrel breeds in northern central Siberia and spends the non-breeding season in northern Australia with occasional birds reaching New Zealand. However, it is generally a bird of dry grasslands rather than mudflats.

The Eastern Curlew is the largest of the world's shorebirds with an enormously long decurved bill which can be over 200mm in female birds.

This curlew breeds in north eastern Asia, including southern Siberia and eastern Mongolia. In the northern winter it migrates to the coasts of Asia and Australasia.

It was first recorded at Miranda in 1942 and birds have been seen reasonably regularly ever since.

Whimbrels are mid-way in size

between the Eastern Curlew and the Little Whimbrel. They are slightly larger than Bar-tailed Godwits and can be easily recognised by their large down-curved bills and dramatically striped head. However, they are extremely shy and elusive and usually the first birds to take off.

Whimbrels breed across the Arctic from Eurasia to North America, but most birds reaching New Zealand are thought to be from the Asiatic race *Numenius variegatus*.

About 70 Whimbrels are found in New Zealand each year and very occasionally a bird over-winters. They are mainly found in the top half of the North Island and at Farewell Spit.

The Eastern Curlew is the most threatened of the trio. It has just been upgraded to Endangered under the IUCN Red List category (see page 10). Like most waders migrating along the East Asian-Australasian Flyway it is under pressure from the loss of stopover sites around Yellow Sea.

The Little Whimbrel is considered to be of Least Concern by the IUCN, largely because it has a very large range and a large population. As a result there are no known conservation measures in place specifically targeting it, although potential threats include the degradation of important stopover sites in northern Australia.

Despite declining in numbers globally, the Whimbrel is also considered a species of Least Concern

due to its worldwide distribution and large population.

However, the EAAF population may quantify for Near Threatened status at the regional level due to population decline caused, once again, by degradation of inter-tidal staging sites in the Yellow Sea.

Sources: HANZAB, NZbirdsonline.org.nz

Recent sightings at Pukorokoro

Arctic Migrants

5900	Bar-tailed Godwit
800	Red Knot
1	Hudsonian Godwit
2	Black-tailed Godwit
1	Little Whimbrel
1	Whimbrel
2	Eastern Curlew
2	Marsh Sandpiper
3	Curlew Sandpiper
2	Pectoral Sandpiper
5	Sharp-tailed Sandpiper
41	Pacific Golden Plover
3	Red-necked Stint
11	Turnstone
2	Arctic Skua
1	Little Tern

New Zealand Species

1300	Wrybill
4	NZ Dotterel
40	Banded Dotterel
	White-fronted Tern
	Hybrid Black Stilt
1300	SI Pied Oystercatcher
6	Variable Oystercatcher
140	Black-billed Gull
400	Pied Stilt
24	Royal Spoonbill
6	Caspian Tern



RESTING: A Little Whimbrel taking a break in Jiangsu Province in China.
Photo / David Melville



SHOWING OFF: A Red-necked Stint demonstrates that it may be small but it still has the wingpower to fly from one end of the world to the other. Photo / Glenda Rees

Meet our smallest Arctic migrant

The Red-necked Stint is often overlooked because it is our smallest Arctic migrant about the size of a sparrow. But, as **Rachel Hufton** reports, it is well worth looking for.

Amid the magnificent flocks of Bar-tailed Godwits, Red Knots and Wrybills at Pukorokoro Miranda, it's easy to overlook the Red-necked Stint (*Calidris ruficollis*). But once seen this remarkable little sandpiper is never forgotten.

New Zealand's smallest Arctic wader, about the size of a house sparrow, is extremely gregarious and often seen in twos, working the mudflats, head down, in a repetitive, probing, sewing machine-like motion.

The stint is most easily identified by its small size in relation to a Wrybill or Banded Dotterel. It has a streaked lateral crown and pale underparts. Head, neck and upper breast are usually chestnut brown/grey. The bill is blunt and black-tipped and it has dark legs. The pale supercillium is most prominent in non-breeding adults and juveniles. Like many other Arctic migrants, its breeding plumage develops to a rufous colour on the head

and mantle.

Although radio-telemetry has told us a lot about the mystery of Bar-tailed Godwit and Red Knot migration, information for Red-necked Stint is limited due to the small body-size of the species and the limitations of current tracking devices.

Despite being the smallest wader to reach New Zealand the stint makes a staggering annual round-trip migration of 30,000 km around the East Asian-Australasian Flyway (EAAF). Flag marking of Red-necked Stints in Australia has resulted in a number of Asian sightings which has helped to unravel the mysteries of their migration route.

The latest information indicates that the stint breeds in northern Siberia, from the Taimyr Peninsula to the Bering Sea, and in north-western Alaska. It winters on the coasts of the Bay of Bengal, Malaysia, the Philippines, Indonesia and Australasia,

especially south eastern Australia.

Within New Zealand, stints are widespread in small flocks that seldom exceed 25 birds. Favoured sites include Parengarenga and Manukau harbours, the Firth of Thames, Porangahau Estuary, Farewell Spit, Lake Ellesmere and Southland.

Relatively little study has been undertaken on the Red-necked Stint's breeding behaviour. However, it is known that the male's breeding display involves fluttering and gliding over its breeding territory while uttering a repeated call. Following its aerial display, the male drops to the ground with its wings held high in a sharp V above its back.

Nesting occurs late May-July on the tundra. The species is thought to be monogamous, producing a clutch of four buff-coloured eggs blotched with brown laid in a grass-lined depression on the ground. Incubation. Chick rearing is shared, with the young



DINING OUT: A Red-necked Stint heads out across the mudflats looking for small invertebrates to eat.

Photo / Glenda Rees

leaving the nest soon after hatching.

The diet of the stint mainly comprises small invertebrates obtained by probing and gleaning with its specialised small bill. Predominant foods include small gastropods, crustaceans (amphipods, ostracods), fly larvae and pupae, also seeds.

The global population estimate stands at c315,000 (Wetlands International 2015). It is the fifth most numerous Arctic wader to visit New Zealand, with under 200 recorded annually. In recent years New Zealand numbers have declined to about 60-150 birds. Fewer than 25 remain over the New Zealand winter.

Most observations occur in the Far North, Auckland, Lake Ellesmere, the Firth of Thames and Southland. Records at Pukorokoro Miranda average three in the last 10 years. The first recorded sighting at Miranda was of four birds way back in 1941

The species is classified as Near Threatened under the IUCN Red List Category. Most of the population is restricted to the East Asian-Australasian flyway and habitat loss on the Yellow Sea is thought to be the main cause of population decline.

Sources: HANZAB, NZbirdsonline.org.nz.



AERIAL BALLET:
A male Red-necked Stint performs his breeding display.
Photo / David Jenkins



From the Chair

New year off to a racing start

Chair **Gillian Vaughan** reports on a hectic start to the new year, including steps forward in our relationship with China and backward as far as the threat ranking of our Bar-tailed Godwits and Red Knots are concerned.

A nice quiet start to the year, it's not so much to ask. Right?

The Year of the Godwit was busy enough. Since the last issue of *PM News*, Adrian Riegen joined a DOC delegation to China to continue the work to protect the Red Knot habitat.

Theunis Piersma then visited the Trust and gave several excellent, easy to follow presentations that were really a masterclass in Red Knot ecology. Theunis also spoke to the Minister of Conservation about wetland and shorebird protection and laid some thoughts for the Trust and others in New Zealand on where to next.

I've been personally inspired and reinvigorated by the 2015 year, but have to admit that, after the end of year barbeque at the Shorebird Centre, I was ready for a breather.

But what also happened in 2015 was that godwits and knots were classified as near threatened on the IUCN's red data list. And after reading the details about why, I realise that this is not the right time to step back and have some quiet time.

This is a time when strong relationships are needed, when speakers that inspire us are needed, when people who can communicate our message

are needed. Because, make no mistake, despite all the work that PMNT and others around New Zealand, the Flyway and indeed around the world are doing, many of our shorebirds are expected to show significant declines over the next 20 to 25 years.

The move to give godwits and knots a threat ranking on the IUCN Red Data list is both an endorsement of the message of organisations like ours, Birds New Zealand and many others, as well as a sobering reminder of how much there is left to do.

And, anyway, a quiet start to the year is never on the cards with the Field Course run in January. This is always a big week and this year was no exception. Great participants, tutors that ranged from the sober to the flamboyant, and excellent food, produce a week in which you can see people learning. This is a full on week and is usually followed by a few days of relaxing and general catching up. Not this year though.

On the day the field course ended a group from Yalu Jiang National Nature Reserve and one person from Wetlands International China arrived to stay for three days.

The group was led by Yang He, deputy director of the Dandong agency overseeing the Yalu Jiang reserve, and it was great to have some of the staff from the reserve, some now old friends who I first met in 2004, at the Shorebird Centre. Lu Yong from Wetlands International was also in the group, and some members will remember him from 2005 and 2006 when he spent three months at the centre.

Early on in the visit we discussed some of the ways that we get people involved and interested in shorebirds, the logistics of how the centre runs and the importance of partnerships to the way the Trust operates.

This was reinforced, first by the presence of George Andrews from the New Zealand China Friendship Society who is looking to make a documentary around the godwit migration, and



IN THE FIELD: Participants in this year's Miranda Field Course hide in the undergrowth for their cannon-netting briefing from Adrian Riegen (above) and trudge across the mudflats to explore the benthic life upon which our birds depend (below).
Photos / Jim Eagles, Ray Buckmaster





WORKING TOGETHER: Gathered at the Shorebird Centre for the visit from Yalu Jiang are (from left, bottom row) Sun Dongyu (Technical Officer, Yalu River Wetland National Nature Reserve), Bruce McKinlay (senior DOC manager), Keith Woodley, Yang He (Deputy Director, Dandong Municipal Environmental Protection Bureau), Adrian Riegen, Lu Yong (Senior Technical Officer, Wetlands International China Office), Wang Xiaofei (Technical Officer, Yalu River Wetland National Nature Reserve), (top row) Estella Lee, Gillian Vaughan and Gao Feng (Director, Environmental Protection Bureau, Dagushan Economic Development Zone). Photo / Jim Eagles

later when Bruce McKinlay from the Department of Conservation joined us for the rest of the day.

After some very nice bird watching and a barbecue lunch the group went off to the Kauaeranga Valley Visitor Centre to meet up with the local Thames DOC staff. Unfortunately on the drive up the valley there was a car accident.

Adrian and two of the Chinese group with him were physically fine but Yang He incurred a lower back injury. This is expected to heal with no complications, but meant that he was unable to continue his travels for about a week, so he and Wang Xiaofei, one of his team, stayed on at the Shorebird Centre while the other three members of the group continued on to their next stage, visiting a Ramsar site in Sydney.

We have taken full advantage of Wang Xiaofei while he's been present at the centre, asking him to help explain the godwit migration and importance of the Yellow Sea to some

of our Chinese day visitors.


DOC has meantime been conducting an incident investigation for us, so that as a Trust we can learn from the incident. My thanks to the PMNT and DoC people involved on the day as well at the police, ambulance and hospital staff at Thames who so ably dealt with our group.

With all its problems, my feeling is that through this visit we've still had a chance to show our Chinese sister-site representatives how our organisation operates. They've seen how the centre is staffed, how people come to stay and met some of those who were on the field course. They've had a chance to see how we are operating with DoC, Fonterra, the NZ China Friendship Society and other organisations and my hope is that this better understanding will continue to strengthen the relationship between the two sites.

Continuing the hectic start of the year is the additional talk by Andreas Kim on February 14, followed by

the regular autumn migration day on February 28. Do keep an eye on the Ttrust's website or social media if you are able to as extra events are notified there, as well as by email where possible.

Closer to home, the education kit produced and tested in late 2015 has just gone to the printers. Our next challenge will be to increase the number of school groups using the centre, to which end we are looking to hire an educator on a part time basis to ensure that the advocacy and natural history work we are doing has the widest possible reach.

New health and safety legislation is coming into force soon which will have some implications for how the Trust operates. Council is currently working through this process, but if there are any members with a background in health and safety who would be willing and able to help us set up a framework for long term use I'd appreciate hearing from you. 

Don't let our wonderful Wild Fennel crop go to waste



The Wild Fennel which spreads across Pukorokoro every summer is mostly seen as a nuisance. But, as **Ray Buckmaster** reports, the plant is also a culinary and medicinal resource.

What possible connection could there be between the Plains of Marathon in Greece and the Chenier Plains of Pukorokoro Miranda? Well, when Pheidippides famously ran 150 miles to Sparta to get help for the embattled Greeks he did two other things. He launched that extreme sporting event we know as the Marathon and he did it by running across a plain infested with Fennel and named after it, Marathon being the Greek word for this plant.

Fennel belongs to the Carrot Family with members that are familiar to all of us. On balance it is a very useful family, although some uses would not be approved of today. An extract of Hemlock, which resembles a giant wild carrot but with hairless blotched stems, was used to poison the philosopher Socrates. His pupil Plato described the gradual movement of paralysis up his body until his respiratory muscles ceased to function and he died.

Other members of the family are much more benign and can be recognised, sight unseen, by their characteristic aromas. Many have been selectively bred. The swollen tap root of our domesticated carrot are very different from that of the wild carrot found on the chenier ridges. Parsnip has also benefited from domestication. And, at \$10 a kg, the bulb of swollen leaf bases in Florence Fennel has also found its place in the gourmet section of the vege market.

Wild Fennel, of course, far from being hugely expensive is actually an invasive nuisance in places like New Zealand whence it has spread from its Mediterranean homeland. In fact Trust volunteers have to work very hard to keep the land around the hides free from Fennel.

Wild Fennel doesn't have a swollen bulb, in fact only the youngest parts are tender enough to eat. However, its aromaticity has caused it to be adopted by cuisines in many countries. In this respect it joins a host of other family members such as Parsley, Coriander, Caraway, Aniseed and Dill.

The least flavour intensity is found in the leaves. The


recent visit by about 50 Chinese from Auckland's Holy Grace Church to weed the shellbank saw several older members take time out to harvest fresh leaf tips for use in pork balls. Seeds are more intense in flavour and these can be gathered in quantity from the wild. Dry, mature seeds are often ground but green seeds are used whole and are often chewed at meal end as they are thought to soothe the digestive system. The seed is also an essential ingredient in Asian Five Spice Powder and also Punch Phoran which is used to make dahl.

The really gourmet item with the most potent flavour is Fennel 'pollen'. You can pay US\$7 per quarter ounce for this gourmet luxury but it is free to gather as you walk through the Fennel Forest en route to the hide.

It is not true pollen but rather the hand-collected tops of the flower heads. It's probably best gathered by collecting the flower heads, putting them in a paper bag and hanging them up to dry. The 'pollen' will gather at the bottom of the bag. So prized is it that one food writer described it as 'the dust from angel's wings'.

Jamie Oliver would say that pork and Fennel are good friends, as in Italian sausage, and it is also used in lots of other recipes.

But there is another side to Fennel. Like a lot of other plants, it can cause health problems. A few people react badly to Fennel and even Parsley, Dandelion and Chrysanthemum foliage, developing a condition known as phyto-photo-dermatitis. Contact with the plant makes their skin very sensitive to quite limited exposure to the sun and leads to a dramatic rash.

But that shouldn't stop you nipping down to the hides to watch the birds, gather yourself some Fennel leaves or some 'angel dust', and using it to try out some of the adjacent recipes. In the process you'll be helping keep the area clear of an unwanted weed. 

Traditional Uses of Fennel in Western Herbal Medicine

In the old Wise Woman tradition in Western herbal medicine, it is said that the plants you need for healing and medicine almost always grow right where you are. So what does that say about us all at the Shorebird Centre? Read on!

Fennel has long been used medicinally for its carminative properties. Carminative is the word used to describe herbs or preparations that soothe the gut and relieve gas, bloating and flatulence. But carminative herbs often have a more generalised soothing effect on body systems by calming inflammation and spasms (fennel tea is good for hiccups) and having a mild anti-microbial effect. Fennel helps to soothe the gut and the lining of the alimentary canal.

Culpepper's Herbal published in 1653 has the following to say about fennel: 'One good old custom is to boil fennel with fish, for it consumes the phlegmatic humour which fish most plentifully afford and annoy the body with.' Fennel 'expels wind, provokes urine and eases the pains of the stone, and helps to break it. It stayeth the hiccup and taketh away nausea, or inclination to sickness.'

To make a tea of fennel to aid digestion after those over-indulgent meals or to calm nausea and as a general tonic, take 1-2 teaspoons of dried fennel seeds per person and pour a cup of boiling water per person over them in a teapot. Steep for 5-10 minutes and then pour through a tea-strainer. Fresh leaves can also be used by popping a loose handful in the pot in place of seeds.

Toasted fennel seeds are chewed as an after-dinner digestive tonic and breath-freshener in parts of India and Pakistan.

Fennel is rich in potassium and copper and makes an ideal addition to your compost provided you cut and add it before it is seeding.

I harvest fennel seeds once they have naturally dried out and gone brown and readily shake out of the umbelliferous flower heads. Always do it once the dew or rain has dried from the plant and they have had a chance to dry naturally in the sun and wind.

Louisa Chase

Cooking with harvested Wild Fennel

Newly harvested Fennel seeds are fantastic because they are so fresh and full of flavour. The best time to harvest is late summer, say March/April, when you can easily shake/rub them from the stalks and they are dry, so don't go mouldy on storage. We put them in any curry spice mix and also use them in veggie dishes.

ROASTED CAULIFLOWER WITH FENNEL

Ingredients:

1 whole cauliflower, washed and broken into florets
1 tablespoon fennel seeds
2-3 tablespoons olive oil
1 tsp rock salt
Juice of 1 lemon

8 whole garlic cloves, peeled

Method: Toss cauliflower pieces, salt and garlic cloves with the olive oil in a bowl. Spread on an oven tray in single layer. Sprinkle the fennel seeds evenly over the cauliflower. Roast 45 minutes in hot oven at 190. Sprinkle with the lemon juice and serve.

CARROTS AND FENNEL

Ingredients:

4 carrots, chopped into rounds or pieces
Juice of 1 orange
1 teaspoon fennel seeds
1 teaspoon brown sugar
2 teaspoon butter

Method: Cook carrots in boiling

water until tender. Drain and discard cooking water. Add remaining ingredients and return pot to stove. Heat until carrots are coated with a caramelised sauce (5-10 minutes).

Holly Perry

PORK AND FENNEL MEATBALLS

Ingredients:

500gm pork mince
500gm sausage meat
1 cup dried breadcrumbs
1 onion
1 apple
2 teaspoons of fennel seeds
A few garlic cloves
1 teaspoon of salt
1 teaspoon white pepper/chili flakes
Cooking oil

Method: Peel and chop onion and apple fairly coarsely and finely slice the garlic. Smash up the fennel seed. Put all of the ingredients, except the oil, in a large bowl, mix well then form into 3cm balls.

Place oil into a frying pan on medium heat and cook the balls.

These pork balls can be served as an accompaniment to a roast meal or served over pasta with a sauce.

They are very good served cold. Smaller versions go well on cocktail sticks served with a dipping sauce as part of a tapas menu. They freeze well. The mix can also be used to make rather different sausage rolls.

Ray and Ann Buckmaster



WILD ABOUT FENNEL (above) A member of Auckland's Holy Grace Church gathers fennel beside the old hide; (below) Tasty Pork and Fennel meatballs. Photos / Jim Eagles, Ray Buckmaster



GODWIT TIMES

Happy New Year to you all.

I just received a very interesting email from one of our junior birders which I thought I would share with you.

Dear Godfrey

I visited Pukorokoro Miranda with my grandparents in the school holidays. There were lots of amazing birds to see there but we concentrated on looking at the seagulls. Before my visit I thought that seagulls were a bit of a nuisance – noisy and likely to steal your picnic lunch if you are not careful - but I learnt that the Black-billed Gulls are special. They are endemic or only found in New Zealand and they are the most endangered seagull in the world.

My Grandad and I looked through a spotting-scope at the Black-billed Gulls and wrote down the colours of the bands on their legs. Then we gave the information to the man in charge of research on the gulls. He sent me a reply that I have copied below. I've also attached a photo my Grandad took of the black-billed gulls we saw.

Here are some jokes for you. Why do seagulls fly over the sea? Because if they flew over the bay they would be called bagels! When do godwits stand on one leg? When they are feeling unhoppy!

From Jamie

From: Tony Habraken

Sent: 17 January 2016

Subject: Black-billed Gulls

Hi Jamie

Thanks for taking the time to record the colour combos on the Black-billed Gulls. The bands you recorded are of birds I colour banded sometime between 1994-2005 when we started doing a study on movement of this species. We used year cohorts (same colour combination) for all chicks banded at the same colony so we could track them as age groups as they progressed in life. Though I have not banded any more black-billed since 2005 we are still getting some good sightings. We are also reading the metal band numbers which date back to the first year of banding now making them 21 years of age.

We banded a total of 1938 birds in those 11 years at six different locations in Kaipara, Manukau and Firth of Thames.

I appreciate the time you took in reading the bands and passing the information on, it is much appreciated and of great value.

Keep up the good work and enthusiasm. We need more young birding buddies like you.

Cheers Tony

Thanks, Jamie. Great work on the Black-billed Gull research. I've put your Grandad's photo of them below.

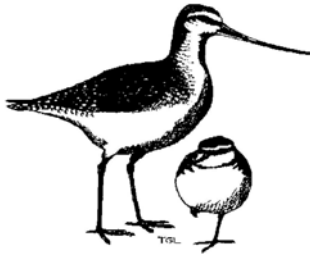
I have also made a wordfind using the underlined words from your letter. See if you can find them all.

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

All the best
Godfrey



PUKOROKORO MIRANDA NATURALISTS' TRUST



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Magazine

Pukorokoro Miranda Naturalists' Trust publishes *Pukorokoro Miranda News* four times a year to keep members in touch and provide news of events at the Shorebird Centre, the Hauraki Gulf and the East Asian-Australasian Flyway. No material may be reproduced without permission.

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See the birds

Situated on the Firth of Thames between Kaiaua and the Miranda Hot Pools, the Pukorokoro 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 Pukorokoro 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 Pukorokoro 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 Louisa Chase at 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, the census days are a good chance to get involved with field work and research. This year's are on June 12 and November 20. 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 *Pukorokoro Miranda News*. If you want to discuss your ideas contact Jim Eagles at eagles@clear.net.nz.

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.

Super Summer Sale

To clear space for some exciting new products
the Shorebird Centre Shop is offering
lots of goodies at super low prices

**Why not drop down to the Centre, snap up
some bargains, then go and watch the birds?**

If you can't find the time to visit, go to our online shop at
<https://shop.miranda-shorebird.org.nz/> make your
selection and pay safely via Paypal. Or, if you know what
you want, ring 09 232 2781 with your credit card handy.



Year of the Godwit t-shirts
Were \$24.90. Now just \$17.
Get in while stocks last.

Wildside sparkling brooches

Now only \$9

Previously \$13.90

**Lots of flowers
and birds to
choose from**



Colourful bird house numbers tiles Reduced from \$14.90 to \$10



Beautiful Bronze Bird Brooches Previously \$39.90. Now only \$20



Ponga tote bags

Reduced from \$24.90 to **\$17**

Kauri backpacks

Reduced from \$12.90 to **\$9**



Year of the Godwit drink bottles

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Now only **\$10**

Just arrived

Celebrate the
Bar-tailed
Godwit being
chosen as
NZ's Bird of
the Year with
one of these
unique t-shirts
especially
created by
Keith Woodley
Only \$34.90

