

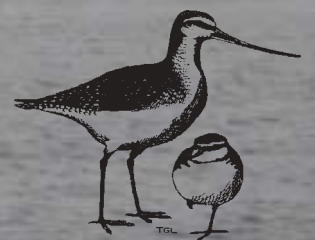
# MIRANDA NEWS

Naturalists' Trust  
May 2006 Issue 61



**Yalu Jiang National Nature Reserve**

**Saemangeum Estuary**



# May 2006 Issue 61

Situated on the Firth of Thames between Kaiua and the Miranda Hot Pools, the Miranda Shorebird Centre provides a base for birders, right where the birds are. Drop in to investigate, or come and stay a night or two. The Centre has three bunkrooms for hire, plus two self-contained flats. For rates see Back Page. The best time to see the birds is two to three hours either side of high tide. The Miranda high tide is 30 minutes before the Auckland (Waitemata) tide.

The Newsletter of the Miranda Naturalists' Trust is published four times per year to keep members in touch, and to bring news of events at the Miranda Shorebird Centre and along the East Asian-Australasian Flyway. No part of this publication may be reproduced without permission.

Cover Photo: A portion of the more than 40,000 birds at Erdaogou, Yalu Jiang National Nature Reserve.  
Photo Keith Woodley

## A word from the editor

I was showing a friend some photos that were taken at Yalu Jiang on our recent trip north. His comment was that those photos could have been taken anywhere. He was right, they were close-ups of Bar-tailed Godwits, some in breeding plumage, some not, and with only a little grey mud behind them they could have been photos from Miranda. But it bought home the message that if the birds were missing from those close-ups at Yalu Jiang then six months later they would also be missing from the photos at Miranda.

This issue of the MNT news is both a celebration of the growing relationship with Yalu Jiang and of the work that goes on there, and a memorial to the loss that occurs this year as the Saemangeum estuary slowly dries out. Next year the birds will be missing from the photos at Saemangeum and that means that there will be other places, all up and down the flyway, where they will also be missing.

The loss of the Saemangeum estuary is not something that we should forget. We should do all we can to ensure it doesn't happen again.

The relationship of the MNT with Yalu Jiang National Nature Reserve is a strong step in this direction. Lobbying our own government to pay some attention to their obligations under the Ramsar and Bonn Treaties is another. Somehow right now it doesn't seem enough. If you read nothing else in this issue please read Keith's article on page eight.

Finally I'd like to take the opportunity to thank David Medway for his regular OSNZ contributions over the past few years. David is not standing for president of the OSNZ again, so after this issue will no longer be contributing the OSNZ column. I consider the formal contact between the MNT and the OSNZ is quite valuable and I would thank David for his commitment.

The deadline for the next issue of the MNT News is July 20th. I look forward to your contributions.

Gillian Vaughan

## Upcoming Events

May 21 10:00am  
**Annual General Meeting**  
See notice page 12  
Guest Speaker: Steve O'Shea on Giant Squid.

July 2  
**OSNZ Firth of Thames Winter Census** Meet at the Shorebird Centre 10:00. Contact Tony for details 09 238 5284

August 19 5:30pm onwards  
**Winter Potluck Dinner**  
Speaker Mike Cosgrove - mountaineer, adventurer, photographer.

August 20 10:00am  
**Working Bee**  
Annual Cleanup of the Shorebird Centre - come to the potluck dinner and stay overnight or come in the morning

September 12-14  
**NZ Dotterel Course**  
For those involved with dotterel protection as volunteers or professionals. More details from the Centre.

October 15 10:00am  
**Welcome to the Birds.**  
The Arctic migrants return!  
Guest Speaker to be announced.

**NOT ON YOUR CALENDAR**  
November 18-19  
**The art of botanical drawing Workshop with Sandra Morris**  
see page 17 for details

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# Wader Survey of Yalu Jiang national nature reserve 13-23 April 2006



The Mayor of Dandong at Erdaogou speaking to the media for the bird festival,

*Gushan Management Centre, Yalu Jiang  
NNR - April 2006*

A long way from home it may be, but the surroundings are most familiar. Memories of our earlier visit in 2004 remain fresh; the building is much as it was, but now it too is full of the familiar. Evidence of the growing relationship between these two shorebird sites and the strengthening personal contacts are all around us. There are the familiar faces that belong here. Zhang Guangming – for 10 weeks a part of the Miranda environment, now back in his own world. Yan Meifang the reserve director who regales her staff with stories from her visit to Miranda last year. Notably absent is Jia Na; normally part of the operation here, but as I write this she is still at Miranda and not due to return here until mid-May. It seemed a little strange saying goodbye to her at Miranda while I am now at her place!

When we were last here the newly erected building was largely bare of interpretive material. Now the legacy of Zhang's sojourn at Miranda is everywhere, with an impressive series of display panels in all levels of the building – some directly modelled on or influenced by Miranda ones, others quite distinctly different. Then there are the large photos on the walls – ourselves individually and as groups, some taken here last time, others taken in New Zealand in the last twelve months. It

was flattering if a little disconcerting to return here to find oneself so prominently on display!

Over the last few days we have also returned to sections of the coast – shorebird survey sites that remain fresh in the memory. We are here over a week earlier and there are no trees yet in leaf so the flat brown world of rural northern China looks even more uniform. The interior of the reserve at the western end is a broad band of reed beds, just short stubble at this time of year. Further east are extensive areas of rice fields being prepared for planting. Small industrial plants and villages occur at frequent intervals in this zone. Closer to the coast is the enormous grid of shrimp ponds extending almost the length of the reserve, the tiny huts, sluice structures and implement sheds – often with tiny red flags taut in the ever present breeze – dotting the embankments. Here and there small forests of masts also festooned with red flags, mark mooring sites for fishing boats. Under the flat grey sky the chilly breeze is a less welcome familiarity. But beyond the seawall on the incoming tide are the main act – the flocks of shorebirds staging here before resuming their northward odyssey.

A hectic schedule begins immediately after we arrive, and a pattern of long days emerges. Timing of this visit, as

with anything in the world of shorebirds, revolved around the tides. Here the tide reaches the seawall very quickly so birds are present on the inner flats only briefly before dispersing to roost sites all along the coast. Often these are in dry fish ponds or on embankments a considerable distance away. Therefore counts really need to be done as early as possible. This in turn determines an early departure each day so we can be in good positions for counting. Once the tide is in there is often little more to be done, except perhaps wait for it to fall (again this can happen very quickly here) to look for leg flags and colour bands as birds return to the mud. On the first few days however, we must return to base where training workshops are scheduled for each afternoon.

Apart from approximately 10 reserve management staff, we have been joined by people from reserves all over China. They are here to participate in the shorebird surveys and for the workshops. Long hours were spent at Miranda preparing material for presenting at these workshops. We were indeed fortunate to have Yang Xiuzhi (Wetlands International – China) and Jia Na in residence as they were able to translate all material into Chinese. Sessions covering shorebird ecology, survey and counting techniques, data analysis, the New Zealand shorebird sites and Miranda are held over the next



We were told that the barbecues in NZ for various dignitaries had been well remembered, and we were therefore treated to a BBQ Chinese style. It all went better once we moved outside, the trick seems to be not setting your chopsticks on fire!



Not long after the above photo was taken Zhang Guangming realised why it was not advisable to talk on your cellphone while knee-deep in mud. Luckily it only took him 15 minutes or so to extract himself.

As far as we could tell the visit to Gushan Number 1 Middle school went well! The feeling of being treated like a pop star took a while to fade.



Over three visits to Erdaogou, the site with the artificial roost, we were joined by a large array of people. On the day of the bird festival we felt somewhat under-dressed with so many others in suits (see the mayor, above). When we came back to do the count a number of people from the local city of Donggang also visited. It was almost like being at Miranda with families just stopping by when it suited them.

Below, 16,000 Dunlin (enlargement to the left) in a semi-dry fish pond provided an interesting counting challenge for Keith. Luckily Adrian and Gillian had counted them earlier, so were able to corroborate his story (but they decided not to tell him that they'd finished the count until he was through)!



three days. In addition three or four nights have been scheduled for mist-netting and banding birds on the mudflats or fish ponds. On the first night we return to the seawall where a long cold evening produces only one bird – a Dunlin which is flagged with orange and green and released. This turns out to be the only bird caught, as a full moon and erratic tides limit opportunities for further banding.

On Wednesday 19 April the survey is suspended for a significant event. The official opening of a new visitor centre and bird hides at Erdaogou, near the city of Donggang at the eastern end of the reserve is held along with the opening ceremony for a bird festival. There is an impressive turnout for it. Over 600 people including the mayor and vice-mayor of Dandong along with many other state and party officials, public and media are present. Several hundred school children are bused in to perform.

Outside the new centre a stage has been erected facing towards the seawall over 300 metres away. The audience face inland as speeches are heard from the mayor, other officials and Adrian Riegen. Important though this event is, with many dignitaries in attendance, shorebirds respect only the strictures imposed by tides. Shortly after the ceremony begins the audience, including the mayor, are compelled to turn away from the speakers as well over 30,000 birds erupt off the mudflats. The impact on people is immediate and utterly profound. The mayor himself is heard to say that while he had been aware the site was significant for shorebirds, he had no idea just how important. The birds have

done what no amount of lobbying or slick slogans could have managed.

Back on stage Adrian is making the point that today Yalu Jiang is the second most important shorebird site around the Yellow Sea. But in a few days time it may well become the most important as the giant reclamation at Saemangeum in South Korea is due for completion. (Three days later comes confirmation that the seawall at Saemangeum has been completed.) It is a powerful but depressing message, with the flocks wheeling overhead underlining just what is at stake.

\* \* \* \* \*

Our return to Gushan Middle school takes us through the streets of the town – cluttered with a medley of vehicles from trucks to boxed mopeds. The school itself is large by NZ standards – over 5100 students all in tracksuit style uniforms in blues and purples. In fact it has grown by several thousand students in the two years since our first visit. We are met by the headmaster and ushered into his office. The large and sparsely furnished room is dominated by a huge desk - a phone, diary, jade utensil holder and two small Chinese flags the only objects on its otherwise empty expanse. The windows look out on a vast empty yard and school buildings beyond which lie the reed beds. The red and yellow livery of a Petro China gas station sign on the main road is the only bright colour for now. But within weeks the landscape here will turn green. From the corridors we can see into classrooms – rows of desks each overflowing with stacks of books. We are ushered into the auditorium where more than 300 students are waiting. The presentation

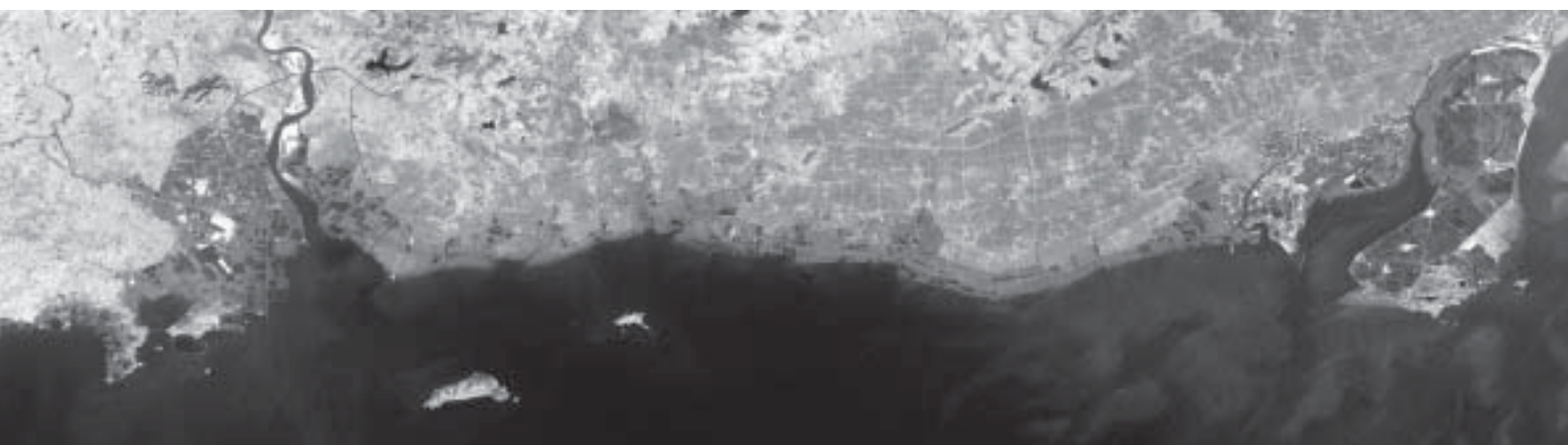
equipment is of a very high standard and the talk on shorebird ecology and Miranda goes well.

Towards the end the students are asked: why should we conserve shorebirds? The first few answers touch on the ethical and philosophical - we share the planet with birds, we need to protect them for their own sake and for ours, if all the birds were gone we would be lonely. Adrian hands out posters and Miranda magnets as prizes. Just to meet foreigners is hugely significant for these kids. The opportunity to speak English with others is a priceless opportunity readily seized. There are questions about shorebirds and then about us and New Zealand. Afterwards each of us disappears into a dense huddle of students, *all* eager to talk, pepper us with questions and get our autographs.

Part of our mission this time round is to facilitate a sister school partnership between Gushan Middle School and Hauraki Plains College. Discussions with the Hauraki principal before coming here were very positive. At this end too there appears to be great enthusiasm for the idea. A few days later the headmaster and some of his staff host us for dinner. It is a relaxed and convivial evening and an important step towards achieving our objectives here.

\* \* \* \* \*

We travel to Dandong for a meeting with our old friend Yu Lian Sheng, director general of the Environmental Protection Agency (CEPA) for Dandong. Over tea we discuss our visit and say how impressed we are with progress here. We are also to have dinner with the vice mayor.





*The team at the new centre at Erdaogou. From left to right Gillian Vaughan, Adrian Riegen, Keith Woodley and Bruce Postill. Photo Zhang Guangming*

On a hill above the city a tall pagoda serves as a viewing platform where we kill time before dinner. The hill is covered in bare woodland apart from a few pines and a scattering of trees just starting into leaf. On this late afternoon there are quite a few local people ambling about its trails – some openly astonished to see foreigners. The murky smog/haze of late winter means most of the city is shrouded, and North Korea across the river is only dimly visible.

Dinner is at a large restaurant complex built on the very edge of the river. Our room on the second floor is at one end and built out over the water. Immediately across the river the Korean bank looks very close. Joining us are the governor of Kuandian county, the director of CEPA Dongau, our old friend Chen Kelin from Wetlands International - China, and several other officials as well as Yu Lian Sheng and Yan Meifang. With two exceptions everyone around the table has been to New Zealand. While there is a degree of ritual about dinners such as this there is a surprising lack of formality, and this event holds the key to what is truly significant about our latest visit to Yalu Jiang.

All our interactions with senior officials bear a common theme; there is a genuine sincerity and interest in the reasons for us being here. The relationship cemented by the Memorandum of Understanding of

April 2004 has now advanced considerably. The value of visits to Miranda by various delegations since 2004 is clearly obvious to us all. Not only is there is a warmth to the personal contacts between us and those who participated in the delegations, but also with reserve staff and other officials. The growing links between New Zealand and China have been a constant backdrop to this visit. There is very strong interest in New Zealand and the visit by the Chinese Premier several weeks ago was well known.

\* \* \* \* \*

The Governor of Kuandian County who visited Miranda last year invites us to his region and hosts us at a lakeside hotel about 100 kilometres up the Yalu River from Dandong. It is our first time away from the coastal area, and immediately the landscape changes – the alluvial plain of the reserve giving way to hill country. The hotel sits on an island a few hundred metres from the hills of North Korea. It is off-season and we are the only guests, sharing this isolated place only with migrating wagtails, swallows and a bitter breeze.

A small boat journey along the North Korean shore is an intriguing if somewhat ambivalent experience. People are moving and working on the river bank as are a number of military personnel. There is a vaguely uncomfortable edge to our activity,

almost something voyeuristic as we glimpse a snapshot of the lives of these people, in this most enigmatic and closed of countries. The buildings and settlements visible from the river have a rundown look. An enormous industrial complex appears to be in complete ruins. But perhaps the most significant features are the terraced hillsides. From the river bank to the tops of the highest hills, (perhaps up to 600 metres) every available inch of soil has been terraced for crops. It is an impressive sight but one which is perhaps all too eloquent as an indication of living conditions. Underlining this impression and the efforts involved in farming this way is the solitary figure carrying two buckets of water up the steep bank from the river on a shoulder yoke.

Back on the reserve the survey continues. Five days of counting shorebirds have taken us to all areas of the reserve. The final day includes Erdaogou, where the hides are put to good use as shelter from the ever present chill breeze. We officially count birds at this site for the first time and arrive at a total of well over 45,000, at least 30,000 of which are Bar-tailed Godwit. This brings the survey total for the reserve to 129,000 birds. It is an over-used phrase now, but 'awesome' is the only way to describe what unfolds. Looking through telescopes we are focused on counting and looking for colour bands and leg flags when a giant engine starts up. Only it is no human device but the sound of the flock lifting off as one. It swirls and twists and undulates low to the water and up again, breaking into several sections to add another layer of movement to this already stunning spectacle. We have all seen this kind of thing before, many times at Miranda alone. But nothing on this scale. The fact that most of these are Bar-tailed Godwit – many of them 'our birds' – instills something else to the experience. Both we and these birds have traveled many thousands of kilometres to be here, and here on the seawall of Yalu Jiang we can celebrate this sublime connection.

Keith Woodley

## f i n a l   C o u n t

Species	Number
Bar-tailed Godwit	45691
Dunlin	43875
Great Knot	16268
Eurasian Curlew	6100
Grey Plover	5573
Unidentified Curlew	4100
Eastern Curlew	2126
Kentish Plover	1485
Eurasian Oystercatcher	296
Spotted Redshank	113
Whimbrel	89
Red-necked Stint	62
Common Redshank	54
Common Greenshank	33
Terek Sandpiper	27
Spotted Greenshank	24
Black-winged Stilt	13
Curlew Sandpiper	7
Common Sandpiper	6
Ruddy Turnstone	4
Lesser Sand Plover	4
Wood Sandpiper	3
Black-tailed Godwit	3
Marsh Sandpiper	2
Red Knot	1
Little Curlew	0
Broad-billed Sandpiper	0
Pacific Golden Plover	0
Sharp-tailed Sandpiper	0
Sanderling	0
Green Sandpiper	0
Long-toed Stint	0
Common Snipe	0
Oriental Pratincole	0
Grey-tailed Tattler	0
Asian Dowitcher	0
Temminck's Stint	0
Spoon-billed Sandpiper	0
Unidentified small	1200
Unidentified large	1200
Unidentified	1000

**OVERALL TOTAL                    129359**

Species seen in numbers that are considered  
"internationally important" were:

Bar-tailed Godwit	Eurasian Curlew
Eastern Curlew	Great Knot
Dunlin	Grey Plover
Eurasian Oystercatcher	Kentish Plover
Spotted Greenshank	

## highlightS and CompariSonS Wit h 2004

Less birds overall were counted then in 2004, particularly Bar-tailed Godwit and Great Knot, they appear to reach the peak of their migration later in the season.

10,000 more Dunlin were counted on the 2006 survey then in 2004. More Dunlin were counted on this survey then any other.

No Little Curlew were encountered, probably as the flooded fields they were present in last visit were still dry this visit. This also led to a decline in the number of Wood Sandpipers recorded.

Overall less small birds were counted in 2006 then 2004, no Broad-billed Sandpipers, Sharp-tailed Sandpipers or Golden Plover were recorded.

The count of 24 Spotted Greenshanks is the highest for the reserve and may be the highest in China.

## Summary of Colour flag & Band Sightings

Species/Colour	#	Origin
<b>Bar-tailed Godwit</b>		
White	27	North Island NZ
White/Green	2	South Island NZ
Colour-banded	4	Avon-Heathcote Estuary NZ
Colour-banded	6	Farewell Spit NZ
Colour-banded	9	Firth of Thames NZ
Colour-banded	3	Foxtan NZ
Colour-banded	3	Golden Bay NZ
Colour-banded	10	Tasman Bay NZ
Colour banded	1	North Island NZ
Colour banded	2	South Island NZ
Colour banded	25	unknown NZ
Orange	23	Victoria Australia
Orange/Green	1	New South Wales Australia
Yellow	19	North-West Australia
Yellow alphanumeric*	5	North-West Australia
Yellow band	1	probably NW Australia
Green	4	Queensland Australia
Green/Orange	5	Yalu Jiang, China
White/Black	3	Chongming Dao China
Black/White	3	Chongming Dao China
<b>Great Knot</b>		
Yellow	14	North-West Australia
Orange	3	Victoria Australia
White/Black	1	Chongming Dao, China
Black	1	**
<b>Grey Plover</b>		
Green/Orange	1	Victoria, Australia
Yellow	3	North-West Australia
White/Black	1	Chongming Dao, China

\* Recently flags with numbers and letters on them have been placed on many species. These birds do not have colour bands.

\*\*The black only flags are thought to be from Chongming Dao (Shanghai), which may have lost the white flag since processing.

# SAEMANGEUM: A CATASTROPHE FOR SHOREBIRDS

The Great Knot in front of us are feeding voraciously. They are clearly finding plenty to eat here on the inner tidal flats of the Dongjin estuary, on the west coast of South Korea. Replenishing the fuel they used to get here from northern Australia is an essential task before resuming their journey north to Siberia. But there is something wrong with this picture. The bivalves they are so busy consuming are actually lying on the surface – whereas a knot should have to be digging for them. These dead and dying shellfish are one indication of what is happening to this place and to the neighbouring Mangyeung estuary – both of which are part of the giant Saemangeum

reclamation project. While it is a feasting bonanza for birds this year, it will be a different picture next year and thereafter, now that the sea wall has been completed.

Saemangeum is the name given to a single reclamation project involving the damming of two rivers, and the draining of about 30,000 ha of tidal flats, and 10,000 ha of estuarine shallows, by the construction of a 33 km long seawall. Originally proposed in the 1970s, construction of the seawall began in 1991 and was completed in late April 2006. The creation of agricultural land, particularly for rice cultivation, is the official aim of the project.

The dying of this estuarine system will be a slow but steady process. Although the seawall was completed on 21 April, 540 m long sluice-gates have remained open, but the restricted water-exchange has already reduced the tidal range within the system at highest spring tides from 7 m to an estimated 1m. Upper tidal-flat areas became progressively drier through the second half of April, and some lower-lying tidal-flats have become permanently covered by water.

Saemangeum has been identified as the most important site for migratory shorebirds in the Yellow Sea region. At least 27 species of waterbirds, 18 of them shorebirds, occur in internationally significant concentrations. At least two globally threatened shorebird species – Spotted Greenshank and Spoon-billed Sandpiper – are regularly supported by the area in internationally important concentrations. Over 300,000 shorebirds, including Bar-tailed Godwits from New Zealand, regularly use Saemangeum during northward migration

That the scale of coastal development in South Korea is enormous is clear to the visitor even before landing in the country. The

giant new airport at Incheon – recently acclaimed as the best airport hub in the world – is itself the product of a colossal reclamation project. From there it is a three hour drive to Gunsan, on the northern edge of the Saemangeum area. An almost unbroken string of developments lie along the way, from power stations to bridges, industrial parks to hectares of high rise apartment blocks. Those rural patches in between – rice and crop fields – are often built on reclaimed areas as well. Overlying all of this is a constant haze – the combination of homegrown industrial and urban smog along with dust from the Gobi Desert in China.

Adrian and I are here to assist with the Saemangeum Shorebird Monitoring Programme a joint project by Birds Korea and the Australasian Wader Studies Group. The objective is to survey shorebirds within Saemangeum and neighbouring sites to collect baseline data on numbers, species composition and movements before the site is completely destroyed.

On the north side of the Mangyeung estuary at Okgu – is a small fishing village. A narrow street winds between small warehouses where harvested shellfish are landed on one side and rows of moored boats on the other. From the waterfront tidal flats extend away into a layer of steam lifting off the mud. Several fishing boats are moored offshore, their hulls shrouded in steam. This is still a working village but its days are numbered – already many boats look abandoned, buildings empty, gutted. On both sides of the channel leading into the village are high banks of drying mud – and while there is still moisture under the dry white surface crust, little life is evident. From the seawall east of the village we climb down onto the mud, and walk 500 metres out towards the edge of the channel. Along both sides there are still areas of wet mud where birds are feeding

We begin counting – but the birds massed along the far edge are too dense

*High and Dry - Crabpots, boats and bivalves all left exposed as the estuary dries out*





and indistinct. A telescope scan of 170 degrees reveals an almost unbroken line of long thick slabs that are birds. When they suddenly take off they literally blacken the sky. Our best estimates are that at least 80,000 birds, most of them Great Knot, are airborne in front of us. It is the largest and most impressive concentration of birds I have ever seen. With what lies ahead for this place it is at once enthralling and intensely sad – a requiem for Saemangeum.

Not just birds are affected by this project. All around Saemangeum are communities that for generations have depended upon its resources. Declining fishing villages and abandoned salt works are obvious examples. Crab traps – long lines of pipes cut in half lengthways, each ending in a sunken bucket – are laid out over huge areas of the flats. They will no longer catch crabs. On small embankments in the mud, perhaps 2cm high, we find dense beds of bivalves - the shells all empty. The benthic fauna is already in decline but at low tide there are people and vehicles scattered all over the flats. Small tractors towing covered trailers provide transport for some, while others walk. Ahead of the tide we encounter a steady stream of people trudging in with full loads of shellfish in harnesses on their backs.

Maximum counts by the end of April are 92,768 shorebirds on the Mangyeung and 45,100 on the Dongjin. The major species for the two estuaries are Great Knot (72,342) Dunlin (38,329), and Bar-tailed Godwit (5,833). Just to the north of the Mangyeung is the Geum estuary where 51,568 birds are counted; Dunlin (21,829), Great Knot (14,024) and Bar-tailed Godwit (9,416). These counts offer only a

snapshot of the number of birds using the region. By late April and early May many birds will have departed for the Arctic, while more birds begin arriving in Korea, especially from Australia.

An argument put forward to help justify development of this key shorebird site is that birds will be able to disperse to other sites nearby. While true for a few birds, most are unlikely to find the optimum conditions required to sustain them during stopovers. The Saemangeum estuarine system with its extensive salt-marshes, mud-flats, sand-flats and mud-sand mix flats, is a highly diverse and productive system. It regularly supports the largest known feeding (and roosting) concentrations of shorebirds in the Yellow Sea so it is considered that the system offers the best conditions for such species' staging requirements. As the concentrations and diversity of species are also both greater here than in either the Geum to the north, or Gomso Bay to the south (or at any other site in Korea), Saemangeum must be better at meeting these species' actual ecological requirements. In comparison, based on the number of shorebirds presently supported by these sites, both Gomso Bay and the outer Geum estuary offer comparatively poorer conditions. The evidence strongly suggests that for significant numbers of birds, the Saemangeum development will be catastrophic.

But it would appear this disaster is likely to be compounded by what is proposed for the Geum estuary. Work is already under way on a 10,000 ha reclamation for an industrial estate. Given this trend, it is clear that few, if any, significant shorebird sites in Korea can be considered safe.



*The area of tidal flats reclaimed will be equivalent to those of the Firth of Thames, Manukau Harbour and Farewell Spit combined.*

What has happened at Saemangeum is not just a Korean issue. It has biodiversity ramifications for all countries along the East Asian – Australasian Flyway. In 2008 South Korea will host the Conference of contracting parties to the Ramsar Convention. There are strong fears that work on the Geum project will be well advanced by then. Clearly there is a need for organisations such as Ramsar to be more proactive in addressing this dramatic loss of marine wetlands in Korea. There is also a need for all countries in the East Asian-Australasian Shorebird Site Network to express their concerns to the government of South Korea. Governments focused on short term trade deals need to give more consideration to long term biodiversity outcomes.

Keith Woodley story and photos.

*A great Great Knot flock seen for the last time at Saemanguem?*



# THE OSNZ COLUMN -A Celebration of Kakapo

This is the appropriate title of the March 2006 issue of *Notornis*, the quarterly journal of the Society. The issue is a special volume devoted entirely to the Kakapo (*Strigops habroptilus*). The dearth of published literature relating to this critically endangered endemic New Zealand parrot was recognized by Murray Williams, until recently the editor of *Notornis*, who conceived and edited this special edition of the Society's journal. The Society is grateful to Murray for ably remedying the literature defect by organising the preparation of a wide-ranging series of papers and notes relating to the Kakapo, written by authorities in the field, and by arranging and overseeing the publication of this invaluable collection as a special issue of *Notornis*.

Mick Clout, chair of the Kakapo Scientific and Technical Advisory Committee, says in the first paper in the issue that the story of the decline, rediscovery and slow recovery of the Kakapo is a conservation epic that has captured the imagination of ornithologists and naturalists around

the world. He observes that the survival of the Kakapo is a minor miracle and is a testament to the work of many people, several of whom are contributors to the publication.

The volume is about three times larger than a normal issue of *Notornis*. It comprises a photo essay of 8 colour pages, being an illustrated history of saving Kakapo, followed by 197 pages containing 17 papers and 5 short notes. The 17 papers are: A celebration of kakapo: Progress in the conservation of an enigmatic parrot; A parrot apart: the natural history of the kakapo, and the context of its conservation management; Breeding biology of kakapo on offshore island sanctuaries, 1990-2002; Habitat and diet of kakapo in the Esperance Valley, Fiordland, New Zealand; The habitat, food and feeding ecology of kakapo in Fiordland: a synopsis from the unpublished MSc thesis of Richard Gray; Diet of kakapo in breeding and non-breeding years on Codfish Island and Stewart Island; Nutrient composition of the diet of parent-raised kakapo nestlings; The challenge of supplementary feeding: can

geometric analysis help save the kakapo; Growth and fledging of kakapo; Hand-rearing kakapo, 1997-2005; Energetics of free-living kakapo; Productivity of kakapo on offshore island refuges; Seasonal changes in home range size and habitat selection by kakapo on Maud Island; The timing of breeding in the kakapo; A simulation of the future of kakapo; The role of genetics in kakapo recovery; and Kakapo recovery: the basis of decision-making. The 5 short notes in the volume are: Home range size of kakapo on Codfish Island; What triggers nesting of kakapo?; Subfossil kakapo remains from near Gibraltar Rock, Cromwell Gorge, Central Otago, New Zealand; Kakapo in Maori lore; and Agonistic display and social interaction between female kakapo.

*A celebration of Kakapo* is available at \$26 a copy (which includes postage in New Zealand) from Roger Sharp, OSNZ Membership Secretary, P. O. Box 12-1039, Henderson, Auckland.

David Medway,  
President,  
Ornithological Society of NZ.

## For More Information...

### On Korea and the work at Saemangeum:

<http://www.birdskorea.org/>

Everything you need to know about the monitoring programme at Saemangeum estuary this year.

### On the Magnetic Sense and Bird Navigation:

[http://nationalzoo.si.edu/ConservationAndScience/MigratoryBirds/Fact\\_Sheets/default.cfm?fxsh=9](http://nationalzoo.si.edu/ConservationAndScience/MigratoryBirds/Fact_Sheets/default.cfm?fxsh=9)

Although this has an American focus it is a good general overview of the processes involved in migration.

For more detailed information on Michael Walkers work on the Magnetic sense check out.

[www.gps.caltech.edu/~jkirschvink/pdfs/COINBWalker.pdf](http://www.gps.caltech.edu/~jkirschvink/pdfs/COINBWalker.pdf)

This is a pdf of a scientific paper about Micheal Walkers work on the magnetic sense. If you were at the open day or read the article on page 19 and want more details this paper is a good place to start.

## The Miranda Field Course

A regular part of the Miranda Calendar the Field Course is a five day residential course which covers the natural history of the Miranda area. There is a focus on shorebirds but many topics are covered, the programme varies from year to year but usually includes some botany, some entomology some bird handling and lots of birdwatching.

Contact the Centre if you are interested in attending. The course is open to both members and non-members.

# OUT 'N ABOUT!

## BIRD ATTACK

Since its inception I have watched with growing interest the development of "Lakes Resort" at Duck Creek, Pauanui on the Coromandel Peninsula. This is a residential subdivision planned around a magnificent 18-hole championship golf course. As the name suggests there are large expanses of water forming fresh water lakes that add to the ambience of the residential sections, the newly completed clubhouse and the golf course. The lakes provide water storage for irrigation as well as acting as a magnet for golf balls on this very challenging course.



*New Zealand Dotterel in breeding plumage. Photo Ian Southey*

Pine forest forms the eastern and southern boundaries of the golf course. Duck Creek and its adjoining wetland forms the western boundary and, along with the lakes, the whole area provides a haven for many bird species. A flock of Canada Geese are not so welcome visitors, fouling the greens and bunkers, creating a daily early

morning task for the greens staff. A welcome arrival is a small flock of endangered New Zealand Dotterel (I counted eight one day). Dotterels are also present at Billy Point, Pauanui Beach and on checking at the Information Centre Keith White told me that DoC knew about the dotterels at "Lakes Resort" and were monitoring both flocks. I am not an expert on birds but find it interesting that this latter flock has established on fresh water lakes.

When I am hosting guests at our holiday home nearby a trip to "Lakes Resort" is always on the agenda. Recent guests were from Eastern Cape, South Africa and were very interested in birds. I was telling the visitors about the endangered New Zealand Dotterel as we drove very slowly trying to locate the "Lakes Resort" flock when the bird attack occurred. Running as fast as it could down the middle of the road straight toward our car with wings outstretched and feathers fluffed up, was a dotterel. It came so close that it disappeared from sight so husband was dispatched to move the bird off the road. The dotterel retreated up the centre of the road and we could hardly believe our eyes when this little bird turned and charged toward the car again. This happened a third time and by now we were very amused at the behaviour of this small angry bird whose body language left us in no doubt that it wanted us off its territory right then. Eventually the bird was persuaded to retreat to the grassed area adjacent to the lake and we moved slowly on.

The dotterel was obviously protecting a mate, nest, eggs or chicks but I do have a concern that motorists who do not know or do not care about this endangered species could have so easily run over this feisty bird. Small bird versus motor car is not an even contest. For our guests and us this was a unique and very special experience.

Ethel Evans

## AN ORDINARY DAY

It was early March when a friend and I decided that Sunday would be an excellent day to head for Miranda. The tide was in around mid-morning, the weather forecast was good, and it was mid-March, the perfect time to see the birds in their breeding plumage.

When we pulled up at the limeworks gate parking was at a premium, walking out toward the shellbanks showed a large number of people, most with cameras, many with binoculars or telescopes. Then a large group of children and adults came walking down from the centre. I panicked - had I missed the open day?

Talking to those present the answer was no. People had just come to see the birds, many who had never been to the Shorebird Centre, but had read about the birds in the paper over the years, some who were driving by and stopped to see what other were looking at, other real birders who spent hours trying to turn the Black-tailed Godwit into a Hudsonian (it just wouldn't change!).

It was just an ordinary day, but we were right when we thought it was also a perfect day for Miranda, and we weren't the only ones.

Gillian Vaughan

*An unexpected crowd at Miranda, taken before the big group arrived!  
Photo Gillian Vaughan*



# For Presentation to the AGM

## CHAIRMAN'S REPORT

1. This report is for presentation to the 2006 Annual General Meeting briefly summarising activities of the Trust during the 2005 financial year. As can be seen this has been a very busy year for the Trust and our ability to undertake this wide range of varied activities is only possible by the dedication and assistance of a large number of members and supporters.

2. 30<sup>th</sup> Anniversary:



*The Sibson Room set up for the Anniversary lunch. Photo Chris Thompson*

The year 2005 marked the 30<sup>th</sup> year since the formation of the Trust. Some of the history as seen through the eyes of past chairmen has been documented in the newsletters over the previous 12 months. The founders luncheon on 20 February 2005 was a good opportunity to reminisce with older members and to acknowledge the trials and tribulations that occurred during the formative years and also the successes.

As can be seen from this report the Trust is now involved in a wide range of activities and it is all too easy to forget the difficult early years. It is worthwhile for members to read the history of the Trust written by Past Chairman Stuart Chambers and realise how close the organisation came to winding up on a number of occasions.

3. Chinese Connection:

During the year the Trust hosted an official delegation from the Liaoning province in China as a direct

consequence of the sister site relationship. This delegation was led by the Vice Mayor of Dandong City who had acted as our host during the visit for the sister site relationship signing ceremony in 2004. The delegation included a number of senior officials from not only Dandong City but also the Yalu Jiang National Nature Reserve and Wetlands International – China Division.

One of the key outcomes of the visit was an arrangement for Chinese reserve workers to be hosted by the Miranda Trust for periods of approximately 2-3 months to develop skills in managing wading bird habitat sites.

The Vice Mayor gave such a glowing report of the Shorebird Centre on his return to China that the Mayor of Dandong City who was heading a trade delegation to New Zealand later in the year made a point of diverting the delegation to spend several hours at Miranda. During his time at Miranda we were able to arrange for the Mayor of Franklin District to meet with him and establish a direct political link to support the shorebird link.

4. Chinese Reserve Managers:

The first of the Chinese reserve workers arrived at the Centre during November and were hosted by the Trust until near the end of January 2006. These were two delightful young gentlemen by the names of Lu Yong and Zhang Guangming, one each from Wetlands International – China Division and the Yalu Jiang National Nature Reserve staff.

During their visit they were able to participate in the January field course and also by way of a donation from a member of the Trust were able to attend the Australasian Shorebird Conference in Nelson in December.

From February to April 2006 the second pair of the workers, two young ladies, arrived. They also were one each from the same two Chinese organisations and were Jia Na and Yang Xiuzhi. The same member also provided sufficient money to enable this pair to spend several days in Christchurch and also visit Farewell Spit getting an appreciation of other areas also utilised by the shorebirds. Our thanks to the donor and also the South Island hosts.

### AGM and nominations for Council

The Annual General Meeting of the Miranda Naturalists' Trust will be held at the Shorebird Centre on Sunday May 21st 2006 at 10 am.

Nominations are called for the positions of Secretary, Treasurer, Auditor and 10 Council members. Please have your nominations with the Secretary, Will Perry, by the eighteenth of May. His address is on the inside of the back cover of this magazine. Your letter should have the name of the person you are nominating, your name and the name of someone to second the nomination. Everyone involved must be financial members of the Miranda Naturalists' Trust.

#### AGM Agenda

Apologies for Absence

Minutes of the last AGM May 15th 2005

Matter Arising from the minutes

Chairman's Report

Treasurer's Report

Election of Officers

(Treasurer, Secretary Auditor, 10 Council Members)

General Business

These visits give an opportunity for Chinese workers to experience a non-government organisation operating in the conservation field which is a management regime not presently able to be undertaken in China. There is evidence however that the Miranda influence is having some effects and we are hopeful that the benefits will flow onto other reserves throughout China and hence help the migrating birds that travel to New Zealand.

#### 5. Other Visitors:

On 19 November 2005 the Trust hosted an official but informal visit by the Governor General. She had previously visited the Centre in a private capacity on at least two occasions but she had expressed a desire to visit the Centre during the peak period of the wader stopover and have time to appreciate the birds.

Following several hours on the shell banks observing the birds she returned to the Centre for a light luncheon before driving her husband home.

Her visit coincided with a wader identification course and she freely mingled with the participants who were a little surprised at their Vice Regal attendee.

During the year the Prime Minister also visited the Centre in a private capacity. During her brief visit she and some of her family members completed the walk to the shell banks and returned to the Centre. Unfortunately her visit was at the wrong stage of the tide cycle and the birds were feeding on the wide expansive mudflats. The Council intends to officially invite her at a more appropriate time so that she can better appreciate the bird life.

#### 6. The Ngati Paoa Trust:

The Miranda Naturalists' Trust was pleased to be invited to attend the launch of the Ngati Paoa Trust on 9 April 2005.

Several members from the Wharekawa Marae participated in the opening of the Shorebird Centre in 1990. However since that time the contact between our two organisations has been minimal but regular contact is something that we



*Chairman David Lawrie at the Shorebird Centre. Photo Zhang Guangming (This photo hangs on the wall of the Gushan Management Station at Yalu Jiang!)*

need to actively promote in the future. Each of our organisations have a desire to see the Firth of Thames environment protected and developed in a sustainable way. It is hoped that in future years we can more closely work with the Ngati Paoa Trust in developing plans for the Kaiaua coast line.

#### 7. Courses At Centre:

During January the five day residential field course was held ably organised by Eila Lawton. This course was fully subscribed and was thoroughly enjoyed by all the participants.

However the success of this type of field course is largely due to the tutors who volunteer their time. Without that voluntary input it would not be possible to provide such a wide range of topics from such knowledgeable tutors at a realistic cost. I would therefore like to publicly thank them for their assistance in making this such a successful event.

During this year Eila also organised two 2 day wader identification field courses. These also proved highly successful and even the birds obliged with several rarities turning up on the days to further challenge the participants.

In October an art workshop was held at the Centre under the tutelage of Sandra Morris a well known artist and the illustrator of a number of books. This course concentrated on outdoor bird sketching and then the transferring

of those sketches to lino cuts and techniques for printing. This proved to be a very popular event and similar workshops are intended for the future.

#### 8. Guest Speakers:

The guest speaker at the Autumn Migration Day in March 2005 was Andrew Crossland from the Christchurch City Council who gave an outline of the cities policies towards wetland conservation and restoration. He also spoke of his experiences surveying shorebirds in Sumatra.

The speaker at the Annual General Meeting in May was Nigel Milius, one of the Council members of the Trust. Nigel currently spends his summer months as a tour guide on ships visiting the Antarctic. He showed us a stunning array of photos of birds and other wildlife although his nomadic lifestyle means that he is hardly ever home in New Zealand.

Dr Michael Walker was our guest speaker at the Autumn Migration Day where he gave us an update on the research being undertaken into how birds migrate. It would appear that there are cells located within the head of birds which give them the ability to track magnetic fields as they move on migration. This research, while providing some answers, throws up many more questions and we look forward to an update from Michael in the future on this ongoing research.

## 9. Conservation Award:

At the launch of conservation week in Auckland on 1 August the Minister of Conservation on behalf of the Department of Conservation presented the Trust with the Stella Frances Award for conservation excellence. Stella was a regional conservator for both Waikato and Auckland Conservancies of the Department and was a great supporter of the Miranda Naturalists' Trust until her untimely death in 2003. The award underlines the incredible effort that so many Trust members have made over the years to making the Shorebird Centre what it is today. It also acknowledges the role that Miranda people play in shorebird advocacy work both within New Zealand and along the migration flyway.

## 10. Government Funding:

While the Government and the Department of Conservation acknowledge the excellent work that the Trust undertakes in research and advocacy work for the migratory shorebirds they have not provided any funding to that work. The bulk of the costs of undertaking banding research and the advocacy work on shorebird migratory species is undertaken by volunteers and largely at their own expense.

During the year Adrian Riegen and I made representations to the Minister of Conservation to seek some help directly from the Government. The Government are signatories to both the Ramsar Convention for the protection



*Jia Na from Yalu Jiang and Yang Xiuzhi from Wetlands International on their last day in New Zealand. Photo David Lawrie.*

of internationally important wetlands and also the Bonn Convention for the advocacy and protection of migratory species. Much of the work that Miranda people undertake with the migratory shorebirds falls within both of those major Government Conventions and it is my belief that the Government should be providing some funding to the Trust to acknowledge the work that we are doing on behalf of the Government.

The Minister was unswayed by our impassioned pleas and the Trust has now made a direct approach to both the Auckland and Waikato Conservancies seeking some funding assistance. It is a little ironic that some of the costs of the work that has occurred in China has been funded by the Australian Government.

## 11. Grants:

During the year we applied for a grant from the ASB Communities Trust to purchase a laptop and data projector to operate at the Centre and on outside presentations. In the past we had relied on either the speaker bringing their own or borrowing one from Ecoquest and that

clearly was not a satisfactory long term situation.

We are pleased to advise that the ASB Trust provided sufficient funding for us to purchase the equipment which is now in use at the Centre and has also been used in the outside presentations.

During the year Dr Phil Battley one of our Council members and John Perrott from Wildlands Consultants prepared an application for funding from the Government Biodiversity Conditioning Fund for predator control work along the shore line of the Firth. This application was successful and the trapping programme has now been commenced and will be continued for the next few years. Hopefully this will reduce the predator numbers that were having an impact on the New Zealand Dotterel, White-fronted Terns and Black-billed Gulls that were attempting to nest on the shore line.

## 12. Aquaculture:

The Trust has kept a watching brief on the progress of the Auckland Regional Council as they are developing the aquacultural management area in the Firth of Thames. The local residents groups have been leading the opposition to the proposed large scale marine farming and the Trust has been providing assistance and support where possible.

*Bird-watching after the talk on the open day. Photo David Lawrie*



At this stage the final decisions have still not been reached but the Trust believes that any aquaculture in the Firth of Thames should be on a small scale precautionary basis in case there are major effects on the food chains in this fragile environment.

Following the above work the Local Community developed a proposed to establish a seabird coast environmental centre in Kaiaua. The application for funding for that centre was not successful and the Trust is looking at ways of providing some part of that community service to bolster our reputation as a centre of excellence for conservation and educational purposes on the western side of the Firth of Thames.

Bill Brownell in association with Environment Waikato is undertaking the second phase of the “Muddy Feet” research proposal in the Firth and the Trust is an active participant in this exercise. As this project proceeds much more data will become available on which future decisions of land use and marine activities can be developed.

#### 13. Staffing:

Keith has continued in his excellent role as the manager of the Centre. During the year the Trust has employed Jenni Hensley on a part time basis to ensure that Keith can have time away from the Centre if necessary. Clearly an on-site manager has difficulty in escaping,

particularly when he is limited to how far he can pedal his bicycle.

However the work at the Centre still relies on a pool of volunteers who can assist at busy times or when either Keith or Jenni are absent. Kathy Barrow is the organiser of the Friends of Miranda and she is always looking for additional people who can assist even for an occasional day.

#### 14. Wader Studies:

During the year the activities of the wader study group continued under the guidance of Adrian Riegen. This work was augmented by a study that Phil Battley is undertaking into the migration of godwit and also a contract that is being undertaken by the Ornithological Society on behalf the Department of Conservation on the movement of wading birds in New Zealand.

All of these projects are able to share resources including the large pool of voluntary helpers that Adrian has trained over the years. The outcomes of these various projects will be more fully reported in the future.

Results from these studies have however shown the direct links of birds between Miranda and China and also areas in South Korea right into the breeding grounds in Alaska. The observation of the banded waders is also providing direct evidence of the migratory paths adding greatly to the world wide knowledge of these bird species.

One of our members Ray Clough keeps reminding me that there is little value in protecting the birds in China if our own endemic Wrybill is in trouble at home in New Zealand. This is a timely reminder that while there are exciting projects throughout the world it is also necessary for the Trust to keep a focus on events happening closer to home.

Ray is correct in that there is clearly something changing in the wintering of Wrybill with flocks roosting in different areas and an apparent decline in numbers. Over recent years we have been pressuring the Department of Conservation to finalise the Wrybill recovery plan that will provide some focus to research into this endemic species. This is something that we will need to continue as at this stage the recovery plan is still not finalised.

#### 15. Conclusion:

As can be seen from this report this has been another very busy year at the Centre and with the international and local recognition that the Centre is now receiving it is unlikely that activities will decrease in future years.

As I have mentioned several times through this report this achievement is only possible because of the willingness of people to provide their time and expertise on a voluntary basis. I believe that the results that we have achieved are truly remarkable, particularly given the very limited financial resources at our disposal. The growth that has been achieved over the 30 years of the Trusts existence has wildly exceeded the expectations and indeed the purposes for which the Trust was originally established.

I am proud to be associated with the wonderful group of people that make the work of the Trust so successful. That pool of people includes the office bearers, the Council members and all of the members and supporters. Everyone of you provides a little piece and our strength comes from that collective energy and wisdom.

David Lawrie  
Chairman



*Wrybill, the need for a recovery plan becomes more and more obvious.  
Photo Ian Southey*

**MINUTES OF THE 30<sup>th</sup> ANNUAL GENERAL MEETING OF THE MIRANDA NATURALISTS' TRUST  
HELD AT THE SHOREBIRD CENTRE ON SUNDAY 15 MAY 2005 AT 1015 hrs.**

**PRESENT:**

The Chairman (David Lawrie), Secretary (William Perry), Treasurer (Ashley Reid) and about 70 others.

**APOLOGIES:** Nancy Payne, Geoff Moon, Barbara Blythe, Monty Widgery, David Crockett, Ruth Crockett, Nanette McLauchlan, Bryan Woolley, Bev Woolley, Hazel Harty, Brian Jones, Sue Reid, Arun Piesse.

**APOLOGIES ACCEPTED** (Betty Seddon / Linda Underhill.)

The Chairman, David Lawrie welcomed all members present to this, the 30<sup>th</sup> AGM of the Trust and particularly welcomed first Chairman John Brown and first Secretary, Judy Piesse and past Chairman Stuart Chambers.

**MINUTES:** The minutes of the 29<sup>th</sup> AGM held on 23 May 2004 had been published in the May 2005 edition of "Miranda News".

The minutes were **TAKEN AS READ** (Ashley Reid / Adrian Riegen).

The minutes were **APPROVED AS A TRUE AND ACCURATE RECORD.** (Adrian Riegen / John Rowe).

**MATTERS ARISING FROM THE MINUTES: None**

**CHAIRMAN'S REPORT:**

The Chairman, David Lawrie, reiterated that this meeting was the 30<sup>th</sup> AGM of the Trust and took the opportunity to remember people who were no longer with us and who had contributed so much to the formation of the Trust. He then congratulated Nanette McLauchlan for having organized the luncheon held in February as a celebration of the 30<sup>th</sup> Anniversary. He also thanked Judy Piesse for preparing a folder of cuttings showing the history of the Trust and repeated a plea from Judy for more cuttings. The Shorebird Centre had been the venue for several courses through the year, notably the Dotterel Course, the January Field Course, a Wader Identification Course and David thanked Eila Lawton for her work in organising the courses. Sandra Morris had been the guest speaker at the October 2004 Migration Day and David Melville at the March 2005 Migration Day. There was a Working Bee in August 2004 and another was planned soon. Gillian Vaughan and Eila Lawton attended the Birds-a-Plenty Festival in the eastern Bay of Plenty. Adrian Riegen had been the Guest Speaker at the AGM in 2004 and spoke about the Memorandum of Understanding between the Trust and the Yalu Jiang National Nature Reserve. The theme of cooperation between Miranda Naturalists' Trust and Chinese organisations has continued with a visit from the Taiwanese Hwa Hsia Society and a joint meeting between MNT, Ngati Paoa Management Trust and Chinese visitors. The Shorebird Centre has also been used as a meeting place for local and regional government bodies and is seen as a non-partisan organisation with no boundary constraints. The

Trust is keeping a watching brief on a number of local activities, including marine farming plans, variations to the Coastal Plan, local councils' policies on dogs, Camper Vans / Mobile Homes, Aircraft Flying Zones. The Shorebird Centre now has a part-time Assistant Manager in Jenni Hensley – the interest from an Endowment Fund is being used to pay her and this demonstrates the importance of Bequests and Legacies to the Trust. The Trust continues to rely also on Volunteers to staff the Centre and provide relief for the fulltime Manager and part-time Assistant Manager – Kathy Barrow continues to organise the "Friends of Miranda" to help staff the Centre. There were also volunteers from overseas (Dan and Kate) who contributed to the staffing of the Centre. Among other plans for the future, MNT Council is planning additions and modifications to the existing buildings. The relationship with Yalu Jiang National Nature Reserve in China continues to develop. The Memorandum of Understanding was signed in April 2004; a delegation from China visited Miranda in April 2005; MNT plans to host Chinese delegates at the Shorebird Centre and to send delegates to Yalu Jiang; Phil Battley's work on Godwit and Knot enables observers in China to identify individual birds banded in New Zealand; Keith Woodley was a speaker at a Chinese Environmental Conference in Auckland. The Trust continues to hope that the New Zealand Government will offer some financial assistance for these initiatives. The Firth of Thames is now one of five Ramsar sites listed in a National Wetland Trust booklet and we aim to increase the number of sites. David Lawrie thanked the MNT Council and especially thanked Keith Woodley for his work as Shorebird Centre Manager.

Moved (David Lawrie / Stella Rowe) that the Chairman's Report be adopted – **CARRIED nem con.**

**DISCUSSION following Chairman's Report**

1. Keith Woodley reported that the sign warning of thieves operating around the Limeworks gate had been stolen and that he had replaced it.
2. Keith Woodley also reported that the Walking Trail from the Centre to the Hide is going to be fixed.
3. Department of Conservation staff had started to mow the fennel.
4. Linda Underhill commented that the Shorebird Centre needs a more-conspicuous sign on the road – Betty Seddon commented that it is particularly difficult to locate the Shorebird Centre at night.
5. Judy Piesse raised the issue of security at the Shorebird Centre – Nigel Milius commented that plans for the new building will include better security.

**TREASURER'S REPORT:**

The Treasurer, Ashley Reid, formally presented his report on the finances of the Trust as published in the May 2005 issue of Miranda

News. The Auditor has advised a different format for the Annual Financial Report and this was circulated at the meeting. Income from Subscriptions has remained about the same as in previous years. Donations are up a bit; Grants are down a bit. The Education Programme is developing. Accommodation continues to be a good source of income and we are trying to improve it. The shop now has a good range of quality books. New merchandise includes items of clothing embroidered with the Trust logo. The Auditor also wants to see an Asset Register. Ashley acknowledged assistance that he has received from MNT Council and from volunteers staffing the Centre and especially from Centre Manager, Keith Woodley. Moved (Ashley Reid) that the Treasurer's Report be adopted – **CARRIED nem con.**

**DISCUSSION following Treasurer's Report**

1. Eila Lawton queried the "Profit" on Field Courses. The Auditor had requested separation of these items.
2. Phil Battley asked about \$5,000 from the Sibson Account – these funds had been used as financial assistance for the Trust's delegation to China.
3. There was a brief discussion of the membership – it may be regarded as static or stable. MNT Council has discussed a suggested membership drive.
4. David Lawrie thanked Ashley Reid for his work as Treasurer.

**ELECTION OF OFFICERS:**

Treasurer – Ashley Reid elected unopposed. Secretary – William Perry elected unopposed. Auditor – Gyde Wansbone, Chartered Accountants, Te Awamutu nominated (Ashley Reid/Nigel Milius). The motion was **CARRIED nem con.** Ashley Reid reported that we can expect a charge of \$1,500 to \$2,000 for audits in future.

10 nominees for 10 positions on Council, namely David Lawrie, Kathy Barrow, Eila Lawton, Adrian Riegen, Gillian Vaughan, Nigel Milius, Len Taylor, Phil Battley, Nanette McLauchlan, Sue Reid. **ALL ELECTED UNOPPOSED.**

**SUBSCRIPTIONS:**

Proposed (Ashley Reid / Linda Underhill) that the subscriptions for membership of Miranda Naturalists' Trust for the year ending 31.12.2006 remain at the following rates:

Individual Member: \$35; Family Member: \$40; Overseas Member: \$40; Life Member (under 50): \$1050; Life Member (over 50): \$525. **CARRIED nem con.**

**GENERAL BUSINESS:**

- 1) Alison Chambers congratulated Gillian Vaughan for doing such a great job as editor of the Miranda News magazine.
- 2) John Brown requested an update of progress on the Artificial Shorebird Roost. David Lawrie reported that he has written to the Nature Heritage Fund to say that the



## Treasurer's report for year ended 31st December 2005

Trust needs more time to prepare its plans for the Artificial Roost.

- 3) John Brown also asked about the Trust's relationship with local government bodies. Keith Woodley reported that there had recently been a joint meeting at the Shorebird Centre of representatives from Environment Waikato, Auckland Regional Council, Franklin District Council, DoC Auckland and DoC Waikato.
- 4) Phil Battley reported that Predator Control and Weed Control on the Shell Bank needed to be resumed.
- 5) Betty Seddon asked about control of shooting at Miranda. David Lawrie commented that the area is not officially a closed hunting area but that we could force the issue if necessary.
- 6) Phil Battley reported that the hide has now been moved to a more appropriate location on the Shell Bank. Adrian Riegen plans to do some maintenance work on the hide.
- 7) Stella Rowe asked about the latest news on Mussel Farming. Phil Battley reported that proposals for "Mussel Spat Farming" in the Firth of Thames are being considered by the Auckland Regional Council and by the Ministry of Fisheries. Existing proposals have been delayed by a moratorium. Constraint Mapping and Consultation with local groups have led to revised proposals including a 1,000 hectare block off Waharau.
- 8) Keith Woodley answered a supplementary question regarding Fennel with the information that this weed is present partly on DoC land and partly on private land.
- 9) Judy Piesse proposed another vote of praise for the multi-talented Keith Woodley, who remains a real asset to Miranda Naturalists' Trust.
- 10) Betty Seddon paid tribute to David Lawrie for the time and effort that he contributes to Miranda Naturalists' Trust.
- 11) Stuart Chambers commented that he is pleased that MNT Council is serious about expanding the Shorebird Centre. David Lawrie spoke on some of the detail in the current draft plan. MNT Council has not yet made any final decisions but the current Sibson Room will probably become a members-only area.
- 12) Mangroves. There was discussion in the meeting about the controversial issue of mangrove encroachment. The controversy exists because mangroves are seen as a valuable native species but they are growing so well in some locations that they are choking tidal creeks and damaging other features of the habitat.
- 13) Adrian Riegen reported that a Video / DVD of David Melville's talk on bird flu is available for viewing at the Shorebird Centre.

### The meeting closed at 1130 hrs.

Following the meeting, David Lawrie introduced guest speaker, Nigel Milius to give a talk on his experiences of Antarctica and its wildlife.

I have much pleasure presenting my report for the year ended 31<sup>st</sup> December 2005

The trust continues to make steady gains in its overall financial position – this has been achieved by several methods – better return on long term investments, marketing higher quality goods, promoting a greater range of field courses and attracting more participants, more realistic prices for school tours and lectures and constant support for, and participation in, scheduled activities from our dedicated members.

**Subscriptions:** The net income from subscriptions is higher than last year and reflects the continuing interest that members have in the activities of the trust. We have 620 members in New Zealand and 50 overseas – For some time the subscription income just barely covered the cost of the magazine production but this trend has been reversed with the small surplus helping with the ongoing running costs of the organisation.

**Donations and Grants:** One substantial grant was claimed during the year being the contribution towards predator control from the Department of Conservation – this is a 3 stage process with the balance of the agreed costs being claimed in the current financial year. One further major donation was from the ASB charitable Trust being a donation towards the cost of purchasing data projection equipment and accompanying Laptop computer. Other donations have formed a substantial portion of our income and we are extremely grateful for all donations received and acknowledge the very important part they are to the effective administration of the centre, and the projects undertaken by Council.

**Education:** The Centre is recognised as an excellent provider of educational material, which fits in with the Ministry of Education syllabus. Allied to the

effort put into the education of school children is the increasing number of adult groups (Probus etc.) who include Miranda in their itinerary – the income from this activity has continued to grow and thanks must be extended to the volunteers Kathy has organised to help when the Manager is busy with school groups and lectures.

**Field Courses:** Field courses continue to be very popular with more than one being undertaken each year. The "profit" on the field courses is not a true indication of the results, and until we devise a method to record the accommodation portion of the field course costs at source, then it will continue to show as income for field courses. In other words the accommodation portion of the field course income is still inflating the actual field course profit and belongs to accommodation income. We are working on a solution to separate the two income streams for next year.

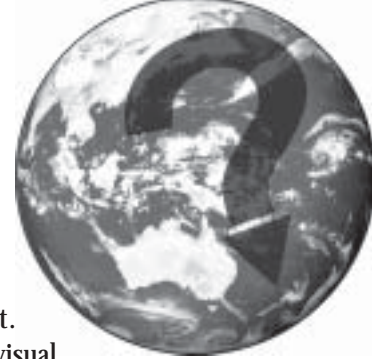
**Accommodation:** Accommodation facilities continue to be well used – the net income from this source has continued to rise. When it is considered that a portion of the accommodation has been used to house our exchange staff from overseas, this is a good result. If the accommodation portion of various field courses is added to the total it can be demonstrated that very good use is being made of our facilities and care must be taken to ensure that the standard is maintained and the centre can still cater for larger numbers when required.

**Shop Trading:** While gross profit from shop trading is slightly down we have improved the range and quality of the goods for sale and increased stock on hand. This continues to be the major source of income for the trust and we are grateful for the support of the Trust's members and customers

**China:** It is very encouraging to see how the relationship with China has progressed with our members being



# ANIMAL MAGNETISM: THE MAGNETIC SENSE AND ITS USE IN LONG DISTANCE MIGRATION BY ANIMALS.



*Associate Professor Michael Walker was the guest speaker at the March 2006 open day. His talk on the way animals perceive magnetic fields and use them for navigation was fascinating, in part because it looked at the birds we are coming to know so well from a completely different angle. This is a short summary of what Michael spoke about.*

\* \* \*

How does a godwit find its way across the Pacific to New Zealand from Alaska? Weather data for September show that godwits must navigate through greatly changing weather systems from north to south; westerlies, easterlies variables, doldrums, more easterlies and more westerlies. From Alaska they are aiming at a target (New Zealand) approximately 2° wide, and as the potential to be blown off course is very high, their annual appearance in New Zealand is a tremendous navigational achievement. How birds and other animals regularly navigate over long distances is a frequently asked question.

One possibility is that animals can detect the magnetic fields of the earth and use this to navigate. Because the whole earth is like a magnet with a field running from the north magnetic pole to the south, this could provide navigational information. Studying this has been a two-stage process – first, the existence of magnetic sense in animals had to be demonstrated; second, experimental work to show whether it is used in long-distance navigation was needed.

## DO ANIMALS HAVE A MAGNETIC SENSE?

Behavioural research showed that animals can respond to magnetic fields. Early experiments on several types of fish showed that they would respond with a particular behaviour (such as swimming through a hoop) when a magnetic field was switched on, indicating they could sense the magnetic field. This ability is now known from fish, birds and bees. It seems that animals respond to changes in the intensity, rather than the direction, of the magnetic field.

So how do animals detect magnetism? Some animal cells contain microscopic magnetite crystals (essentially lodestone,

which the first compasses were made of) that are thought to be involved. These in effect form a bar magnet that rotates to align with a magnetic field – when an animal moves these crystals will act like a ‘switch’ and set up an electrical current that will reveal the magnetic field. However there are no single magnetic sense organs, and as the magnetic stimulus can travel through body tissues, the receptors could be anywhere in the body. It was a needle-in-a-haystack approach to finding them in birds. Generally, though, these cells are concentrated in the snout region, in the olfactory rose.

Animals do therefore have the ability to detect magnetic fields, but do they use that sense for navigation?

## DO ANIMALS USE THEIR MAGNETIC SENSE TO NAVIGATE?

There are several things that birds need to know to migrate successfully:

(1) where they are now, (2) the direction to where they want to go, and (3) how this changes as they are blown about.

People have been trying to determine how migration works for more than 80 years. Most of the work has been done with homing pigeons as they are cheap, abundant, work on demand, and can be sacrificed if necessary. In the 1970's birds were followed from planes, and were studied from the ground by looking at which direction they disappeared in. Geographical anomalies such as iron deposits and volcanoes were found to make it harder for the birds to work out where to go.

In the current decade GPS chips have been attached to homing pigeons to allow researchers to follow the birds accurately, and the ability of birds to navigate was found to be quite variable even in the absence of physical features such as volcanoes. When bird tracks were plotted against maps of the natural magnetic fields (which bear no relation to topographic features), they were found in part to travel along magnetic contour lines. When in areas with unusual magnetic fields birds can

go off-course until they clear those areas and can reorient.

They also use visual features when they are in areas they are familiar with.

In conclusion navigation over distances of more than 10,000 km can potentially be explained in terms of events happening in cells that detect magnetic fields. Researchers are starting to understand features of the magnetic sense and that birds and other animals do respond to magnetic fields when they want to determine their current position.

## IN QUESTION TIME:

· They'll use any reliable navigational features that they can. It appears that sun and stars are useful for determining direction but not position, and the magnetic sense is more useful for determining latitude.

· The angle of the magnetic field is probably how they determine their north-south position; the magnetic fields are steep at the poles, flat at the equator.

· People have tried to find use of the magnetic fields by land animals without much success. One of the reasons it is so important in birds and fish is the importance of maintaining position in a fluid, featureless environment, which is not so important in land mammals. There is some evidence of bats using magnetic fields.

Whales are hard to get into the lab, but off the East coast of the USA there is some correlation between whale migration and magnetic fields.

· There is an element of practice to the ability to navigate. Street pigeons in Albert Park can't navigate the same way a homing pigeon can, as they never fly far enough to need to navigate. The ability of juvenile godwits to navigate is probably developed in their flights around the breeding grounds and to the coast, however while adults are able to correct for mistakes in navigation the young birds are less flexible.

Gillian Vaughan with thanks to Phil Battley

## Unusual amount of activity in Lancewood

Oliver, in his *Birds of New Zealand* (1955, p. 476), mentioned that on Mt Arthur he saw a Mountain Lacebark (*Hoheria glabrata*) that was "swarming" with Bellbirds, Tomtits, and Grey Warblers. He noted that two kinds of food, nectar and small insects, would be present.

On 26 February 2004, I noticed an unusual amount of bird activity in a mature Lancewood (*Pseudopanax crassifolius*) growing at Pukeiti, the property of the Pukeiti Rhododendron Trust near New Plymouth. On closer inspection, I saw that the tree was laden with flowers that were being visited by numerous honeybees. I kept this tree under observation for the next 1½ hours. When I first arrived there were about twelve Silvereyes in the tree, feeding at the flowers and looking for insects on the branches and elsewhere. Two Grey Warblers, two Fantails, and one female Tomtit were also in the tree looking for insects. The female Tomtit visited the tree three times while I was there. Although I saw a male Tomtit more than once in the immediate vicinity, it never went into the Lancewood during the time I had it under observation. A Shining Cuckoo was also in the tree looking for insects. I was somewhat surprised to see it there because I had not seen or heard a Shining Cuckoo at Pukeiti for about the past two months. It also visited the tree three times while I was there, and was silent throughout. On one occasion I saw it catch and eat a small grub.

A fruiting Wineberry (*Aristotelia serrata*) was growing only a few metres from the lancewood. Although up to two Tui visited that tree three times and ate its ripe fruits, only one of them went into the Lancewood, and then only once. The Tui showed no interest in its flowers, but spent a short while looking for insects in a White Rata (*Metrosideros perforata*) vine that was growing, but not flowering, on the trunk and lower branches of the Lancewood. I have never seen Tui feeding at Lancewood flowers, but I have often seen them feeding at flowers of the closely-related Five-finger (*Pseudopanax arboreus*) and Large-leaved Five-finger (*Pseudopanax laetus*).

The number of birds in the Lancewood varied while I was there, but the tree was never without one or more birds feeding in it at any given time. The Silvereyes were the only birds I saw feeding at its flowers. I did not see any of the Silvereyes or other birds show any interest in the numerous honeybees that were in the tree. Although I could not see them, many small insects which the birds were looking for and catching must also have been present. This is the only occasion during years of observation at Pukeiti on which I have seen birds feeding in this particular Lancewood when it has been flowering.

David Medway

## Weka counts from

Confirming the presence of Weka at Kawakawa Bay has been a pleasant surprise. They are a rare bird now following the massive decline in the once extensive Gisborne population in the 1980s. After getting over the novelty of having them there, the next step was to find out how many there were.

Fortunately a good technique for surveying Weka has been worked out by Tony Beauchamp which simply involves sitting at count point for an hour before sunset and an hour after and listening for calls. Territorial Weka give distinctive spacing calls – a loud "coo-eel" given repeatedly, usually in the evenings, at times as a chorus as they reply to each other. Most birders readily recognise the calls easily even if they are not familiar with them. Weka tend to start calling from about the same place, near their favourite roost, and this allows the same birds to be identified in different counts. Not all birds call each night but over several nights more and more of them will be located. Studies used to validate the method suggest that at least three to five counts are needed to get most of the birds.

Members of the South Auckland Ornithological Society and some of the Kawakawa Bay locals began last winter with a roadside survey along the Bay Coast Road and bush reserves along the main road to the south of Kawakawa Bay. Weka were only heard between Waiti Bay and Tawhitokino Beach but there seemed to be quite a few birds calling there. We contacted the farmer for access and were allowed to squeeze in a count on August 6<sup>th</sup>, just as his lambing season was beginning. Comparing all the count sheets there seemed to be at least 16 Weka in the area we counted including 4 pairs which seemed quite promising so more counts were planned for a better time.

We began counting again on February 25<sup>th</sup> and carried out two more counts on March 11<sup>th</sup> and 18<sup>th</sup>. Given the awkward hour, these Weka counts have proven to be surprisingly popular and the original counters have been supplemented by more locals and a contingent from Hortresearch. I have



Bellbird Photo Ian Southey

# Kawakawa Bay

no doubt that this is due in no small way to the Cotman's hospitality, especially the hot drinks and fruitcake at the post-count debrief but we have also been favoured by good weather.

From all of this counting 45 different Weka including 14 pairs can be distinguished. They are spread from the boat ramp at Kawakawa Bay to the far end of Tawhitokino Beach and are mostly within about a kilometre of the coast. Concentrated counting on the western edge showed few birds past the main ridge. The eastern limits are not so well known but there were few, if any, calling Weka reaching Orere Point. The birds that visit the houses along the coast road are well known now but a number of them did not call during the counts. One reason for this was revealed when Gordon Charleston saw a pair of Weka with two fluffy chicks on March 27<sup>th</sup>, Weka are known to call less often while breeding. The birds at Te Papa Road were notably quiet during the count period and breeding was suspected there too but no chicks were seen. It seems to have been a good long breeding season with some pairs raising three broods of chicks, so we should probably count a bit later next year. Allowing for the silent pairs and the younger birds without territories that do not call, there are easily more than 50 weka in the area but 100 may be a bit too optimistic.

Perhaps we missed a few birds but the Weka population at Kawakawa Bay seems to be doing quite well. This is fairly unusual, as the DOC Recovery Plan recorded 107 Weka liberations but, although they may last for few years, at only two mainland sites have they survived for any length of time This suggests that very small populations of Weka are extremely vulnerable yet they seem to be spreading at Kawakawa Bay. Compared to the counts made in August the main Weka population seems to be denser and to have spread from the farmland into the edges of the bush. They are also being reported from new places between Orere Point and Kawakawa Bay where one was seen half way up the hill on the road leaving



*This Weka is a regular at the backdoor of one local couple. He happily comes up to, and even inside their home. Photo Bruce Shanks.*



*This map summarises the birds heard over the course of the three counts in 2006. It does not show birds known to be present who did not call during the count period*

town. Another intrepid Weka was seen at Hunua Falls. Most of these are not recorded as calling so they may be dispersing juveniles. If the breeding continues to be successful in the core area, however, these birds may be joined by mates so the population can continue to spread. Next year we will count again to see how well they do.

Ian Southey

To be involved in, or for further information on, the Kawakawa Bay Weka project contact Rosemary Cotman at [cotman@paradise.net.nz](mailto:cotman@paradise.net.nz)

# Tara Ure: Hunter Wetlands Centre

During the National Wetland Trusts' Wetland Symposium in Hamilton at the end of February I met Tara Ure.

I subsequently took Tara to the Miranda Shorebird Centre to show her our facilities and discuss with her the operation of interpretation centres. Tara is currently organising a network of wetland centres in Australia and I have suggested to her that Miranda and the National Wetland Trust should be members of that grouping.

Tara Ure is the Chief Executive Officer of Hunter Wetlands Centre Australia (HWCA) - a community not-for-profit organisation in the Hunter Region of NSW. HWCA is owner and manager of the Ramsar listed Shortland Wetlands, part of the Hunter Estuary Ramsar site - one of 64 Ramsar wetlands in Australia.

The Hunter Wetlands Centre was established in 1985 as Australia's first wetlands centre and continues to focus on the conservation of wetlands through community capacity building, nature-tourism and education. Over 40,000 visitors and some 10,000 school students visit HWCA each year. Communication, Education & Public Awareness is a key focus for HWCA and they are currently working on projects that include a National Wetlands Capacity Building project, a State Ramsar Communication Strategy, a Regional Ramsar Communication Strategy, development of a Shorebird education website:

[www.wetlands.org.au/shorebirds](http://www.wetlands.org.au/shorebirds) representing the flyway, and many local capacity building initiatives as well. Indeed during 2005 HWCA's role in wetlands education was internationally celebrated when they were announced joint winners of the International Ramsar Conservation Award (Education) and Evian Special Prize, presented at the recent COP in Kampala, Uganda.

For those of you with long memories (such as Stuart Chambers) you will remember that the instigator of the Hunter Wetland Centre was Max Maddock who was the guest speaker at the opening of the Miranda Shorebird Centre. Max is now obviously older but is still actively undertaking his banding study of Egrets and Ibises in the reserve but in a concession to his age he now sends his wife up the trees to capture the chicks for banding.

The history of HWCA is an interesting one and perhaps the efforts of the community can best be seen below with the before and after photo of the visitor centre and small section of wetlands! The site had been left degraded for many years, then was used as football fields, then again it was abandoned until 4 species of Egret were discovered roosting at the Shortland Wetlands by founder Max Maddock in the early 1980's. This set in chain a series of events that lead to the very ambitious project to rehabilitate the 45ha site. The first 10 years of operation was

solely run by volunteers. Now some 17 staff and 150 volunteers continue to work at HWCA. Volunteers have amassed some 230,000 hours since inception and planted almost 45,000 natives to create habitat for 207 bird species and many other wildlife species including the Threatened Green & Golden Bell Frog.

Tara says her passion lies in developing and working with true sustainability in action. She is currently working with her Board and team of people to focus on the environmental, economic, cultural and social values of environmental organizations such as HWCA and in ensuring that this community organization has strong long term viability.

Tara currently holds a position on the Australian Wetlands Alliance and NSW Ramsar Managers Network as well as being a board member on the Belmont Wetlands State Trust. She is also actively involved in the Australian Tourism industry, and until recently held the position of Vice Chairman of the Hunter Regional Tourism Organisation. She now sits on the Newcastle Tourism Advisory Board bringing specialist expertise in eco-tourism.

Tara will be making several trips to New Zealand during 2006 and looks forward to exploring the vast array of our wetlands during that time.

David Lawrie and Tara Ure

*The Hunter Wetland Centre in 1985 (photo unknown) and today (photo G Hardy)*





Look at recent issues of MNT  
News and NZWSG News  
[www.miranda-shorebird.org.nz](http://www.miranda-shorebird.org.nz)

From the Blackboard  
May 8th 2005

## Miranda Naturalists' Trust People:

### Shorebird Centre Manager:

Keith Woodley: RD 3 Pokeno. Phone/Fax  
(09) 232 2781 email: shorebird@xtra.co.nz

**Chairman:** David Lawrie, R.D. 2, Pukekohe.  
Phone (09) 238 -8407.

**Deputy Chairman, and Banding Convenor:**  
Adrian Riegen, 231 Forest Hill Road, Auckland  
8. Phone & Fax: (09) 814- 9741.

**Secretary:** Will Perry, 34 Morrin St, Ellerslie,  
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1944 wk; (09) 526-1960 fax at work.

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**Editor:** Gillian Vaughan, 54 Appleby Road,  
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5518 email: gillianv@actrix.co.nz

### Council:

Kathy Barrow	Nigel Milius
Phil Battley	William Perry
John Gale (Ex officio)	Ashley Reid
<b>David Lawrie (Chairman)</b>	Sue Reid
Eila Lawton	Len Taylor
Nanette McLauchlan	Gillian Vaughan
Adrian Riegen (Deputy Chairman)	

### Membership Rates

Ordinary Member - \$35  
Family Member - \$40  
Overseas Member- \$40  
Life Member, under 50 - \$1050  
Life Member, 50 and over - \$525

### Membership of the Trust entitles you to –

- Four Miranda News issues per year.
- A \$5 discount on overnight accommodation
- Invitations to Trust Events
- The right to attend the Annual General Meeting
- The right to vote for council members

Help support the Trust's efforts to educate and promote conservation awareness.

### Bequests

Remember the Miranda Naturalists' Trust in your Will and ensure that our vital work in education and protection of the migratory shorebirds can continue. For further information and a copy of our legacy letter contact the Shorebird Centre.

### Accommodation

The Centre at Miranda has three bunkrooms for hire plus two self-contained flats:

Per bed / night member	\$12.50
Per bed / night non-member	\$17.50
Hire of flat member	\$40.00
Hire of flat non-member	\$50.00

For further information contact Keith at the  
Shorebird Centre, RD3 Pokeno  
Phone /Fax (09) 232 2781

## Arctic Migrants

<i>Bar-tailed Godwit</i>	400
<i>Hudsonian Godwit</i>	1
<i>Red Knot</i>	2
<i>Turnstone</i>	6
<i>Curlew Sandpiper</i>	1
<i>Terek Sandpiper</i>	1

## New Zealand Species

<i>Pied Oystercatcher</i>	
<i>Wrybill</i>	2300
<i>NZ Dotterel</i>	
<i>Variable Oystercatcher</i>	
<i>Black-billed Gull</i>	
<i>Red-billed Gull</i>	
<i>White-fronted Tern</i>	
<i>Caspian Tern</i>	
<i>Pied Stilt</i>	
<i>Spoonbills</i>	4
<i>Bittern</i>	1

*Banded Rail on Centre  
Grounds 4/5/06*

## Want to be involved?

### The Miranda Garden

If you want an excuse to stay at Miranda for a couple of week nights free of charge, come and help a small team of gardeners maintain the gardens. It is satisfying and worthwhile work in the outdoors. We make the time enjoyable especially when we down tools at high tide and go and watch the birds on the shell banks. If interested phone Keith on 232 2781 who will put you on to a gardener!

### Firth of Thames Census

Run by OSNZ and held twice a year the Census days are a good chance to get involved with ongoing field work and research.

### Friends of Miranda

A volunteer group which helps look after the Shorebird Centre during busy periods and in Keith's absence. If you'd like to spend time helping out contact Keith. Helping out can be anything from helping with the shop, school groups or meeting people down at the shellbanks.

### Long term Volunteers

Spend four weeks or more on the shoreline at Miranda. If you are interested in staffing the visitor centre, helping with school groups or talking to people on the shellbank for a few weeks contact Keith to discuss options. Free accommodation is available in one of the bunkrooms. Use of a bicycle will be available.

**The Magazine**  
never forget you are  
welcome to contribute  
to the MNT NEWS



# The Birds of Saemangeum

one last look



Photos  
Jan van de Kam

