

# MIRANDA

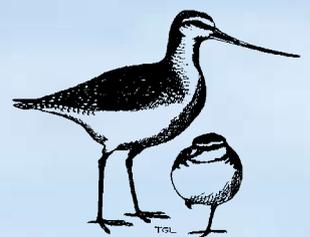
Naturalists' Trust

August 2011 Issue 82

NEWS



Red Knots in Crisis  
On Vagrancy



# August 2011 Issue 82

## Upcoming Events - note the times!

August 27th (Sat) Working Bee and Winter Pot Luck Dinner

Guest Speaker: Tony Wilson – Birding Travels

Working Bee 10a.m.-3p.m. Bird-watching 4p.m.-6p.m. Then dinner. Come for one or all events.

6-8 September 2011 Conservation Management of New Zealand Dotterels – Training Course

2-4 October 2011 Nature Journaling Course. Join Sandra Morris for this course

October 30th (Sun) 2011 Welcome to the Birds Day 9am

High tide 10:15a.m. Guest speaker: To Be Announced.

Gardeners of all skill levels welcome to stay for an hour or so afterwards to help spruce up the gardens around the centre.

All welcome!

November 13th (Sun) 2011 OSNZ Firth of Thames Wader Census Contact the Centre for details, all welcome!

26-27 November 2011 Wader Identification Course.

Contact the Centre for details of these events. 09 232 2781 shorebird@farmside.co.nz

Front Cover: Hudsonian Godwit, a regular visitor to New Zealand in small numbers. See article page 10.

Back Cover: Two Glossy Ibises, present at the Stilt Ponds though May this year. Photo Ian Southey.

## From the Editor

I am pleased to advise that a new editor for Miranda Naturalists' Trust news has been found, and that over the course of the next few issues more and more of his influence should be seen on the magazine. Jim Eagles has put his name forward for the position, and for the upcoming issues he and I will collaborate on the News. The next issue of the News should have an introduction from Jim, although many of MNT News readers may know of him through his work at the New Zealand Herald.

A returning character in this issue is David Lawrie, David had hoped that by retiring as Chair of Miranda Naturalists' Trust his workload for the magazine would decrease, however as he is president of the Ornithological Society of New Zealand it seems appropriate to ask him to write a piece about what the OSNZ is doing from time to time. Interestingly enough he chose to write on the wader census, and important long term count, and one where we do need more people involved. I look forward to seeing many of you on census in November. If you feel like you want to be involved but don't have the skills come along anyway! We'll teach you.

Phil Battley has kindly written a piece on the Red Knots in the Bohai Sea for this issue, this is an issue that I feel we have needed a coherent summary of for some time and I thank him for his work in putting it together,

The deadline for the next issue of the news is 20 October, I would be interested in receiving article or pictures for the News!

Gillian Vaughan 

From the Blackboard  
15 August 2011

### Arctic Migrants

Bar-tailed Godwit	300
Red Knot	300
Turnstone	3
Golden Plover	2
Curlew Sandpiper	2

### New Zealand Species

Pied Oystercatcher	
Wrybill	1800
Banded Dotterel	120
NZ Dotterel	
Variable Oystercatcher	
Black-billed Gull	
Red-billed Gull	
White-fronted Tern	hundreds
Caspian Tern	
Pied Stilt	
Royal Spoonbill	
White Heron	2

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The Newsletter of the Miranda Naturalists' Trust is published four times a 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.

# Bohai Bay, China – Crisis Time for Red Knots

Phil Battley  
Ecology Group, Massey University

One of the enduring mysteries in the East Asian-Australasian Flyway has been the whereabouts of Red Knots on migration. Until a few years ago, just a tiny proportion of the knots thought to exist in our flyway could be accounted for when migrating towards the breeding grounds. The reasons for this are now becoming evident –



the total population estimate may have been far higher than the real number, many birds may not be migrating into the Yellow Sea region until late in the season so may be missed in early surveys, and, as suspected, knots may concentrate in certain areas, as they do in other flyways. We now know of one region that holds very large numbers of knots on northward migration – Bohai Bay, in



Yang Hong-yan and Theunis Piersma (left) discuss just where the actual shoreline of the Caofeidian New Area project lies. Photo P Battley

the western part of the Yellow Sea of China. When Mark Barter published his book “Shorebirds in the Yellow Sea” in 2002, only the Tianjin coast of Bohai Bay was known to hold decent numbers of knots, with 14,000 counted there. Since then, the efforts of Yang Hong-yan (“Nicky”), a PhD student from Beijing, and Chris Hassell and col-

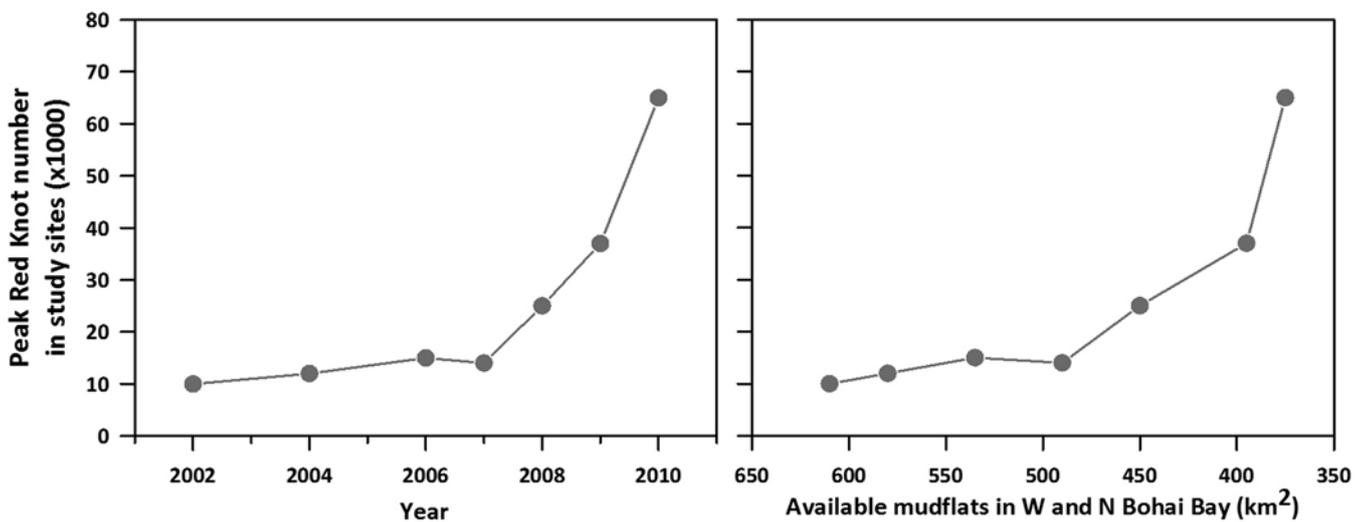
leagues from the Global Flyway Network, have confirmed that Bohai Bay is of critical importance to migrating knots, and is under immense pressure from reclamation.

Survey work done by Nicky and others has now recorded peak counts of around 65,000 knots in Bohai Bay in 2010 and 2011. Curiously, the num-

bers of knots in Nicky’s survey area on the eastern side of Bohai bay have risen dramatically in recent years (see figure, left-hand panel). But that increase is an illusion. Nicky has also documented, from satellite imagery, the rate of reclamation of the tidal flats around Bohai

Bay, and if the count data are instead plotted against available area of mudflat, the trend is virtually identical (figure, right-hand panel). The incredible rate of mudflat destruction is evidently forcing all the knots from the greater region into an increasingly small area. At the same time that it has been discovered that knots concentrate into Bohai Bay on

Peak knot counts in the study sites in eastern Bohai Bay, 2002-2010. Based on Yang et al. 2011.





Above: Red Knots forage on the mudflats of Bohai Bay, with an oil infrastructure backdrop. Photo P Battley.



Above: A mud-pumping barge and pipelines. The previous year, this had been one of the best spots to watch knots from. Photo P Battley.  
Below: A pipeline discharges its mud slurry into a settling pond. Photo P Battley.



migration, a reassessment of the Flyway population of knots has suggested that instead of there being around 220,000 knots, a figure about half that number may be more accurate. With immature birds not migrating northwards, the number of migrants likely to pass through the Yellow Sea region may be more like 87,000 than 180,000. This raises the frightening possibility that virtually of the East Asian-Australasian Flyway's Red Knots use Bohai Bay on migration (bear in mind that our *rogersi* subspecies migrates earlier than Australia's *piersmai* subspecies knots, so peak counts may underestimate true numbers using the area).

Why is Bohai Bay subject to such rates of tidal flat destruction? The answer is (at least) threefold: (1) China has a booming economy, and it is far cheaper to develop new land by “re”claiming mudflats than it is to free up existing land (I have seen an estimate of US\$30–70/m<sup>2</sup> for reclamation compared with US\$150–200/m<sup>2</sup> for inland); (2) Bohai Bay is the nearest coastline to Beijing, and some industry has been shifted from Beijing to Bohai, in part to improve air quality in the city; and (3) Bohai Bay happens to be the site of the largest oil field to be found in China for many years – the Nanpu oilfield. This oilfield has generated a huge amount of local infrastructure, particularly in the Caofeidian New Area Project. You won't find this on Google Earth, which for some reason has an image that must be approaching 10 years old. That shows a narrow causeway running out to a partly developed barrier island. The reality is that the entire area is a massive industrial zone about 20 km by 18 km in size. The western sides of Bohai Bay are largely reclaimed, and the key stretch of mudflat for waders is now only about 20 km long.

I had the opportunity to pay a brief visit to Bohai Bay in May this year, when I was a speaker at a symposium organised by WWF China and the Global Flyway Network entitled “Shorebirds and

Coastal Wetland Conservation in the Yellow Sea Ecoregion". This was an effort to bring together researchers, managers, advocates and media, to focus attention on the Bohai Bay crisis. Several people known to Miranda Naturalists' Trust members attended, including Bob Gill from the US Geological Survey, Prof. Theunis Piersma from The Netherlands, and Chris Hassell from the Global Flyway Network (based in Broome, NW Australia), as well as several academics and managers from within China. The scale of the issue confronting conservationists quickly became obvious when Nicky explained how, during the course of her PhD, entire counting zones that had held tens of thousands of birds had been destroyed.

Mudflats are reclaimed through the use of massive mud-pumping barges. A seawall is built from rocks quarried somewhere in China's interior and trucked to the coast. Then, barges are placed offshore, thick metal pipelines set up to reach the land from the barges (each section being about 10m long), and mud is pumped in behind the seawalls to fill them in. Within a year or two, what had been a productive mudflat is a dry, barren desert, while the remaining mudflats offshore from the seawall

seem to deteriorate in quality and are abandoned by knots. The scale of the oilfield also became clear for the first time the week before I arrived, when there were two days of unusually clear weather. Bob Gill counted 91 oil barges lining the horizon, so who knows how many vessels are present on the bay as a whole.

Colour-band and leg flag records confirm that both New Zealand and Australian knots use Bohai Bay, so the destruction of the tidal flats there is of direct conservation concern to New Zealand. One of the purposes of the May meeting was to crystallise efforts to promote the conservation of the remaining tidal flats. Efforts are underway to evaluate the approach most likely to succeed in this regard. In some ways, the size of the problem may seem insurmountable – a bunch of birders against the Chinese economy –, but there is hope that a multi-group, multi-country, cohesive and very high-level approach, might yet be able to save the Nanpu coastline. It would be easy to promote the positive aspects of such a reserve, which would be of hemispheric importance and would provide a magnificent shorebird spectacle at key times of the year. Adjacent salt-pans could be managed to provide high tide roost sites and foraging habitat for Curlew

Sandpipers. But time is rapidly running out for Bohai Bay, and if habitat loss continues to proceed as it has to date, our knots may have just years, rather than decades, in which to use Bohai Bay on migration.

[P.S. Note that this was typed on a computer almost certainly made in China!]

#### Further reading

Yang, H.-Y., Chen, B., Barter, M., Piersma, T., Zhou, C.-F., Li, F.-C. and Zhang, Z.-W. 2011. Impacts of tidal land claims in Bohai Bay, China: ongoing losses of critical Yellow Sea waterbird staging and wintering sites. Bird Conservation International, in press. (Downloadable for free from the journal website: <http://journals.cambridge.org/action/displayJournal?jid=BCI> - searching "Yang Bohai" brings it up)

Rogers, D. I., Yang, Y.-H., Hassell, C. J., Boyle, A. N., Rogers, K. G., Chen, B., Zhang, Z.-W. and Piersma, T. 2010. Red Knots (*Calidris canutus piersmae* and *C. c. rogersi*) depend on a small threatened staging area in Bohai Bay, China. *Emu* 110: 307-315. (downloadable from [http://www.publish.csiro.au/?act=view\\_file&file\\_id=MU10024.pdf](http://www.publish.csiro.au/?act=view_file&file_id=MU10024.pdf)) 

For details on the Bohai shorebird surveys visit [www.globalflywaynetwork.com.au](http://www.globalflywaynetwork.com.au)

*Bohai Bay from space. Left – Google Earth image. Right – Landsat image reconstruction, showing the Caofeidian New Area Project that is largely absent from the Google Earth image! The remaining shorebird habitat runs along the coast of the left-hand side of the images. (Images from Google Earth and Yang Hong-yan)*



# Visitor Report

## Site: Miranda Shorebird Centre & Findlay Reserve

Kristelle Wi



The Miranda Naturalists' Trust has been up and running since 1975 and The Miranda Shorebird Centre first opened in 1990. The principal aim is to raise public awareness of coastal ecology and advocacy for shorebirds and their habitat. The Centre is open 7 days a week attracting approximately 20,000 visitors a year, the key attraction

being the large flocks of shorebirds that come to roost on the shellbanks at high tide. This reserve is an important roosting and nesting habitat for over 40 species of birds, many of which are endangered. These include our resident birds e.g. Pied Stilt, internal migrants e.g. over 40% of the Wrybill population and also arctic migrants e.g. Bar-tailed Godwit (from Alaska).

Both local and international interest has been growing over past years.

There are a number of reasons why it is beneficial to have a guide stationed at the 'hide'. Firstly, as the 'hide' (where observing takes place) is located 2km south of the Centre where the manager is stationed, it's not possible to assist visitors wanting to see the birds while running the shop and giving lectures etc. It was previously recognized that this inability to run the Centre while providing assistance to visitors on the shoreline was a flaw in our operations. Volunteers were available but only on an irregular basis and for short periods of time. So it is important to have someone at the viewing site to assist visitors and groups. In some cases, people will visit the hide not knowing the information centre is 2km up the road.

The majority of visitors that come to the reserve simply don't know what species they are looking at. The assistance of a guide, equipped with a high powered telescope, means visitors can view the birds closely, ask questions and leave with a better understanding and knowledge of Miranda

wildlife. When visitors look through the telescope, everything suddenly becomes a lot more interesting. This makes the Miranda experience more memorable. Visitors leave with more inspiration to become involved with the Trust, wanting to return for the same experience each year. The comment that is heard most often is "I'm so glad I came, it makes all the difference having you here to help". In my experience, visitors wouldn't have spent as much time here or had as much interest if there wasn't someone there to help.

Having someone at the reserve also ensures minimal disturbance to the birds - by making sure public don't frighten the birds or run their dogs along the shell bank where birds roost at high tide. This protection is important for helping ensure breeding success for resident species such as New Zealand Dotterel, Pied Stilt, Variable Oystercatcher, Black-billed Gull and White-fronted Tern. It is also most important for our arctic migrants, as they need to store as much fat and protein as possible for their extreme migration (10,000km). Any amount of disturbance (especially within the 3 weeks leading up to migration) will waste vital fuel needed in the journey. If they don't have enough energy, they will either stay here unable to reproduce or if they do attempt to migrate they would die of exhaustion on the way.

Our experience shows that the advocacy role of someone stationed at the hide increases overall visitor satisfaction. People who subsequently visit the Centre are more likely to support

us in some way, often by donation or shop purchases. It may also open opportunities for some to become more involved in our activities.

Other duties as the Shorebird Centre assistant included pest control (4 hours a week), gathering data on bird numbers and movements, and also keeping an eye out for color banded birds to record.

A small questionnaire was designed to gain information from the visitors coming to the 'hide'.

### Results:

85 days between October 2010 and April 2011 were surveyed, for approximately 3 hours over the high-tide. In those 85 days, we had 2150 visitors. This is an average of 25 visitors at the hide, just in the 3 hours of the best viewing time (This doesn't include visitors who come at low tide).

- 71% of these people are from New Zealand and 29% from overseas.
- 19% of those who visited the hide had not gone to the Shorebird Centre prior to visiting the hide. 81% visited the Centre first.
- 68% of the visitors had visited the Miranda Coast before, 32% had not. 

This is a copy of a report prepared for the ASB Community Trust which provided funding for this project.

# Storm Surges

Bob McDavit

On 23 January 2011, widespread flooding affected places from Wanganui to Hawke’s Bay northwards. Coastal sea inundation affected several parts of Auckland including Queen Street, Tamaki Drive, the northwest motorway, Herald Island, Maraetai and Miranda (western side of Firth of Thames). This was a case of storm surge associated with a passing low pressure system. The system

formed in the tropics around New Caledonia, but left the tropics before it had time to deepen into a tropical cyclone.

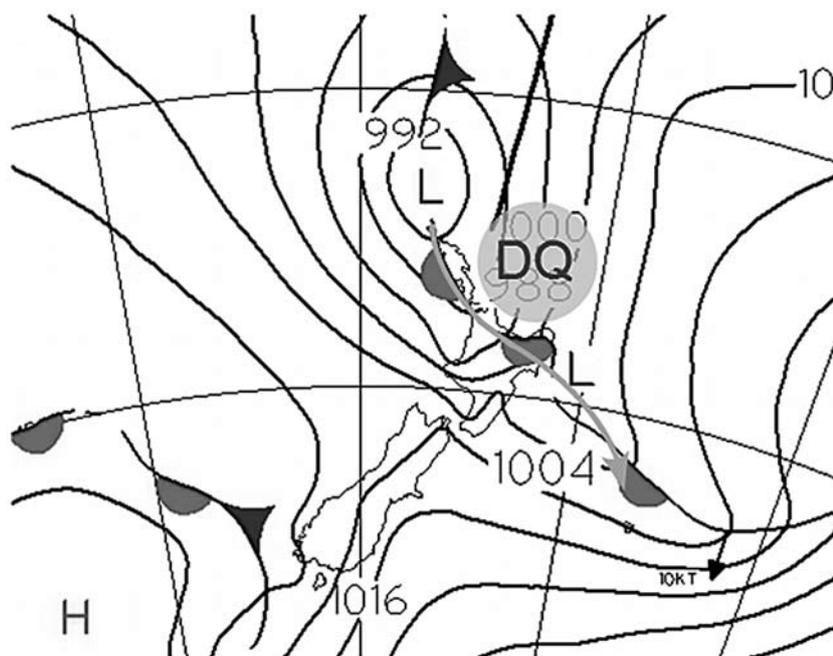
Storm surge is the name given to the situation when the sea floods inland along the coast. It has three components.

Strong winds are often associated with low pressure systems. Storm movement – that is, the movement of the low pressure system itself – influences the wind strength.

In the Southern Hemisphere, where the wind flow around a low is clockwise, storm movement adds to wind strength on the left side of the storm

the dangerous quadrant.

On 23 January, when the low on the weather map above approached Northland, its dangerous quadrant (labelled DQ on the map above) brought the most pronounced on-shore winds and highest wind setup to the Coromandel – Bay of Plenty area. NIWA measured storm surges of 370 mm around Coromandel and 590 mm at Moturiki Island near Tauranga.



Weather map for noon on Sunday 23 January 2011. The region marked DQ is explained in the text.

## 1. Wind setup.

When strong winds blow from the sea to the land (“onshore”), a wind setup is formed: under some circumstances, the sea is pushed onto the land faster than it can drain away, and waves penetrate beyond the high water mark. Wind setup depends on the size and shape of the strongest wind zone and the land it encounters. It is accentuated in shallow basins such as the Firth of Thames.

track. For a low travelling southwards, this means that winds are stronger in its eastern semicircle. This is why many sailors call this the dangerous semicircle and its front-left quadrant

## 2. Low air pressure.

The inverse-barometer effect occurs whenever air pressure over the ocean differs from normal. Each hectoPascal of air pressure below the norm (of 1013 hPa) may raise the sea level by ten millimetres. So, a large low pressure system is accompanied by a dome of elevated sea surface.

On 23 January, when the pressure dropped to 986 hPa around Auckland, the maximum inverse barometer effect was around 270mm.

## 3. The Tide

The tide comes and goes around once every 12 hours 20 minutes. The tidal range – that is, the difference in height between low and high tide – is largest a few days after the moon reaches its perigee (closest point of its orbit to earth) within a day or so

Auckland/ mm/23 Jan	~noon	~midnight
1. Wind setup	449	270
2. Inverse barometer	180	250
3. Astronomical tide	3500	3400
Total = measured storm tide	4129	3920

of reaching a full or new phase. This happens only a few times per year, and is sometimes called a King tide.

Auckland has a reasonably large tidal range of around 3 m. On 23 January the high tide height was 3.5m – only about 100mm lower than a King tide.

Strong onshore winds from the tropics often produce heavy rain on any hills and ranges. If this drains off quickly (as is usually the case in New Zealand) and arrives at the coast at the same time as a high tide, the

chances of flooding near river mouths and estuaries is increased.

Auckland's tide gauge showed a peak of 4.129m between 11am and noon on 23 Jan 2011. Data are courtesy of Ports of Auckland.

When Tropical cyclone Yasi made landfall onto Queensland, Townsville (with a two-metre tidal range) was in the dangerous quadrant. Yasi's two-metre storm surge arrived on the outgoing tide, reducing its impact.

The highest-ever measured storm surge was 8.5 metres at St Louis Bay in Hurricane Katrina (2005). The worst storm surge, in terms of loss of life, was the Bhola cyclone which hit East Pakistan (now Ban-

gladesh) on 12 Nov 1970, here an estimated 500,000 people perished.

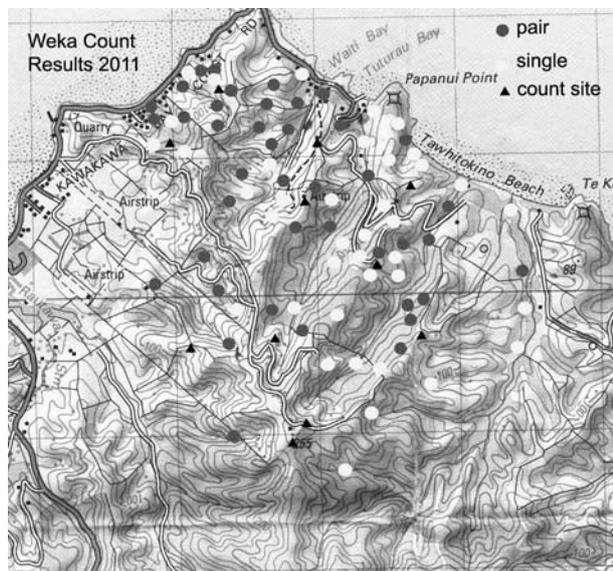
The online nautical almanac published by Land Information New Zealand explains more about how tidal predictions only give the astronomical component, and how strong meteorological effects need to be taken into account. During a period of King tides, if there is an anticyclone around or strong offshore winds, extra care is needed around rocks, reefs and sandbars, as the actual water level may drop to near or below chart datum – which is the level that charted depths displayed on a nautical chart are measured from. Each nautical chart carries a note defining its chart datum and most New Zealand nautical charts use the lowest astronomical tide computed over the period of one entire SAROS cycle.

Reprinted with permission from <http://blog.metservice.com/2011/03/storm-surge/>. Visit the Met Service Blog for explanations of all sorts of weather phenomenon. 



The trail to the hide on January 24th. Photo K Woodley

## 2011 Count Results



This map of the results of our three autumn counts shows where the Weka were heard in relation to the 11 standard count sites (the black triangles). The total was slightly lower this year, 122 weka were located in 2011 count as opposed to 132 in 2010. The numbers close to the coast were about the same. It was in the higher (drier?) back country to the south towards the Mataikokako trig point (a black triangle on the map but not a count site) that Weka were harder to find and this was consistent over the three nights. Why? Perhaps this is the aftermath of the very dry autumn in 2010; did the birds we counted up there a year ago not survive the long drought which did not break until mid-June 2010?

We had a great turn out of new counters all of whom seemed to have an interesting time. It was great to welcome them and some of them enjoyed it so much that they gave us a subscription! As if counting was not enough!

To find out more about Weka Watch, and perhaps become involved visit [www.wekawatch.co.nz](http://www.wekawatch.co.nz) 

# OSNZ Report

David Lawrie

President Ornithological Society of NZ

The editor has requested that I provide a brief report on activities of the Ornithological Society of NZ (OSNZ) that may be of interest to the Miranda Trust (MNT) members. While there is a very large overlap in membership there are still many members of the Trust who do not belong to OSNZ. Recently the MNT and OSNZ held a joint workshop at the Shorebird Centre to teach

the basic skills in shorebird counting techniques. The tutors for this course were the very experienced members of the Trust and the hope was that attendees would be able to join OSNZ volunteers in undertaking shorebird counts around the country. This workshop proved to be very successful and an additional one has now been held in the BOP region of OSNZ.

A key question that was asked at these workshops was why does OSNZ bother with undertaking regular counts. In this article I will give a brief background as to why counts are undertaken and the ongoing need for them into the future.

The bulk of the shorebirds that utilise the Miranda shellbanks are migratory, either Trans-equatorial or to the South Island of NZ. These long journeys are undertaken to enable the birds to utilise their preferred breeding habitats on the Arctic Tundra or the South Island braided riverbeds.

Because of the dispersed nature of their breeding areas it is impossible to undertake any form of population counts during that season. The only opportunity for any form of population monitoring is during the non-breeding season when the birds are congregated.

Because of the long and complicated migrations that these birds undertake they are at risk at several points within this journey and conservation needs to occur on a global scale

involving close cooperation between countries.

However to gauge population fluctuations it is necessary to have long datasets so that trends can be established. There are regular cycles in populations, depending on a range of factors including breeding success and weather effects. These are also compounded by changes in stopover sites by reclamation or drainage.

Counts undertaken on only a single event basis therefore do not give a good indication of the population on an ongoing basis. It is necessary to count regularly and compare results over a long period of time to establish trends.

Shorebirds have been counted twice yearly in the Firth of Thames since 1960. This is one of the longest similar datasets that are available and it is highly desirable that this is continued into the future.

OSNZ initiated a national wader count scheme in 1983, although many areas had been counting individual sites prior to that date. The national wader count scheme was continued until 1994. Most of the regions in NZ have continued those counts on a twice yearly basis, and the official national scheme was reinstated for the period from 2004-2009.

These counts have shown that the populations of the species that travel to NZ have been steadily declining and for some species that population decline has been substantial. This

knowledge has provided the trigger for international action to be taken to try to find reasons and halt the decline.

While these counts are not strictly a population count it is highly desirable that the figures are as accurate as possible and the coverage is as wide as can be achieved. It was for this reason that the two organisations initiated the workshop to increase the pool of skilled counters.

I would urge all MNT members to assist with future counts as it provides very important data, the value of which may not be apparent until for many years into the future. 

## At Miranda

Census at Miranda takes place twice a year, November and June. All are welcome to participate, if you are inexperienced you'll be paired up with someone to show you how its done. We always need more help so please come along, or contact OSNZ to find out about census in your region.

## What are the Results?

You can find some of the census results online, a summary of the 2008 and 2009 Wader Censuses can be found at <http://osnz.org.nz/national-wader-count>.

The a summary of the data from 1983-1994 is [http://www.notornis.org.nz/contents.php?volume\\_issue=n46\\_1](http://www.notornis.org.nz/contents.php?volume_issue=n46_1), and the data from 1994-2003 is at [www.doc.govt.nz/upload/documents/science-and-technical/drds308.pdf](http://www.doc.govt.nz/upload/documents/science-and-technical/drds308.pdf)

# On Vagrants

Keith Woodley

“Particular species of birds, like different nations of men, have their congenial climes and favourite countries; but wanderers are common to both; some in search of better fare, some of adventures, others led by curiosity, and many driven by storms or accidents.” Alexander Wilson *American Ornithology*, 1826.



One day in September 1983 there was a minor commotion on the waterfront at Port Vila, Vanuatu. A bird was attracting much attention from local people as it flew around the harbour edge. Some said they had never before seen such a bird - a striking black and white affair with a vivid orange bill. Alerted by a familiar call, visiting New Zealand biologist Rod Hay watched it land briefly opposite the Post Office before flying to an island near the harbour. For Hay, fresh from field work on the Rakaia River for his PhD on Wrybill, it was a most familiar bird: clearly an oystercatcher, and almost certainly a New Zealand one. That it could have been an Australian Pied Oystercatcher was considered unlikely as the bird had more white on its back than is found

in that species. Furthermore, unlike the South Island Pied Oystercatcher (SIPO), the Australian birds are quite sedentary. However Vanuatu was over 2000 km outside a SIPO's normal South Island - North Island loop, so what was this bird doing so far from home, especially considering there were no records of SIPO from the Kermadecs or New Caledonia?

There was, however, a bird 'indistinguishable from SIPO' that had been seen on Lord Howe Island the previous year. The fact that both records occurred at a time of year when SIPO are migrating south led to the hypothesis that 'reverse migration' may have been the cause of the fault. According to the theory, a 'mirror image' navigational error occurs when

a migrant bird takes a correct bearing from a north-south axis but travels on the wrong side of that axis, that is, 'a confusion of left and right orientation' occurs. However, this hypothesis is still subject to much debate among scientists. But whatever the particular mechanism or navigational fault responsible, the oystercatcher was clearly a long

way from home.

It is in the nature of migratory shorebirds, covering the vast distances that some of them do, to sometimes get it wrong. To the excitement of the birder, but possible doom of the bird itself, a vagrant individual can turn up in all sorts of places - sometimes an entire ocean away from where it should be. In 1921 Canterbury ornithologist, hunter and collector, Edgar Stead pondered the possibilities of this. "Most of the plovers are gregarious in the winter, and so, no doubt, odd specimens, and even small flocks, of a species which does not normally migrate to New Zealand would get entrained by a flock that did so and come along with it. In this way it seems to me practically all the Asiatic migratory species of plover will sooner or later visit New Zealand, though many of them at the present time have not been recorded any farther than Australia." Stead was clearly correct in this view: since 1921 at least 19 species of Northern Hemisphere migrants have been added to the official New Zealand list.

\* \* \*

The Welshman appeared back at the front desk. For the last couple of hours he had been down the road looking at birds on the shellbanks and the Stilt Pools.

"How did you get on?" I asked.

"Pretty good", he replied. "On the pools there were loads of Pied Stilts, Bar-tailed Godwit, Red Knot, a Ruff, a Sharp-tailed Sandpiper, a few Wrybills and -".

'Wait a minute,' I interrupted, 'did you say Ruff?'



*In 2005 the Ruff at Miranda did not stay for long.  
Photo Brian Chudleigh*

'A male Ruff, yes.'

This required further inquiry. The Shorebird Centre operates a bird sightings book, where people are encouraged to record what birds they have seen and, where relevant, in what numbers. Anything unusual would be forwarded to the Rare Birds Committee of OSNZ for evaluation, a process that, by necessity, needs to be rigorous and thorough. For as a species we are all too fallible. We see things that are not there, and miss things that are there. Besides, it is often difficult to record accurate information about a bird you may have seen fleetingly. In short, credible evidence is required.

I began the tactful process of establishing the Welshman's credentials. How experienced a birder was he? Was he familiar with Ruff? His initial description of the bird – 'that it was a male with a few remaining traces of breeding plumage' – certainly indicated a degree of knowledge. But just as my polite inquisition was getting underway, he whipped out a digital video camera and said 'here, look at this.' The footage showed a familiar landscape, unmistakably the Stilt Pools – where a rather oddly shaped wader perched on long reddish legs was foraging. Its head seemed smaller than one would expect of a bird of these proportions, its bill slightly drooping. The feathers on its back were very dark with broad pale edges. It was certainly a bird I had never seen before. Several minutes later, a 'Closed' sign was on the door and the two of us were standing by the pools looking at the first Ruff to be recorded on the Firth of Thames.

The breeding range for Ruff extends across northern Europe and Russia, with the bulk of the population wintering in Africa and parts of south Asia. However it is also a rare but regular visitor to Australia, in which case, like the Port Vila oystercatcher, this Ruff may actually have only been a few thousand kilometres adrift. But

wherever the wintering site was that it had been aiming for, it clearly had gone astray somewhere. It was just the eleventh record of the species in New Zealand.

The New Zealand Checklist lists 46 species of Northern Hemisphere breeding shorebirds recorded in New Zealand. Some of these are of course annual visitors – be it perhaps 90,000 Bar-tailed Godwits or a few dozen Sharp-tailed Sandpipers. At least 11 species, such as Marsh Sandpiper and Common Greenshank, are listed as uncommon but possibly annual visitors, while 20 are recorded as genuine vagrants for which only a handful of records exist or, in the case of Stilt Sandpiper, just the one. So how much do we know about these birds? How did they get it wrong? Furthermore, once they are in the wrong place, can they subsequently get back to normal?

A bird arriving in New Zealand could have overshot - merely missed its correct destination, possibly with weather factors involved. Perhaps Bar-tailed Godwits seen on the Auckland Islands were originally planning to stop in Southland. Another possibility is the vagrant may be an inexperienced juvenile. There is considerable evidence that on their first journey after fledging, juveniles are more likely than adults to go astray, and there does seem to be a preponderance of young birds among known vagrants. The inexperience of some young birds is further compounded by the circum-

stances under which they are making their first migrations without, in the case of some species, the company of experienced adults. Or Alexander Wilson may have been right and perhaps some birds may just like to wander – whether through curiosity and pursuit of adventure, or not. Sometimes it may involve merely the length of the South Island: from time to time southern New Zealand Dotterels from Stewart Island turn up on Farewell Spit, and most often they turn out to be juveniles.

But once a bird becomes a vagrant, can it subsequently return to the places it should be? In other words, can a young bird make a correction, learn from its mistakes, and then perform better later in its life? The answer at present is unclear. It does seem likely that a bird that ends up thousands of kilometres away from where it should be, perhaps involving considerable longitudinal displacement, may find it challenging to get back to normal. Take for example Hudsonian Godwits, one or two of which regularly seem to turn up in New Zealand. Their breeding range extends in pockets from western Alaska across Canada to Hudson Bay, from where they migrate to southern South America. Most years in New



*This Broad-billed Sandpiper returned to the same roost site for several years before disappearing. Photo Ian Southey*



*This Dunlin spent its breeding season on the Manukau Harbour in 2006. An example of reverse migration? Photo Ian Southey*

Zealand there are one or two Hudsonians reported, and the most likely way they got here is in a flock of Bar-tailed Godwits making their normal southward migration. However bar-taileds return to the breeding ground via the coast of East Asia, where there are few if any records of Hudsonians. For a vagrant to return north in the same way it arrived, it would presumably need to accompany bar-taileds on a route completely foreign to its genes. The southward journey could be seen as an aberration, the bird got it wrong and was unable to make a correction and so arrived in New Zealand. But accompanying bar-taileds north again would entail even further longitudinal displacement to the Yellow Sea region, before heading back to Alaska.

Of course another option is to just stay put, and it is not unusual for a vagrant bird to remain at a particular site over several years. In which case it will doubtless get somewhat lonely, or it may get attuned to the local environment. Such appeared to be the case with a Black-tailed Godwit which, in the 1950s, remained on the Firth of Thames for four successive years. Not only that, it eventually adopted a completely different moult schedule - assuming breeding plumage during the southern spring and moulting

the mistiming in its breeding mechanism adjusts itself – and there is no sign of this at present – it is unlikely that this Black-tailed Godwit will feel any urge to migrate and it may well prolong its stay on the Miranda coast indefinitely.

Which leads to yet another question: is vagrancy a likely avenue for range expansion, the establishment of new populations of a species, or new migration routes? That migrants turn up in unusual places more often than non-migrants is not surprising, nor the fact that most records of vagrancy coincide with normal migration seasons. However we must remember migratory birds are programmed in certain ways. If a migrant turns up where it should not be, perhaps as a result of weather, it may still be in a migratory state and so ready to reorient itself and continue with its journey. Many vagrants do in fact appear to move on fairly quickly. Yet it also seems likely that many current bird populations, particularly those on oceanic islands, are descended from ancestral vagrants. Consider for instance, the number of European species introduced to the New Zealand mainland in the nineteenth century that have since established populations on various sub-Antarctic islands. Then again, establishment of a

out of it the following autumn. In other words, this was the exact reverse of what should happen for a northern breeding species. Wrote Dick Sibson: ‘Unless

new population relies on at least one viable pair arriving at a new site and surviving long enough to successfully breed. Given some of the far-flung places vagrants may turn up, the odds of that must be erratic at best.

A further unknown involves the economics of a migratory flight. Most known migration events, particularly of shorebirds, involve flocks rather than individuals. We know that flying within a formation can significantly reduce flight costs, so presumably an optimal migration strategy is to set out with company. So if a Broad-billed Sandpiper is seen in New Zealand, did it arrive with others of its kind? This seems unlikely given there has seldom been more than one bird seen at a time. So did it arrive in a flock of another species, perhaps with birds of a similar size? This seems a strong possibility. But if so, what happens when the time comes to depart northward again? If the Broad-billed Sandpiper opts not to remain here, responding instead to the hormonal tug of its genes, does it wait for a departing flock of suitable strangers, or does it leave by itself, somehow coping with the predicted extra flight costs? No one knows for sure. It may even turn out that the predicted benefits of flying in a flock are not as important for some birds. After all one thing learned from the satellite tracking of godwits, was the consistent tendency we have to underestimate what some of these birds are capable of.

#### Further reading:

Stead, E.F. 1923 Notes on the Migratory Plovers of New Zealand, with records of some Additional Species. Philosophical Institute of Canterbury 7th September, 1921 Transactions New Zealand Institute 53  
Sibson, R.B. 1956. Abnormal Black-tailed Godwit in the FOT Notornis 6(8)241-242  
Hay, R. 1985. An oystercatcher in Vanuatu. Notornis 32: 79-80  
Newton, I. 2010. Bird Migration. Collins 

# Miranda Naturalist Trust Membership Analysis

Len Taylor

A common question about the trust is how many members we have and how that is changing.

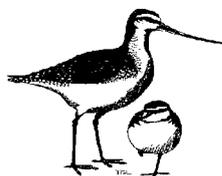
Analysis has been done on the membership data from 2004 to 2010. Over this time total membership numbers have remains relatively constant at between 634 and 682. 2010 had 634 memberships, the lowest since 2005 when there were 637 registered members.

New Zealand registrations have fluctuated between 587 and 638, 2010 having the lowest registrations over the past seven years. Overseas memberships been relatively stable over that same time period; growing slightly from 42 in 2004 to 47 in 2010. Overseas memberships average about 6.6% of our memberships.

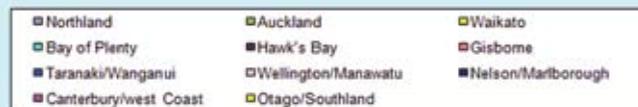
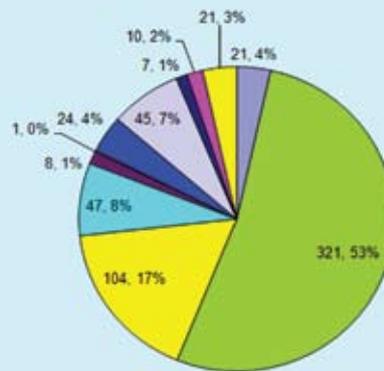
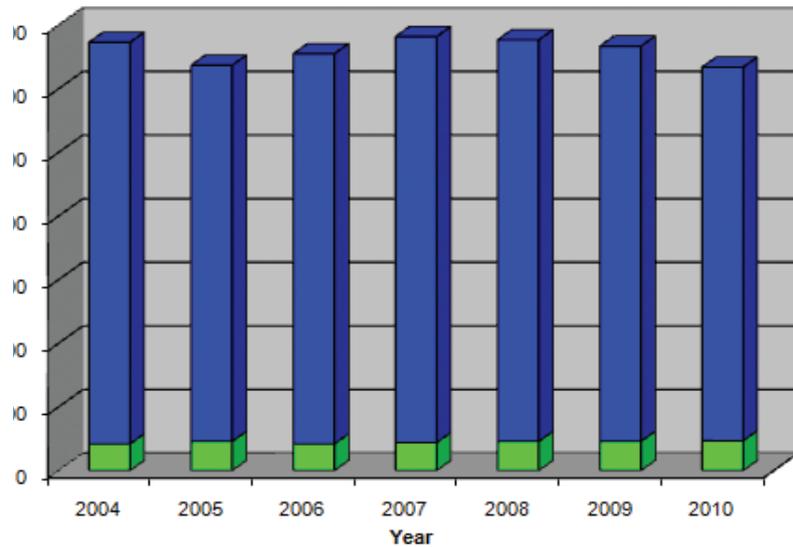
Of our New Zealand members 36% are individual members, 32% family members and 29% life members. We also have a small number of honorary members in this group, 3%. Interestingly no overseas members are family members.

On average 81 NZ memberships are cancelled a year, given that membership numbers have not dropped dramatically over the past few years new members are obviously joining at a similar rate. Most new members join by filling out the form on our membership brochures, indicating that they are joining as a result of visiting the centre.

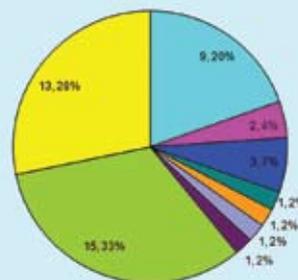
If you know someone who may be interested in the work that the Trust is doing why not consider giving them a gift membership for a year!



**Total Registration Numbers**



**Overseas Membership Demography**



## From the Centre! Upcoming Volunteer Workshop

Miranda needs you. Yes. You! Volunteering at the Shorebird Centre will give you a sense of belonging, of doing something worthwhile. We are holding a volunteer training day on Saturday October 22 commencing at 10.00 am. Come for the day and learn about the running of the Centre, the talks we give groups and the objectives of the Trust. This will be a fun day and an opportunity for present volunteers to sharpen up their skills. A late tide means you can go birding. Participants may stay free in a bunk room and if you need to stay Friday night before the training that will also be available to you. Bring your lunch and dinner. Email Maria on shorebird@farmside.co.nz or phone the Centre on 09 2322 781 to register.

## In the Shop

A few book titles to ponder.

*Kakapo – Rescued from the Brink of Extinction*, Alison Ballance, hardcover, \$49.90

*Visions of Nature – NZ's Wild in the West*, Trevor Penfold, hardcover, \$54.90

*Endangered Birds*, Martin Walters, hardcover, \$49.90

*101 Golden Rules of Birdwatching*, Marcus Schneck, hardcover, \$25.90

*Down in the Forest*, Yvonne Morrison, softcover, \$19.90

*Sensational Survivors – An Illustrated Guide to NZ's Remarkable Wildlife*, Sandra Morris, softcover, \$29.90

*Mr RG, The Adventurous Tomtit*, Barbara Hughes, \$16.90

If you are a regular visitor to the Centre we are happy to layby books for you, if you rarely visit we are happy to accept mail order! Call or email us and we'll go through the details with you. 

## from the Chair

Gillian Vaughan

At the AGM in August the new council was elected, As advised in the previous issue our Treasurer, Ashley Reid stood down. At the time no nominations were put forward and council was given leave by the AGM to appoint a new treasurer.



We now have a candidate for Treasurer, and I expect that his appointment will be confirmed at the next council meeting. Will Perry was returned by the AGM as Trust secretary At the same time Alister Harlow chose not to stand for council again, however all other council members were nominated again and elected unopposed. At the first council meeting following the AGM I was elected Chair of the Trust for the upcoming year. I would like to thank all members of the council both current and those who have recently left for their work on behalf of the Trust.

The speaker at the AGM was Robert Hoare on "The Ghosts on the Coast and other Mythic Moths of Miranda.". This was an excellent talk, which those who attended found both educational and thoroughly enjoyable. It is hoped that a writeup of this talk will be in the next issue of MNT News.

### Hauraki Gulf Marine Forum

The state of the Firth of Thames, the catchments leading into it, and their effect on the shorebirds and the coastal areas has been of concern to council for some time now. Obviously this is a bigger project than Miranda can deal with alone, and it was therefore interesting to attend the launch of the 2011 Hauraki Gulf State of the Environment Report earlier this month. (this can be found from <http://www.arc.govt.nz/environment/coastal-and-marine/hauraki-gulf-forum>).

Ensuring that the Hauraki Gulf environment does not suffer from the

many competing interests in the area is part of the brief of the report and it as clear from the speakers on the day that this is not currently happening, with most environmental indicators worse now than they were in the past.

The chair of the Hauraki Gulf Forum is the mayor of Hauraki district, the district in which Miranda is now located, after the readjustment of Auckland boundaries. We therefore looking forward to working with our new council on several levels.

Council members will be watching the Forum to see where we play a part. A fuller report on the contents of the 2011 Report will be in a later issue of the MNT News.

### At the Centre

Winter is a quiet time at the Centre, and those who have frequented the Centre of late will have found out Centre Manager thoroughly engaged in his computer, I am pleased to report that the first draft of Keith's next book has been turned in and, in his own words he is now "back in harness". Maria and Kristelle have both stepped up over the periods Keith has been away and I would like to thank them for their work.

The June OSNZ wader census was carried out, however more people are always useful at these events and I would encourage people to attend.

The Winter Potluck Dinner is almost upon us and I look forward to seeing many of you there.



Keep up-to-date with events  
visit  
[www.miranda-shorebird.org.nz](http://www.miranda-shorebird.org.nz)



## MNT People:

### Shorebird Centre Manager:

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### Assistant Manager

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### Treasurer: Ashley Reid

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### Council:

Gillian Vaughan (Chair)  
Adrian Riegen (Deputy Chair)  
William Perry (Secretary)  
Ashley Reid (Treasurer)  
David Lawrie (Immediate Past Chair)  
Eila Lawton Emma Pearson  
Len Taylor Estella Lee  
Phil Hammond Alister Harlow  
Wendy Hare Keith Thompson

## 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.

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

## Accommodation

The Shorebird Centre has bunkrooms for hire and two self-contained units:

Per bed / night member \$ 20.00 Per bed / night non-member \$ 25.00  
Hire of self-contained unit member \$ 65.00 Hire of unit non-member \$ 85.00  
For further information contact the Shorebird Centre, RD3 Pokeno 2473  
Phone /Fax (09) 232 2781 Email: [shorebird@farmside.co.nz](mailto:shorebird@farmside.co.nz)

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

### Membership of the Trust entitles you to:

Four Miranda News issues per year.  
A discount on overnight accommodation  
Invitations to Trust Events  
The right to attend the AGM  
The right to vote for council members

### Membership Rates :

Ordinary Member - \$ 40.00  
Family Member - \$ 50.00  
Overseas Member- \$ 50.00  
Life Member, under 50 - \$ 1200  
Life Member, 50 & over - \$ 600

## Want to be involved?

### Friends of Miranda

A volunteer group which helps look after the Shorebird Centre. If you'd like to help out contact Keith. Helping out can be anything from assisting with the shop, school groups or meeting people down at the shellbanks. Regular days for volunteer training are held, the next scheduled day is Saturday October 22, 2011. Contact Maria for details.

### 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.

### 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. If you can't make the Firth Census contact OSNZ for census days in your area.

### Contribute to the Magazine

If you've got something you've written, a piece of research, a poem or a great photo send it in to MNT News. If you want to discuss your ideas contact Gillian Vaughan, [gillianv@actrix.co.nz](mailto:gillianv@actrix.co.nz).

### Help in the Miranda Garden

We can always use some spare hands in the Miranda Garden, be it a half hours weeding or more ambitious projects. While our formal gardening program has ceased if you do have some spare time while around the Centre please feel free to do any garden maintenance you can see needs doing! Ask at the desk for ideas, or adopt a patch and call it your own.

