Tattler

Newsletter for the Asia Pacific Flyways & Australian Shorebirds 2020 Project

No. 36 July 2015

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Eastern Curlew, recently declared Critically Endangered in Australia. Photo: Silva Vaughan-Jones

Editorial

Once again shorebirds are on the move – leaving their breeding grounds to fatten up at stopover sites for the long migration southwards. Some of them will be making this journey for the first time; some will be carrying flags and bands, geolocators or satellite transmitters; some will be spotted en route as they pass through stopover sites; some will have revised status when they reach their non-breeding destinations; and all of them will be searching for safe feeding and roosting sites during their migration and at their non-breeding destinations.

Research is being conducted on many fronts throughout the EAAF – updates on the tracking of Little Curlew, Great Knot and Bar-tailed Godwit reveal fascinating details of their migration strategies; while surveys of Red Knot staging at Bohai Bay confirm the critical importance of shorebird foraging and roosting sites in the Yellow Sea. Local studies at non-breeding sites continue to show alarming declines in shorebird populations – further justifying the recently announced Critically Endangered status of Eastern Curlew and Curlew Sandpiper in Australia.

Just as shorebirds benefit from shared experiences during migration and while foraging and roosting, so does the population of birdwatchers involved in monitoring them. The more we can extend those shared experiences into the wider community, through radio, newspapers, magazines, workshops and art exhibits, the more we can protect the birds and their habitats.

Liz Crawford, Editor
Contributions are welcome and should be sent to:
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www.awsg.org.au
A Special Interest Group of BirdLife Australia

AWSG Australasian Wader Studies Group

birdlife AUSTRALIA

To Our Winged Travellers - EAAFP Interactive Art Project

On 22 May 2015, we started an interactive public art project called '*To Our Winged Travellers*' at G-Tower in Songdo, Incheon, Republic of Korea. This campaign is for anyone to be able to take part, by writing a cheerful message on a bird-shaped note or via a submission form (http://eaaflyway.net) online, wishing migratory waterbirds a safe journey on the East Asian-Australasian Flyway.

More than 500 messages were collected over the last two months via online and from the collection point.

Call for exhibitors: We are looking forward to a perfect place to display those messages gathered from all over the world. Please kindly contact us by email at **secretariat@eaaflyway.net** if you, your organisation, or your visitor centre has a place to display the exhibit and encourage more people to join this campaign. Southward migration is starting soon. Be part of our interactive art installation and make people fully aware of the current situation that migratory waterbirds are facing.

Spike Millington
Chief Executive EAAFP

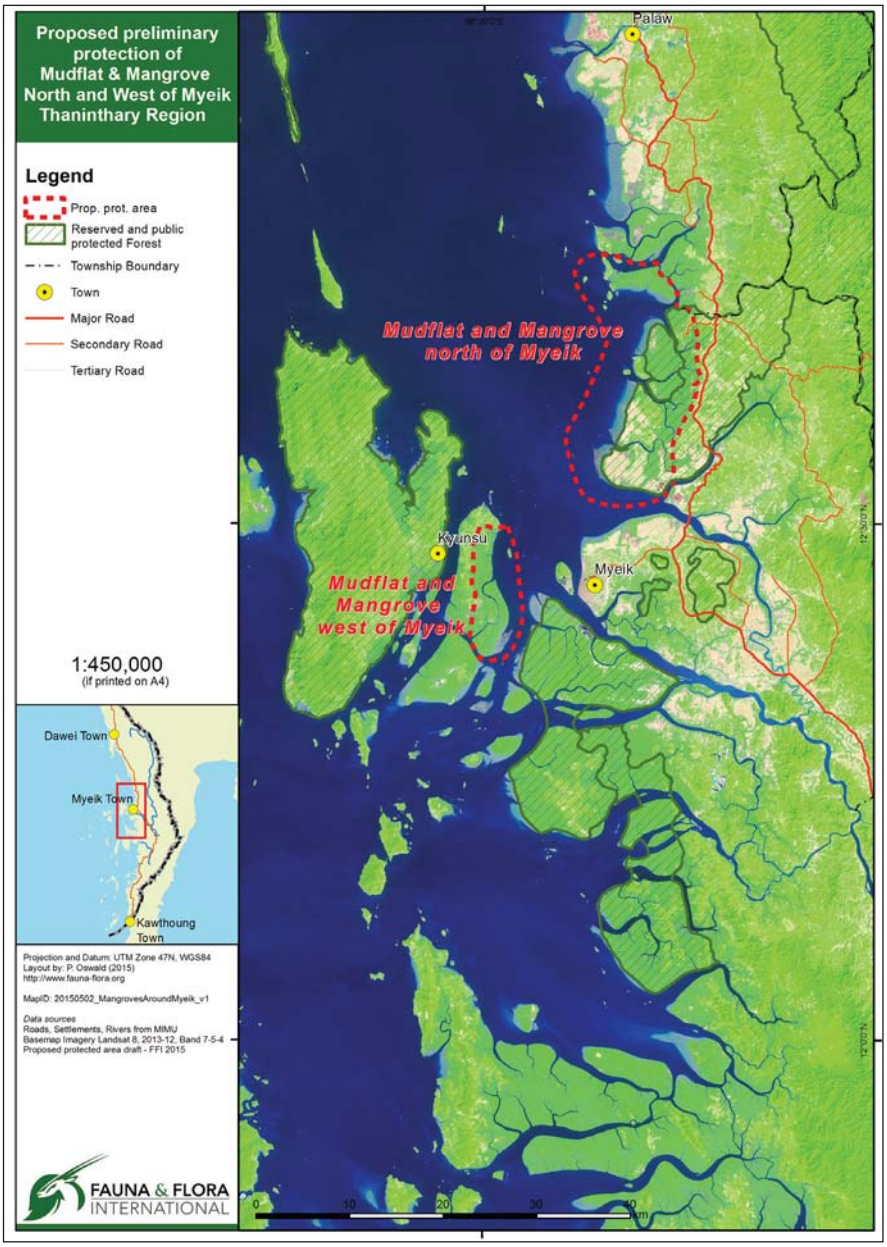
Source: http://www.eaaflyway.net/thanks-for-your-participation-for-to-our-winged-travellers-campaign/

'Have a safe journey' written in Spanish @ EAAFP

Grey-tailed Tattler Tringa brevipes, *a new species for Myanmar*

Between 2008 and 2014 extensive coastal surveys covered almost the entire 3000 km coastline of Myanmar (Zöckler *et al.* 2014). Starting in 2013 the extensive mudflat areas around Myeik were surveyed for shorebirds for the first time (Moses in litt.) and surveys have been repeated in autumn 2014 and January 2015 (see Moses & Zöckler 2015). However, in May 2015 for the first time this area was surveyed during late spring. Only very few areas in Myanmar have been surveyed outside the wintering period.

On 5 May 2015 at Thetyewar Beach at N12.60963° E98.63964° among a group of 400 sandpipers a Grey-tailed Tattler *Heteroscelus brevipes* in breeding plumage was present. This is the first record of this species for Myanmar. The bird was feeding on its own at receding tide with about 150 Greater Sand Plover, 20 Lesser Sand Plover, 40 Bar-tailed Godwit, 25 Terek Sandpiper, 40 Curlew Sandpiper, 30 Red-necked Stints and a few Eurasian Curlew, Ruddy Turnstone and Little Stint. There were also 3 Nordmann's Greenshank. While most birds including the Grey-tailed Tattler were in breeding plumage, all three Nordmann's Greenshank were first-year birds. At this site 4 - 6 Nordmann's Greenshank were observed in December 2014 and January 2015 and it is only five kilometres from the place where in December 2014 and January 2015 one Spoon-billed Sandpiper was also recorded (Moses & Zöckler 2015).



Thetyewar Beach, Myanmar at high tide. Photo: C. Zöckler

The Grey-tailed Tattler breeds in northern Central and Eastern Siberia (Lappo *et al.* 2012) and winters in southern Thailand, Malaysia, Indonesia, Philippines, New Guinea and Australia (del Hoyo *et al.* 1996), but little is known about their migration route. The species is declining (Wetlands International 2014) and actions for conservation along the flyway are important. The record of Grey-tailed Tattler in May is also interesting in the context of the only five other records from Bangladesh. All have also been spring records in late April or May (Thompson & Johnson 2003), and it seems the species might undertake a loop migration via the Bay of Bengal involving at least a few individuals. But many more individuals might be involved considering the low observer density in Myanmar and the wider Bay of Bengal. It is hoped that increasing survey efforts of these mudflats north west of Myeik and other parts of the country will confirm a regular migration route for this globally considered near-threatened species (BirdLife International 2014).

Australasian Wader Studies Group

Grey-tailed Tattler Tringa brevipes*, a new species for Myanmar, cont.*

Grey-tailed Tattler at Thetyewar Beach, Myanmar 5 May 2015. Photo: C. Zöckler

Increasing industrial and domestic coastal developments near the city of Myeik are threatening these still untouched areas. Hunting and trapping of shorebirds in the winter season has also been noted as a threat for wintering shorebirds. It can only be hoped that proposals for large protected coastal areas that include mangroves and coastal mudflats will safeguard the areas in the longer term.

Acknowledgements
We like to thank Fauna & Flora International for encouraging and supporting the mudflat surveys in the Myeik area and Patrick Oswald (FFI) for GIS support. We also like to thank Lay Win for his company and observations and an unknown motorbike driver for guiding us to these remote areas.

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Christoph Zöckler & Saw Moses

Eastern Curlew & Curlew Sandpiper now Critically Endangered - Australia

The Federal Government has officially recognised the status of two Australian migratory shorebirds — the Eastern Curlew and Curlew Sandpiper — as Critically Endangered under *the Environment Protection and Biodiversity Conservation Act* 1999 (EPBC Act).

"The listing recognises that the birds now face a very high risk of extinction in the near future," said Samantha Vine, Head of Conservation at BirdLife Australia. "Earlier this month BirdLife Australia's Threatened Species Committee released its assessment confirming that seven of Australia's migratory shorebird species are on a trajectory to extinction, and now the plight of two of these birds has been recognised by the Australian Government".

The population of Eastern Curlew reaching Australia has more than halved since the 1980s. "We're watching many shorebird numbers dwindle before our eyes. Without urgent conservation action it's conceivable that within my lifetime, these birds will stop returning to our shores altogether," said Ms Vine.

"Migratory shorebirds desperately need Australia, China, North and South Korea and other Asian nations to work together to protect the rich mudflats that fuel their migration," added Ms Vine. "Otherwise, in coming years hundreds of thousands of birds will die of starvation and exhaustion as they attempt their arduous annual journeys."

However, BirdLife Australia is not going to let these birds disappear without a fight. We are calling on the Australian Government to do more to protect migratory shorebirds at home and in Asia. BirdLife Australia has launched a petition asking Federal Environment Minister, Greg Hunt to develop:

- A strong national wetlands policy to address the cumulative impacts of multiple threats to our shorebirds ('death by a thousand cuts'); and,
- An ambitious strategy to engage our international partners in the protection of habitat important to the survival of our shorebirds.

The petition is online at:

http://birdlife.org.au/shorebirds-in-crisis

Samantha Vine & Dan Weller
26 May 2015

Eastern Curlews of Pelican Island – Port Macquarie, NSW

Above: Eastern Curlew at Pelican Island - Silva Vaughan-Jones
Below: Pelican Island survey area, Hastings River, Port Macquarie, NSW

Hastings Birdwatchers have been counting and recording shorebirds on Pelican Island in the estuary of the Hastings River at Port Macquarie for thirty years. In 1985 and 1995 there were between 100 and 138 Eastern Curlews feeding and roosting on its sandbanks every summer. Between 2000 and 2010 the numbers halved. From 2010 to 2015 the numbers dropped further, from 50 to 38. A decline from 138 birds recorded in 1985 to 38 in 2015, has to be regarded as a significant loss and of considerable concern for Australia's largest migratory shorebird.

Local disturbance is coming from paddle boarders who are paddling too close to the shoreline and sometimes landing on the shore, causing roosting birds to lift at times when they should be resting. Boating and jet skiing are also a concern. The recreational needs of a growing provincial town are impacting on all local wildlife but could have a catastrophic effect on the Critically Endangered Eastern Curlew. This is only part of the problem; the major concerns are further north in the Yellow Sea which are now impacting at a local level.

Silva Vaughan-Jones

Joint Shorebird Survey of the Onchon County Coast of DPRK, May 2015

In April 2009 the Korean Natural Environment Conservation Fund and Miranda Naturalists' Trust (New Zealand) completed a joint survey of shorebirds at Mundok, 80km northwest of Pyongyang. This was the first known survey of birds using tidal areas of the West Sea of the Democratic People's Republic of Korea (DPRK). In 2014 a joint agreement was signed in Pyongyang between the Nature Conservation Union of Korea (NCUK) and the now, Pūkorokoro Miranda Naturalists' Trust (PMNT) to expand on this work, with a series of shorebird surveys along the West Sea coast starting in 2015.

From 5-7 May 2015 three members from PMNT joined NCUK staff to complete a three-day survey, timed to make use of high spring tides. A coastal area just north of the port city of Nampo in Onchon County was selected by the NCUK to be surveyed. Late April and early May are considered the period when maximum numbers of migrant shorebirds are likely to be present and so each of the surveys will be conducted during this period. The weather was clear and dry, making for good observational conditions. The purpose was to find key high-tide roost sites along the Onchon County coast, just north of Nampo, identify and count all shorebird species in the area and look for leg flags and colour bands. This visit by PMNT was supported by funding from EAAFP.

Over 20,000 shorebirds were recorded at three sites, two of which were identified as being internationally important. Major species were Great Knot (7600), Dunlin (7419), and Bar-tailed Godwit (2794).

A full report is being prepared for the next edition of *Stilt.*

Adrian Riegen
Pūkorokoro Miranda Naturalists' Trust, New Zealand

Note: An Associated Press article on the joint NZ/DPRK surveys of the West Sea coast is available at the following link:
http://hosted.ap.org/dynamic/stories/A/AS_NKOREA_MIGRATORY_BIRDS?SITE=AP&SECTION=HOME&TEMPLATE=DEFAULT

AWSG North-west Australia Wader & Tern Expedition 6 - 28 February 2015

The overall catch of 2081 waders (and 28 terns) was the smallest for several years (around 3000 is the usual total). This was partly because on two occasions one of the cannons failed to fire, resulting in a couple of hundred birds being missed on each occasion.

Proportion of juveniles

The 2014 wader breeding season in Siberia appears to have been rather poor with only one species (Ruddy Turnstone) having a percentage of juvenile birds in our catch samples above the long-term average (**Table 1**). It is interesting that the high 27.5% juveniles this year in Ruddy Turnstone followed the exceptional breeding performance of this species which occurred the previous year (32.7%). Bar-tailed Godwit (5.5% juveniles), Great Knot (6.5%), and Red-necked Stint (10.3%) were the worst performing breeding species in 2014. The Great Knot is of particular concern as the percentage of juveniles in the 2013/14 non-breeding season was also low (5.0%). This is a species which is heavily dependent on the mudflats of the Yellow Sea for its main refuelling during both northward and southward migration to and from the breeding grounds in Northern Siberia. In recent years these mudflats have been disappearing rapidly due to reclamation.

Acknowledgements

Everyone who took part at any time in NWA 2015 Expedition activities is greatly thanked for their huge input.

The Western Australia Department of Parks and Wildlife again generously supported the participation of two people from China – Feng Xuesong, from the Education Department of the Wader Study Station at Chong Ming Dao, near Shanghai, and Xin Jin, one of Professor Zhijun Ma's students from Fudan University. They are thanked for additional logistical support.

Anna Plains Station (John, David, and Helen Stoate) were, as usual, extremely generous in allowing us to base ourselves around their homestead for 12 days. We thank them enormously for providing accommodation, access to their cool room, swimming facilities, and for giving us permission to roam at will looking at and catching birds around their million acre cattle station.

Graeme MacArthur is greatly thanked for providing his plane and piloting skills for a two-hour aerial survey of Roebuck Plains.

The AWSG and Global Flyway Network would like to acknowledge the Yawuru, Karajarri and Nyangumarta traditional owners for permission to conduct research on their lands.

The WA Parks and Wildlife Department and the Australian Bird and Bat Banding Scheme are thanked for providing research and banding permits.

Table 1 - Percentage juveniles in cannon net catches during NWA 2015 Expedition

Species	No. cannon netted	Juveniles	% Juveniles	Mean % Juveniles 1998/99 to 2013/14	2014 breeding success
Monitored each year					
Great Knot	629	41	6.5%	11.9%	poor
Greater Sand Plover	381	76	19.9%	23.4%	average
Red-necked stint	203	21	10.3%	20.6%	poor
Bar-tailed Godwit	199	11	5.5%	10.9%	poor
Grey-tailed Tattler	153	29	19.0%	20.6%	average
Curlew Sandpiper	92	17	18.5%	17.5%	average
Terek Sandpiper	81	10	12.3%	13.7%	below average
Red Knot	75	10	13.3%	17.2%	below average
Ruddy Turnstone	40	11	27.5%	N/A	good
"Specials"					
Oriental Plover	104	15	14.4%	N/A	average?
Oriental Pratincole	17	?0	?	?	?

Table 2: Oldest Recaptures during NWA 2015 Expedition

Species	Band	Date Banded	Banding Location	Age at Banding	Retrap Date	Retrap Location	Minimum Age at Retrap
Bar-tailed Godwit	072-09384	12/10/1992	Broome	2	11/02/2015	Broome	24
Bar-tailed Godwit	072-55721	4/03/1996	Broome	1	13/02/2015	Broome	20
Bar-tailed Godwit	072-56810	4/04/1996	80 Mile Beach	2	24/02/2015	80 Mile Beach	21
Great Knot	062-57441	16/05/2000	Broome	1	7/02/2015	Broome	15
Great Knot	062-57375	4/03/2000	Broome	1	11/02/2015	Broome	15
Great Knot	062-15441	25/04/1996	Broome	1+	11/02/2015	Broome	20+
Great Knot	062-13736	4/03/1996	Broome	1	11/02/2015	Broome	20
Great Knot	062-09221	16/04/1994	Broome	1	22/02/2015	80 Mile Beach	22
Little Tern	042-12498	8/10/1998	Bush Point	3+	11/02/2015	Broome	19+

Clive Minton, Roz Jessop, Chris Hassell, Mike Dawkins, Prue Wright and Katherine Leung

The Demise of Botany Bay, NSW

Ornithologists have long regarded Botany Bay as a site of international importance for migratory shorebirds. However, despite being recognised as a wetland in crisis and receiving a Grey Globe Award at the 2012 Ramsar Convention at Bucharest, the Towra Point Ramsar Site is heading towards the total loss of migratory shorebirds for which it was designated in 1985.

Although no accurate counts of shorebirds were carried out prior to the 1950s early ornithologists reported 'thousands' of migratory shorebirds in the Cooks River estuary on the north side of Botany Bay. These days such a sight is almost impossible to imagine.

We know that a large proportion of the migratory shorebird population of Botany Bay disappeared in the 1950s and 1960s during the construction and subsequent expansion of Sydney Airport along the northern shores of the Bay. During this period the lower reaches of the Cooks River were diverted to allow the original river course to be filled in and reclaimed. The armoured banks of the new course of the river offer little or no habitat for shorebirds.

Remnant tidal flats and beaches near the original river mouth and Mill Stream provided a small area still suitable for the smaller sandpipers and plovers including up to 400 Red-necked Stints, 250 Curlew Sandpipers, Double-banded and Pacific Golden Plovers. These habitats survived until the construction of the parallel runway of the airport in 1992. By the time the expansion of Port Botany was approved in 2005 the Red-necked Stint population had fallen to 20 birds and that of Curlew Sandpiper to two.

The southern shores of Botany Bay fared much better due to the foresight of the Commonwealth Government of the time, which in 1975 purchased 600 ha of wetland habitat at Towra Point for the creation of a nature reserve to prevent its loss to development. Much of the site was listed as a wetland of international importance under the Ramsar Convention, due mainly to the presence of large numbers of migratory shorebirds including Bar-tailed Godwit, Eastern Curlew, Whimbrel, Grey-tailed Tattler and Terek Sandpiper. This move provided protection by the Australian Government under its international obligations, and more recently under the Environment Protection and Biodiversity Conservation Act (1999).

Although Commonwealth law protects Ramsar sites under Australia's international migratory birds agreements with Japan, China and South Korea, under the Bonn Convention, and of course the Ramsar Convention, responsibility for management of the site has been devolved to the State Government.

Though it's a wetland of international importance, over the years a lack of funding has allowed Towra Point to fall into disrepair, a serious failing of our international obligations. The site is now severely degraded due to weed invasion, erosion, and disturbance which have resulted in the loss of major roost sites. As a result, Towra Point was awarded a 'Grey Globe' in 2012, reflecting the poor state of its management and the need to restore the site.

Spit Island at Towra Point Nature Reserve in 2003 (3.6ha)

Spit Island at Towra Point Nature Reserve in 2015 (1.6ha)

The last two years have been disastrous for migratory shorebirds at Towra Point, especially Bar-tailed Godwits as well as one of Australia's largest Little Tern breeding colonies.

"The problem is that these roosting areas have been disappearing, either eroded by the waves or overgrown with weeds, and they're in urgent need of restoration," explained Phil Straw in a recent newspaper article. "Spit Island is the last remaining roost site on the Towra Point Ramsar wetland. But it is now rapidly disintegrating and there's not enough room for the shorebirds using the Bay."

We have been carrying out intensive studies of shorebirds in Botany Bay since 1991 and have

The Demise of Botany Bay, NSW, cont.

recorded a gradual decline in the numbers of many species. We thought the situation couldn't get worse after a steep fall in the numbers of some species last season, but we were shocked to see an even more drastic decline in numbers this season. We watched birds flying around for hours finding nowhere to land at high tide, or resorting to landing along the shores of waterfront properties while they waited for the tide to recede to expose their intertidal feeding habitat. "I've never seen anything like this in 55 years as a professional ornithologist" declared Phil Straw.

Bar-tailed Godwit roosting along built-up shoreline due to lack of natural roost sites in Botany Bay.

"Most concerning is that while they are flying around they are using up the fat reserves they need to fly back to the Arctic," he continued. "They're starting off behind the 8-ball. Although they stop along the way north to feed and 'refuel' in China or Korea, by the time they arrive on their breeding grounds they'll probably still be in poor condition and so their nesting is likely to be unsuccessful. That will lead to a further decline in their populations."

It is particularly distressing that restoration of the site would be relatively easy. "The solution is simple from an engineering and management point of view," said Phil. "The will is already there. So are the plans. All it needs is the funds to undertake the work and the results will follow."

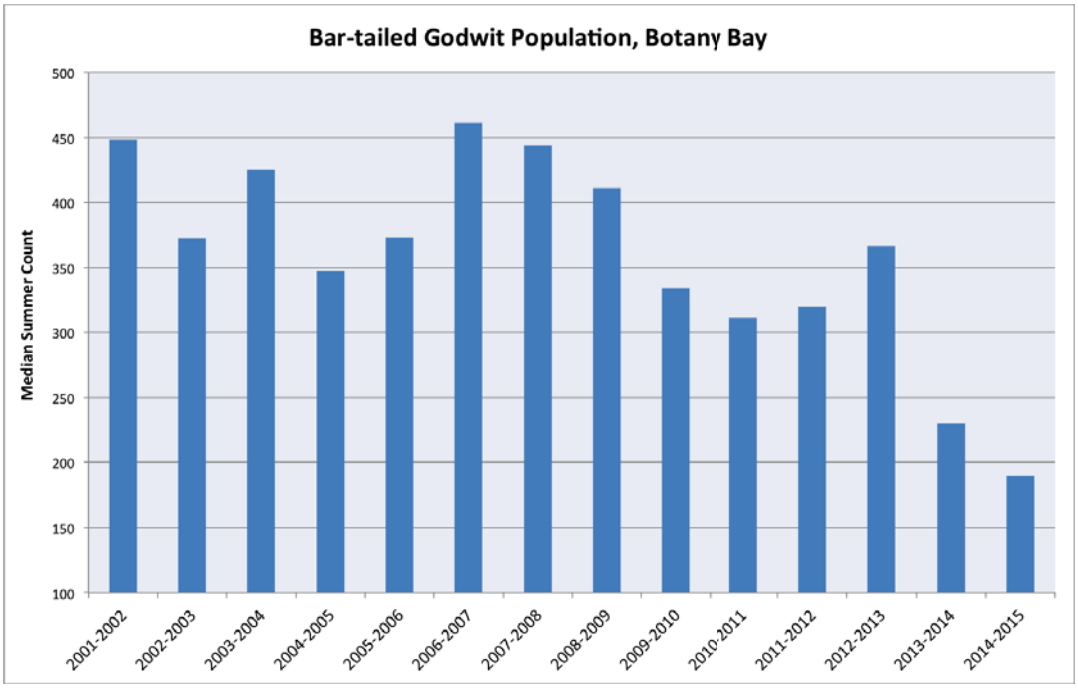
Some glimmer of hope

A spokesperson for Sutherland Shire Council has recently said that council had obligations under international treaties to protect habitats for migratory birds. She said that migratory birds require safe areas in order to roost and gain enough weight to enable them to survive, and migrate to Siberia to breed.

Council is preparing an environmental assessment for the construction of a purpose-built island before seeking permission from State Government departments to construct an island for migratory shorebirds with advice from relevant experts.

The Penrhyn Estuary Enhancement Project initiated by Sydney Ports Corporation as part of its ports expansion promises to provide additional feeding habitat and roost sites for several species of migratory shorebirds on the north side of the Bay. This is already the main site in Botany Bay in 2015 for Pacific Golden Plover and Double-banded Plover.

However at their best these two sites will not make up for the losses at what was always an internationally important shorebird site. Recent losses have been due solely to lack of what, in State Government terms, is a minor financial expenditure.



International recognition for the South-East Gulf of Carpentaria – at last!

The importance of the South-East Gulf of Carpentaria for migratory waterbirds in our Flyway has been known for several decades. Early aerial surveys, two major expeditions by the Queensland Wader Study Group and anecdotal observations have provided data showing this to be the third most outstanding shorebird area in Australia. This claim is based on three criteria being met: support of at least 1% of the Flyway population of a waterbird (true for at least 16 species); support of threatened species (Eastern Curlew, Great Knot, Curlew Sandpiper); and holding 20,000 waterbirds (mainly shorebirds and terns, overall and also at some sub-sites). The core part of the shorebird area comprises intertidal mud and sand flats, mangroves and saltmarshes and extends over 300 km of coast between the estuaries of the Nicholson and Gilbert Rivers.

Until recently, attempts to secure international recognition of this importance had been unsuccessful. Nomination of the entire area or a large portion as a Ramsar Site was hampered by the complexity of the task. Very little of the coast was protected in conservation reserves and landward edges included multiple pastoral leases with varied interests in wildlife. But the Queensland Wader Study Group, AWSG and individual ornithologists patiently sought a way forward; this included raising awareness of the area's significance for migratory waterbirds, with indigenous organisations.

During 2014, the Normanton Land & Sea Rangers of the Carpentaria Land Council Aboriginal Corporation became interested in the Flyway Site Network of the Partnership for the East Asian – Australasian Flyway. They saw that this informal voluntary mechanism provided an opportunity to raise the profile of internationally important sites for migratory waterbirds, with no binding obligations that might impact indigenous or pastoral grazing activities. The Morr Morr Pastoral Company (Delta Downs station), which is operated by Traditional Owners the Kurtijar People, was approached about a possible nomination of coast at the sea edge of its pastoral leasehold land. Enthusiasm of individuals who were Traditional Owners, Land & Sea Rangers, graziers or shire councillors – some of them having more than one of these roles – drove the process forward, with support from ornithologists.

After further consultation within applicable State Government agencies, the nomination of 43 km of Delta Downs coast, over 4 km wide (to include feeding and roosting areas), to the Flyway Site Network was documented. All three abovementioned criteria were met for this component of the greater South-East Gulf shorebird area, with 1% levels applying to Great Knot, Red Knot, Black-tailed Godwit and Greater Sand Plover and substantial numbers of Eastern Curlew also being present.

Map 1: Location of site. The yellow boundary outlines the entire AWSG shorebird area known as 'South-East Gulf of Carpentaria'. The green area is the nominated Karumba-Smithburne (Delta Downs) section, now known as EAAF Site 120.

International recognition for the SE Gulf of Carpentaria – at last! cont.

Eastern Curlew with Whimbrels in background. Photo: R. Jaensch & Carpentaria Land Council Aboriginal Corporation

In December 2014, the Australian Government received the Certificate for Participation in the Network at the Meeting of Partners of the Flyway Partnership in Japan. The Site Information Sheet, maps and photographs of the site (EAAF120) and birds can be accessed on the EAAFP website at: **http://www.eaaflyway.net/about/the-flyway/flyway-site-network/#australia**

Follow-up activities, including possible communication and activities with other Flyway Network Sites, are being discussed and hopefully will sustain community and site manager interest in protecting the Gulf's migratory waterbirds. Designation of other sections of the greater shorebird area in the South-East Gulf to the Flyway Site Network may be considered by other indigenous groups in this region.

Roger Jaensch & Peter Driscoll

Two shorebird flocks at the mouth of Smithburne River. Photo: R. Jaensch & Carpentaria Land Council Aboriginal Corporation

Australasian Wader Studies Group (AWSG) Chair's Report

A number of important developments have occurred since the April 2015 *Tattler* edition, as outlined below.

(a) Crowd-source funding for Grey Plover
The Grey Plover crowd-source funding project conducted over May-June 2015 was highly successful, well exceeding its target of $17,680 with a final amount of $25,341 achieved. This will allow 4 and possibly 5 satellite trackers to be placed on Grey Plovers to give us a better idea of their migration pathway, stopover sites and breeding grounds. Thanks to all those who supported this first-time funding approach including the AWSG and BirdLife Australia team and those who contributed funds.

(b) AWSG Committee Meeting
The AWSG Committee held its annual meeting in Melbourne on 25 June 2015. The CEO of BirdLife Australia, Paul Sullivan, was invited to address the AWSG Committee about his perspectives on the relationship between AWSG and BirdLife Australia and to brief the Committee on his attendance as a Council Member of BirdLife International. Paul recognised the cooperation between AWSG and BirdLife Australia and praised the work of the AWSG over the years. Paul suggested that AWSG should develop case studies and stories about its work with particular emphasis on the changes that this has produced and is producing both in Australia and in the Flyway. This will be a task that the AWSG will pick up and develop.

Reflecting that the AWSG has been in existence for 35 years, it was seen to be an ideal time to focus on what has been achieved and the directions we want to take into the future. A broad-ranging discussion about "AWSG into the Future" focused on the following key areas:

- **A reviewed committee structure**. It was agreed that a new structure centred around 5 sub-committees should be put in place. They will be responsible for the AWSG Database (Chair: Roger Standen); Communications (Chair: Phil Straw); Science and Research (Chair: Danny Rogers); Conservation (Chair: Dan Weller); and Fundraising (Chair: Penny Johns). This structure was seen to be a more disciplined way of addressing the primary functions that AWSG deals with. The sub-committees will aim to meet quarterly and develop a 12 months' work program. This will also provide more comprehensive reporting to the AWSG membership through both *Tattler* and *Stilt*;

- **AWSG and the Flyway.** My report on the 8th Meeting of the Partners of the East Asian-Australasian Flyway Partnership was included in the April edition of *Tattler*. Recognising that the Flyway is one of AWSG's key areas of interest it was agreed that we need to better communicate with AWSG members and the broader community about what is happening in the Flyway. Doug Watkins is taking up the role of AWSG representative on the Flyway Partnership Management Committee that advises the Secretariat. This role will be focused on creating better linkages between the AWSG membership and community with key Flyway work and priorities. I will remain the AWSG representative on the Flyway Partnership Finance Committee which has the task of developing funding mechanisms and sources for the Partnership and its work;

- **Better Communication**. The Committee agreed that it is imperative to improve communication and awareness-raising about shorebirds and their habitat needs given the declines in shorebird populations. This applies to both the AWSG membership and the broader community including government and the corporate sector. Stories that can be built around shorebirds such as the Grey Plover project will be significant ways of raising awareness. A range of communication products will be explored by the Communications Sub-Committee to assist in awareness raising and promotion of conservation objectives for shorebirds;

- **Advocacy**. The Committee reinforced the importance of its advocacy role on behalf of shorebirds and agreed that it should work closely with BirdLife Australia in relation to responding to development applications and proposals that can potentially adversely impact shorebirds;

- **Development of relevant policies**. It was agreed that AWSG needed to increase its work and involvement in the development of policy and influencing governments both in Australia and more broadly in the Flyway. As a starting point, an information gathering exercise will be done on three specific areas of interest to shorebirds (namely, beach wrack, aquaculture and saltworks) to assess what sort of policy work may need to be done on the issues;

- **AWSG Database**. Future directions for managing and maintaining the very valuable database were considered at a meeting prior to the AWSG Committee meeting and an approach adopted for the short to medium term. This is still a work in progress and further information will be provided at a future date.

(c) "Global Travellers in Trouble"
In response to the numerous papers predicting dire future prospects for migratory shorebirds at the Australasian Shorebird Conference held in Darwin in September 2014, the magazine *Wildlife Australia* invited me to write an article about this situation. The article was published in the *Wildlife Australia* Winter 2015 edition and is a cooperative effort with a number of AWSG members and wonderful photographs provided

AWSG Chair's Report cont.

by some top-class photographers. The article is designed to raise awareness about the plight of migratory shorebirds and will hopefully reach a wide audience.

(d) Nominations for AWSG Committee
Nomination forms for the 2016 AWSG Committee are due for submission by 31 January 2016. Forms are available on the AWSG website at the following link:
http://www.awsg.org.au/news.php

Anyone keen to nominate to the Committee is encouraged to do so.

Alison Russell-French
Chair AWSG

AWSG Facebook Page

AWSG is now on Facebook. In only 3 weeks the AWSG page has 230 'likes' meaning 230 people are following what information the page posts. This can be a wide range of shorebird related topics; news articles, flyway news, survey planning or requests for assistance, but most importantly – publicising the AWSG and the work that they do.
To visit the AWSG Facebook page, follow this link (and hit the like button!). **https://www.facebook.com/AustralasianWaderStudiesGroup**

Shorebirds 2020 Facebook Group

Shorebirds 2020 now has a Facebook group. What is a Facebook group? Well, it's the same as a Facebook page (almost) apart from two major points of difference.

1. A group can be set to private or closed, meaning Facebook members need to request permission to join.
2. A group allows all members of that group to post to the group's 'wall' which is then automatically published on each member's personal wall.

In only 3 months, over 630 people have joined, over 70% of whom are new to Shorebirds 2020 and BirdLife Australia. Shorebirds 2020 Facebook group is good for news, events, photos, ID challenges, and importantly – engaging with a (new) wider audience.

To join the S2020 Facebook group, visit this address –
https://www.facebook.com/groups/1418257811799491/

AWSG Secretary Change

Linda Patrick, the AWSG Committee Secretary for the last 18 months, has done a great job in sorting out AWSG membership with BirdLife Australia and reconnecting with AWSG members. Linda has been both an enthusiastic and creative Committee member with great ideas over a number of areas. We will miss her presence on the Committee as a very effective Secretary but she has advised that she will still be connected with shorebirds through the Victorian Wader Studies Group.

Birgita Hansen will be the new AWSG Secretary. Birgita is well-known as the Editor of *Stilt* and we welcome the expertise that she will bring to the Secretary's role. Birgita can be contacted by phone: 0428591810 or email: **b.hansen@federation.edu.au**

BirdLife Australia Indigenous Grants for Bird Conservation and Research

On 6 July 2015, BirdLife Australia announced grants to three Indigenous communities for Bird Conservation and Research to help improve the situation for shorebirds and enhance the capacity of the recipients for on-ground, knowledge-based conservation work.

"Awarding these grants is an important step in increasing engagement with Indigenous people looking after Country as well as improving our understanding of the birds that occur there," said Paul Sullivan, CEO of BirdLife Australia.

The Crocodile Islands Rangers, who manage the Land and Sea Country of the Milingimbi Islands Important Bird and Biodiversity Area, will use their grant to further Indigenous rangers' bird identification skills which will, in turn, boost monitoring of important shorebird and seabird sites in Arnhem Land.

In North Queensland, the Djunbunji Land & Sea Program manages the East Trinity Indigenous Protected Area to international conservation and management standards. The grant will provide its rangers with additional specialist skills in bird identification and management to set the foundation for on-going shorebird monitoring.

Kakadu Bird Week will see people including Indigenous rangers, Traditional Owners and Indigenous children participate in hands-on workshops to understand the requirements of the threatened birds that live in Kakadu, particularly the migratory shorebirds that visit each year.

BirdLife Australia's 2015 indigenous grants for Bird Conservation and Research were funded by money raised through the Flyway Print Exchange, which was set up and coordinated by Kate Gorringe-Smith.

Shorebirds 2020 Project Update

Despite losing Federal government *Caring for our Country* funding close to two years ago, Shorebirds 2020 continues to function as the primary national shorebird monitoring program in Australia, thanks largely to the ongoing financial support from and commitment by BirdLife Australia, and operational support from the AWSG. Shorebirds 2020 also has a number of financial supporters, to whom we are most grateful, namely Adelaide and Mount Lofty Ranges Natural Resources Management Board, Gippsland Lakes Ministerial Advisory Committee, the Victorian State Government Department of Environment, Land, Water and Planning, and the Federal Department of the Environment.

With a fraction of the staff resources that the program had been accustomed to in the past, the last two years have been focused on working with, building capacity and maintaining support for existing Shorebirds 2020 count volunteers and coordinators around the country, and observers in Northern Australia, especially Indigenous Groups.

In addition, most project resources have been dedicated to:

1) Management and maintenance of the database and count data;
2) Preparation and delivery of relevant reporting and publications (i.e. summaries for *Stilt*);
3) Recruiting new observers in areas where we currently have the longest and best data series;
4) Identifying coverage gaps and continuing to target workshop training to these areas;
5) Improving communication and feedback channels.

Some brief program stats:

- Up to the end of May 2015, there are 477 mapped and registered Shorebird Areas, 211 of these have been counted in the last 3 years. Within these Shorebird Areas there are ~2400 Count Areas, of which 1200 have been counted in the last 3 years.

- Nationally, there are 1450 registered accounts in the online database, and of those 450 have been active. However this does not mean we only have 450 counters across the country - there are many areas in which local coordinators collate data from multiple counters and enter it on their behalf under a single database account.

- Shorebirds 2020 have facilitated 47 public workshops, delivered between 2013 and March 2015, involving over 1400 participants. Of the 30,000 Shorebird ID booklets that we have printed, 27,000 have been distributed. We (with the help and wizardry of Neil Shelley) are currently developing the ID Booklet into a flyway-wide stand-alone app for your smartphones and tablets, with NZ and Australian Migrant/Resident species.

- On the school education front, we have visited 22 schools, engaging over 840 students right around the country using the kids educational activity booklets "The Wing Thing", of which we have now distributed over 26,000, and are in desperate need of a revision and reprint.

- In collaboration with North Australian Indigenous Land and Sea Management Alliance (NAILSMA) we have delivered 9 workshops with Indigenous Ranger groups. Four of these groups were involved in the last *Caring for our Country* grant, but this initial training sparked interest in several other Land and Sea Ranger groups around the northern coastline of Australia. These Indigenous Ranger groups are already undertaking ecological monitoring within their management areas and are ideally situated in more remote parts of the country where we currently have no shorebird monitoring occurring.

Shorebirds 2020 has been subject to some technological advancements too. The biggest news on this front is the development of the BirdLife Australia Conservation Knowledge Portal. This will supersede the current Shorebirds 2020 database to make it easier for counters around the country to enter and keep track of their own data. Perhaps the biggest plus in respect to this is that survey data will be easier to enter for more people, and surveys can be sent to multiple BirdLife databases at once (e.g. Shorebirds 2020 and Australian Bird Atlas) rather than having to enter the same data in two or more separate databases. Needless to say, the same level of data vetting and scrutiny will apply to the new database once it is implemented.

The BirdLife Australia conservation team has also been busy creating an Australian Shorebird Interactive Threat Map. An initiative undertaken in collaboration with the AWSG, the map has been created and intends to highlight the 'Death by a thousand cuts' or cumulative impacts to shorebirds and shorebird habitats and better engage people in the protection of migratory and resident shorebirds around Australia. It is modeled loosely on BirdLife International's migratory soaring birds tool **http://maps.birdlife.org/MSBtool/** and will be available to peruse and 'interact' with in the not-too-distant future.

Dan Weller **Shorebirds 2020**

Kim Onton: A thank-you

The national Shorebirds 2020 shorebird monitoring program thrives on the dedication of more than 1500 volunteers nationwide who engage in population counts, conservation advocacy, education and on-ground conservation activities. Kim Onton has been a key figure in the program, supporting and coordinating shorebird conservation work for the entire state of Western Australia, and thus for almost half of Australia's coastline. Kim joined BirdLife Australia's migratory shorebird monitoring, conservation and education project eight years ago and took on the role as state coordinator five years ago. Since then she has been an inspiration to over 150 WA project volunteers through her dedicated work for shorebirds and her tireless efforts to support shorebird conservation activities along WA's coast. The protection of migratory shorebirds is not a single-issue conservation problem, as shorebirds experience the "who's who" of environmental threats such as habitat destruction due to coastal development and sea-level rise, water pollution and disturbance at their roosting and feeding sites. To this challenge Kim brought an intricate understanding of local conservation problems as well as insight into the bigger picture. Most importantly, however, Kim constantly sought to hear and learn from the volunteers.

Her knowledge and expertise are held in high regard by volunteers and professional coastal managers alike and her wonderful gift to captivate an audience with the shorebird story and coastal conservation issues made her a popular speaker at community workshops and events. In short, she embraced her volunteer role as Shorebirds 2020 coordinator for WA in a way that is a model for other regional coordinators in this nationwide project.

Throughout her time as coordinator, she also started and supported the establishment of volunteer surveys in many of the more remote and little-known areas of the WA coast such as Shark Bay, or the Exmouth Gulf. Importantly, she made sure that such surveys would not be one-offs by involving local land managers so that the data obtained could feed back into coastal conservation. Kim thus has made a huge contribution to filling in the blank spaces in our understanding of the significance of the WA coast for migratory shorebirds.

Kim has been instrumental in the expansion of shorebird monitoring and conservation throughout Western Australia through ongoing on-ground community engagement and school education. It has been inspiring to see the number of people get involved in this project, and to see land managers and local governments come onboard and contribute to the conservation of these species and preservation and management of coastal habitats as a result of Kim's dedication and approach.

As of 30 June 2015, Kim Onton is taking a step back from the Shorebirds 2020 WA Coordinator role. A very large thank you must go to Kim for all of her passion, ongoing unwavering commitment, and fantastic work for shorebirds and their conservation over the past 8 years.

While it is a big loss to the Shorebirds 2020 Program not to have Kim as WA Coordinator anymore, it is great to hear that shorebirds in Australia and beyond won't lose her completely. A Western Australia Shorebirds 2020 Sub-Committee is in the process of being formed in order to assist the new coordinator, which Kim will sit on.

Kim has made it well known that her birding knowledge, enthusiasm and passion for shorebirds and the people who work to protect them has skyrocketed since taking on the role in 2008, largely thanks to the support of people such as yourselves, "who have mentored, encouraged and inspired me to do my best for shorebirds. I hope I have and will continue to do so, albeit in a different capacity."

We thank Kim for her 8 years of unwavering hard work, passion and dedication and wish her well for all future endeavours.

Dan Weller
Shorebirds 2020

Volunteers needed for NWA Wader & Tern Banding Expedition 2016

Optimum dates for the **North West Australia 2016** Expedition are **Saturday 6 February to Sunday 28 February 2016**. We will stay at Anna Plains/80 Mile Beach for the first half of the Expedition, and Broome Bird Observatory/ Roebuck Bay for the second half. We usually catch around three thousand waders and terns during the three-week period, of a huge variety of species. Participants are most welcome, especially from overseas, even if they do not have any previous wader banding experience.

Would anyone interested please contact **Clive Minton**: **mintons@ozemail.com.au**

Global Flyway Network Northward Migration Season in Bohai Bay 2015

For the seventh consecutive year, Global Flyway Network surveyors arrived in the second week of April 2015 to study shorebirds as they passed through the Luannan Coast on Bohai Bay on northward migration.

The road that we take from our apartment in Nanpu to the mudflats every day is a little worse for wear; it takes us approximately one hour depending on traffic and how deep the puddles are. So it was with great excitement that we looked out the window on our first day to see a new road being built. It is quite large and will probably be a 4-lane highway by the time we visit next season and cut down our travelling time. That's good - except for the route it's taking. The highway is going to pass straight through two of the best salt ponds for birds that we have ever seen in our study site (or anywhere we have worked around the world actually!) When the conditions are right, as on 16 May 2013, we recorded 95,833 birds in one pond and on 29 May 2013 we had 34,200 Red Knot feeding in the neighbouring pond. They have started to build a wall through the middle of the pond to put the road on but we are not sure yet if they will totally drain it, build on the pond adjacent to the road or how the new road will affect water circulation and depth. Time will tell. Will there be other suitable ponds for the birds to use?

The road being built in the salt ponds. Photo: Bob Loos

Project History

Back in late 2005, Professor Theunis Piersma, leader of the Global Flyway Network (GFN), proposed setting up a long-term monitoring project in North West Australia to complement the already established studies being conducted by the Australasian Wader Studies Group (AWSG). Initially the chosen study species were Red Knots, Great Knots and Bar-tailed Godwits. Black-tailed Godwits were added in 2008. The main study site was Roebuck Bay, Broome, Western Australia. The main funding source was BirdLife-Netherlands.

The project involved catching these species and attaching colour-band combinations to enable individual recognition. The second and critical part was to conduct intensive re-sighting effort over many years, to build up a picture of how these three species were faring through annual survival analysis. Chris Hassell was employed full-time to conduct the research, with BirdLife–Netherlands funding. The same colour marking method was used by Professor Piersma on the East Atlantic Flyway, to allow survival on a different flyway to be compared with the East Asian-Australasian Flyway.

Things started off well, with the first birds banded in December 2005 and regular re-sighting scans underway in Roebuck Bay. Fairly soon it became clear we weren't getting as many records of Red Knots as we were of Great Knots and Bar-tailed Godwits. The latter two species are highly site faithful, but not so Red Knots, who only use Roebuck Bay temporarily. Lots of Red Knot that are caught in Roebuck Bay as first-year birds, move on during their first year to other sites ranging from 'just down the coast' to Eighty Mile Beach, 165km southwest of Broome, or all the way to New Zealand 5,400km away. We already knew about this from recoveries of metal bands and flag sightings, but with individually-marked birds we were 'fine-tuning' our knowledge. This posed an issue for analysis of the data. If a considerable proportion of the marked population were not site-faithful, even mathematics couldn't come up with accurate annual survival estimates.

There is a good chance of marked birds being seen at Eighty Mile Beach as both GFN and AWSG work there and scan the flocks, and in New Zealand there are some skilled and dedicated scanners. But that still leaves the rest of the EAAF and particularly during the migration season, even with some dedicated scanners in China, the enormous Yellow Sea coastline gets little attention. After phone calls with Mark Barter and others and reading a few papers, we knew we needed to be in northern Bohai Bay in May to see if 'our' birds were there on northward migration. PhD student Yang Hong Yan was studying on the Luannan Coast and Chris visited her study area for seven days in 2007. Despite the brevity of the visit, seeing a flock of 9,900 Red Knots loafing on the mudflats just off the seawall with the two subspecies side by side was enough to convince Chris that GFN needed to spend more time here. Soon a plan was hatched to visit this site yearly when the knots were present in large numbers to look for colour-banded birds. That way it wasn't so critical if we missed birds during the non-breeding season in areas with little or no resighting work, as we could see them when they pass through Bohai Bay in China.

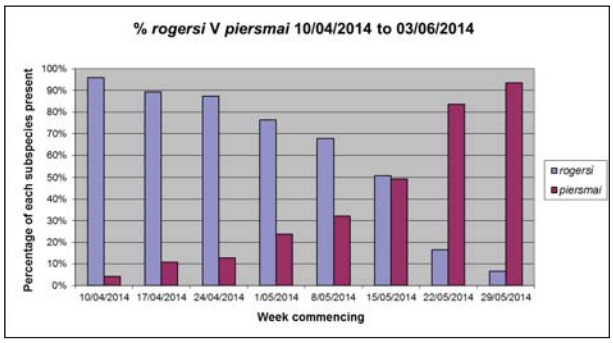
So how many colour-bands do we record whilst working in Bohai? Each year we seem to be getting more and more sightings. This is not surprising as we have been putting more and more combinations on birds. For example during the 2014 season we made 920 Broome colour-band sightings which comprised 345 individuals. In addition to this are all the other flags we record and in 2014 we saw in total 5018 banded/flagged birds.

In the East Asian-Australasian Flyway there are two subspecies of Red Knot that migrate within the Flyway and spend the non-breeding season within it (a third subspecies breeds in the EAAF but to our knowledge migrates exclusively to the Americas). In non-breeding plumage the Red Knot subspecies are inseparable, however in breeding plumage they can be separated reliably in most cases. We assess the subspecies on all the banded and flagged Red Knot we see, not just the GFN colour-banded birds, and this increases our knowledge of where these two subspecies spend the non-breeding season and the areas they pass through to get to the breeding grounds, based on their banding locations.

GFN Northward Migration Season in Bohai Bay 2015 cont.

We also do daily scans of around 1,000 individuals randomly amongst the flocks, to assess subspecies percentages. This informs us of the timing of migration of each subspecies through Bohai Bay, and when multiplied into our counts, gives us an idea of the populations of both subspecies using this area.

The *rogersi* subspecies arrives in large numbers first and is the most numerous of the two subspecies during April and into mid-May. Then the *piersmai* start to arrive and around the same time the *rogersi* subspecies start to head further north to their breeding grounds and so the *piersmai* become the dominant proportions of the flocks. This pattern is shown well in the graph below from 2014.



A nice dark *piersmai.*

A much paler *rogersi.*

What numbers of knots are we talking about that are using Bohai Bay?
Well if you ask us it's pretty much all of our flyway's population. The highest count for our survey site was in May 2011 with a total of 66,500 knots. Like any large site with big tidal movements and here in Bohai Bay the huge area of salt ponds, getting accurate counts is challenging. The 66,500 is 50% of the EAAF population during one count! More birds were probably present in the salt ponds. The total number of Red Knot using the area is obviously much higher when the turnover of birds migrating through is taken into account. Our biggest count this season is 47,500, but that was earlier in the season, before the *piersmai* subspecies had arrived in peak numbers.

Why are the knots gathered in such large numbers on the Luannan Coast?
There are two main reasons. Large scale habitat destruction elsewhere in the EAAF, particularly on the Yellow Sea coast line. Historically the Luannan Coast may not have been the only major feeding site for Red Knots, but due to mudflat destruction on a massive scale in the past decade, the area available for shorebirds to feed has been greatly reduced. Luckily this super-productive piece of mudflat has remained intact and still supports impressive numbers of Red Knots (and many other species).

Red Knots are very specialised feeders when they are on mudflats. Red Knots feed on very small bivalves and the Luannan Coast has a huge volume of suitable-sized prey for them. This particular bivalve is *Potamocorbula laevis* (Pots). Mud samples taken at other mudflats where Red Knots don't occur reveal that this small bivalve is absent, or in low numbers. One of the reasons why this particular bivalve is so common on the Luannan Coast may be due to one of the bivalves' main predators, a large shrimp species that has been over-fished and now 'Pots' have been able to increase their population.

Some of the small bivalves that the Red Knots eat when in Bohai. © Jan van de Kam

Why do we only visit on northward migration?
Unfortunately very little is known of Red Knot southward migration in our flyway. At the time of writing we still do not know of a site that holds large numbers of Red Knots on southward migration. Do they stop over on their way back to their wintering grounds or fly directly back? Geolocator studies in Russia, New Zealand and North West Australia indicate they do stop over, in or close to Bohai Bay. However local birdwatchers have yet to turn up any large numbers during that time period.

Could this mystery southward staging area be under threat also? We assume so. Finding this site and assessing its threats is one of GFN's main priorities.

GFN Northward Migration Season in Bohai Bay 2015 cont.

Not only is Bohai Bay important for Broome's Red Knots but practically all the Red Knots in our flyway. At Bohai Bay we have recorded banded Red Knots from 19 banding localities (**Figure 1**). **So if this small remaining piece of mudflat is destroyed it will affect Red Knots throughout the flyway**.

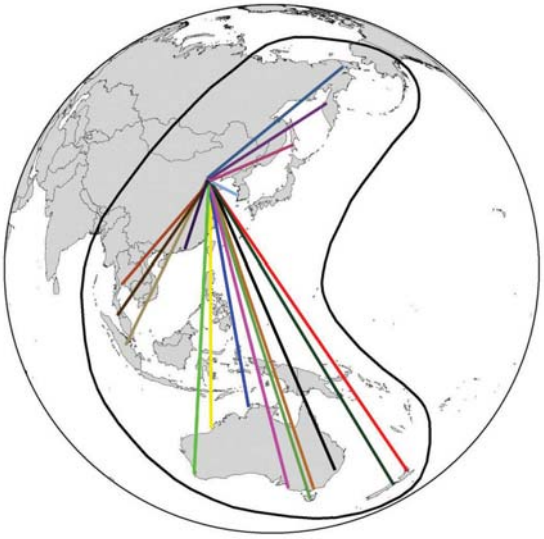


Figure 1 - A representative map showing most of the Red Knot banding locations seen in Bohai. Some have been left out due to their not being able to be seen under all the others!

This year was our best-ever season for records from the GFN colour-marking project in NWA, with 1,221 total sightings and 437 individuals - remarkable when these birds are caught and marked 6,400km away. One of the Red Knots sighted is a minimum of 26 years old. It was first caught and given a metal band in Roebuck Bay, Broome on 10 October 1992 when it was already a minimum age of 3 years. It was then re-trapped on 16 September 2007, then a minimum age of 18 years and given the colour-bands combination 1RLLB. It has been seen twice this season here on the Nanpu mudflats. This is the oldest Red Knot known to us in Australia.

In addition to the colour-bands we have recorded 3,264 flags and bands for other projects! We hope to be back again next year (if funding can be found) to follow the fate of the enormous numbers of migratory shorebirds that flow through Bohai Bay each spring season.

Source: http://globalflywaynetwork.com.au/

Tracking Little Curlew Migration

The first satellite-tagged Little Curlew left North-Western Australia on 23 April 2015 on northward migration. By 7 May 2015, five of the six satellite-tagged Little Curlew had departed. It is very exciting to watch this many birds migrating at the same time. It also raises a lot of questions about why the strategies and migration paths are so different for each bird.

Three of the birds are currently (7 May 2015) on separate islands of Indonesia, despite two of them apparently travelling together from Broome originally. Birds 61 and 65 have now been stopped-over for a week at Roti and Sulawesi (respectively). Bird 63, which left together with 47, was heading straight for Bali but eventually landed on southern Lombok. We had a bird in 2014 stop-over in Lombok, but on the northern side of the island.

Little Curlew 47 was fitted with a tracker in 2013 and we have already had a northward and southward migration from this bird in 2014. We have been fortunate that the battery has lasted this long. It has been transmitting intermittently for the last couple of months and we have a partial track for this bird, which shows it's on northward migration again. Unfortunately, it has not transmitted since 27 April 2015, and we suspect the battery has now ceased operating.

What is most fascinating to see, is the journey of the last of these Little Curlew to leave Australia. Bird 62 has progressed the furthest of them all. It has flown 2000 km over two days and is having a stop-over on the tiniest of the Philippines islands (Beni Island). This is near the northern tip of Palawan, an island where Little Curlew 43 stopped over in mid-June 2014.

Update 11 July 2015
Unfortunately this is a 'bad news' message. All four satellite transmitters on Little Curlew which were sending out regular signals until mid-May 2015 have now stopped transmitting. From elation just a few weeks ago when five birds carrying transmitters set off from north-west Australia we are now extremely disappointed that everything seems to have come to a complete halt.

We were hoping that some of the transmitters might start up again if part of the problem has been overcast weather conditions the birds have encountered in China, thereby causing a lack of solar recharging of the batteries. But it is now six weeks since the last transmission and it seems we really have to accept that we are not going to obtain any further information from these transmitters.

At the moment we really have no clue to the cause/s of this sudden demise of the units. Are there possibly technical difficulties in this batch of units, which have resulted in unusually short transmission lives (meant to be 1 + years)? Evidence from other users of the same MTI product (Reece Pedler and in Alaska) has not revealed any significant problems with performance or longevity of these satellite transmitters so far. It seems hard to believe that all birds have, almost simultaneously, been predated by animals or captured by hunters. Perhaps the most likely cause is that the

Tracking Little Curlew Migration cont.

birds have shed their transmitter harnesses. It may be significant that the timing of most losses coincided with periods of migration when significant distances were being traversed. It is just possible that the loss of accumulated fat used up in these journeys allowed the harnesses to become too loose.

We are continuing to seek comparable satellite transmitter information from other researchers around the world, particularly those who have used satellite transmitters on shorebirds, to help us work out what may have gone wrong.

Whilst the disappointment of the failures is at the forefront of our minds, we should recognise that we have still learned a great deal about Little Curlew behaviour from these satellite transmitters over the last three months. This includes new knowledge about: local, non-breeding, movements in Australia; migratory departure locations in Australia; and northward migration routes and stop-over sites.

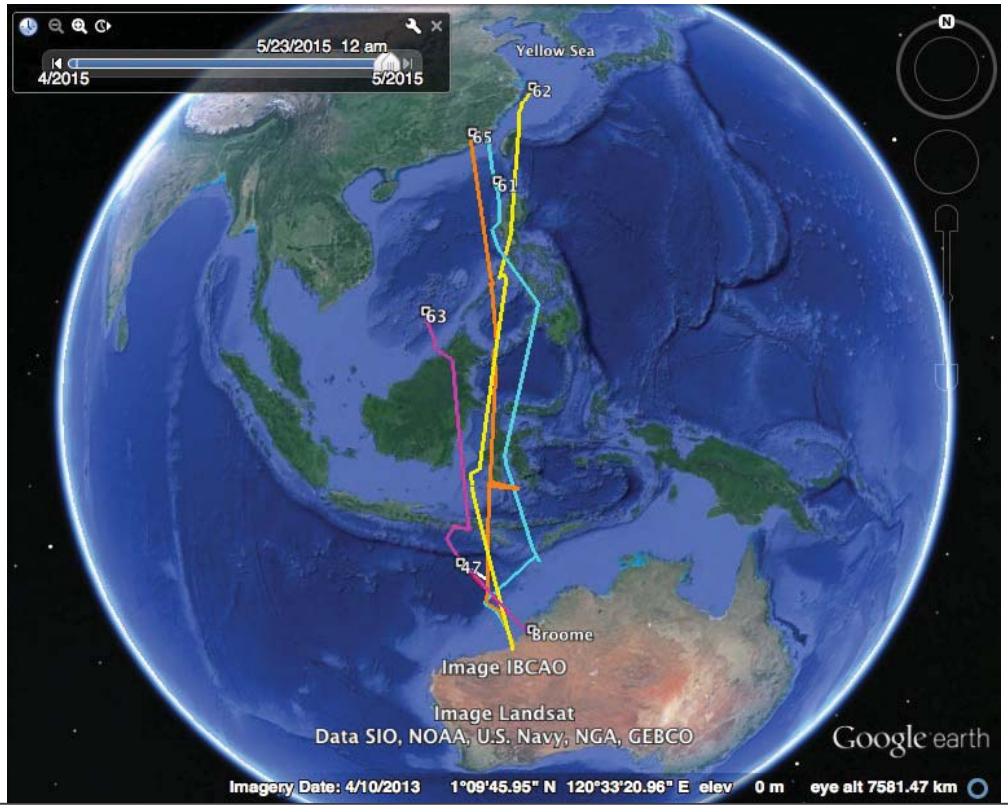
All five birds, which had transmitters put on at Anna Plains and 80 Mile Beach in mid-February 2015 continued to roam around the grasslands of Anna Plains station until the end of March. With them was the sole remaining Little Curlew with a satellite transmitter from the Roebuck Plains, Broome, November 2013 deployment. This bird moved back and forth between Roebuck Plains and Anna Plains before setting off again on this year's northward migration (from Roebuck Plains). One of the Anna Plains/80 Mile Beach birds, from the 2015 deployment, also moved to Roebuck Plains before northward migration. Another one spent several weeks in the Fitzroy River estuary near Derby before its transmitter stopped around the time the first two Little Curlew left on migration from Anna Plains/80 Mile Beach. We therefore have strong evidence that Little Curlew depart on northward migration from a variety of locations in north-west Australia (NWA).

All birds confirmed the migration strategy, which first became apparent during the 2014 northward migration. Most birds stopped in the Indonesian region (1000-2000 km) for between 1 and 2 weeks. Most then moved on to some part of the Philippines for another short stop-over. The Chinese coast was the next destination and it was at this stage where most of the transmissions from the Little Curlew units ceased – we had fixes from two birds, which had reached the coast. This project has shown that Little Curlew seem to be different to most other wader species leaving NWA on northward migration. Most other species put on large quantities of fat (up to 100% addition to their fat-free weight) and many complete their journey (5000-6000 kilometres) to the Chinese coast (including the Yellow Sea) in a non-stop flight. Little Curlew on the other hand seem to put on much less weight (40-60%) before departure and make several stops on the journey before reaching China. Late departure and several stop-overs prior to reaching China also correlate well with (maybe a consequence of?) Little Curlew not completing their wing-moult until early March, whereas most other waders complete it in January or early in February. Energy resources are not normally devoted to weight accumulation until the main moult of the primary feathers is complete.

At this stage, it appears likely that there will be no further emails this year concerning the movements of Little Curlew carrying satellite transmitters.

We will be carrying out a thorough investigation to try to be sure that the performance of satellite transmitters we deploy in the future is much improved. This will include exploring different harness design options.

Clive Minton and Inka Veltheim
on behalf of the AWSG
July 2015



Global Flyway Network Satellite Tag Update 13 July 2015

The Great Knots and Bar-tailed Godwits carrying solar-powered Platform Terminal Transmitters (PTT) have been doing much as we would expect for the last 2 months although with the data gathered from the PTT we get a great insight into individual behaviour. If I am asked, "how does a Great Knot migrate to its Siberian breeding grounds?" I give an answer that is general to all Great Knots: "They fly to southern areas of the Yellow Sea, take one or a few hops to the northern Yellow Sea, finish fattening up there and then go to the breeding grounds." That is broadly correct but of course there is a great deal of individual variation within that general strategy. These individual migration tracks are just what the PTTs reveal to us.

On 20 April 2015, six **Great Knots** were sending signals from China and 2 were sending signals from Australia. One of these was in the Northern Territory (1,000km north east from Roebuck Bay, where we banded it) and the other was at 80 Mile Beach (200km south from Roebuck Bay). It would seem these 2 will remain in Australia over the breeding season.

All the **Great Knots** did a single flight from Roebuck Bay to the coast of China (4600 to 5200km), travelling at about mid-40kph, except for one that stopped in Vietnam. The general strategy has been a single long flight then short stays of less than one day (but up to 11 days) before the next leg northward of between 500 and 1,800km.

One bird was transmitting as it left Roebuck Bay on migration giving very good timing, direction and speed of the initial leg of its journey. It left at 1800hr on 7 April 2015.

The tagged Great Knots mainly used stopover sites in northern China and North Korea. Birds did spend time at Yalu Jiang National Nature Reserve (YJNNR), which is thought of as a traditional 'hot-spot' for Great Knot, however they did not spend much time there and no birds departed to their breeding grounds from there. The stopover sites the Great Knots used this year are 150km southeast and 160km northwest of YJNNR including just over the border of China into North Korea. YJNNR has traditionally been a stronghold for Great Knot and Bar-tailed Godwits but there is growing evidence to suggest it is not as rich in food resources as it was and possibly birds are moving away from using it.

The Great Knots reached the breeding grounds on a NE course away from the northern coast of North Korea and northern China on journeys of about 3,800 km. They broke the journey for 1 to 4 days around the northern tip of Sakhalin and the Sea of Okhotsk after a first leg of about 2,000 km.

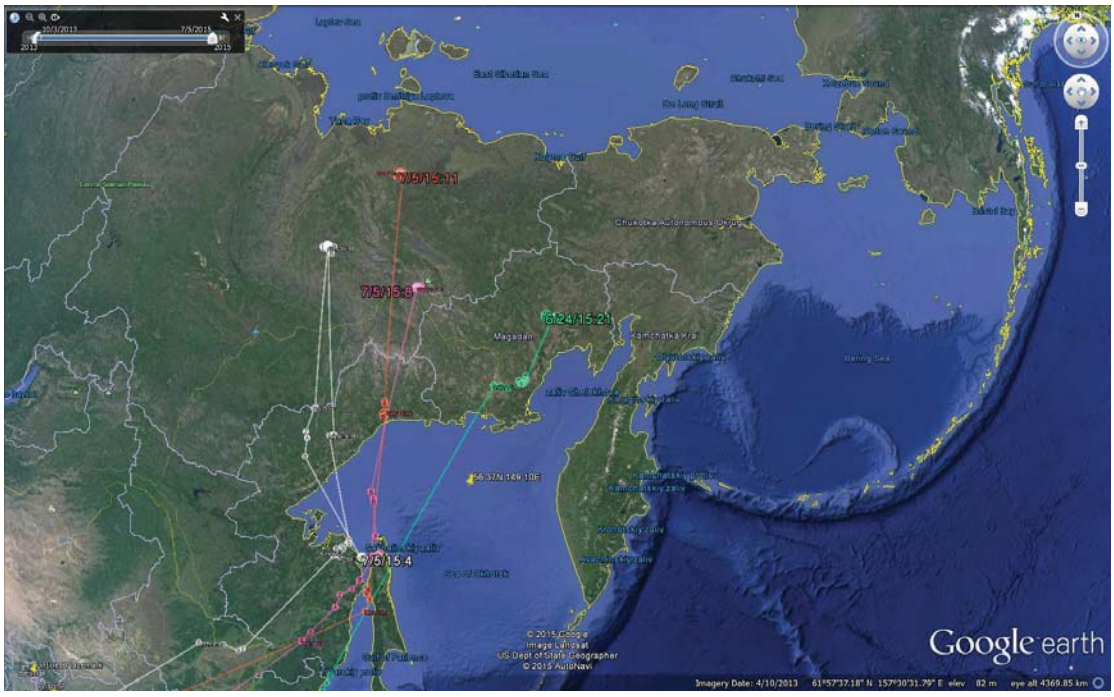
Great Knots on the breeding grounds seem (from their PTT locations and timing) to have nested successfully except for one that seems to have been 'lost', i.e., predated or otherwise.

As of last week (6 July 2015), one bird has started on its southward migration with a 1,500 km flight from the nest site in central Far East Russia, to the Russian mainland just east of the northern tip of Sakhalin in the Sea of Okhotsk.

We expect the Great Knots to return to Roebuck Bay via the Yellow Sea, but let's wait and see!

The **Bar-tailed Godwits** with PTTs left later than the Great Knots. On the afternoon of 11 April 2015, I saw a flock of 55 Bar-tailed Godwits exhibiting pre-migration behaviour at a roost. In this flock were 3 colour-banded birds and 2 of those had PTTs! The flock departed at 6pm that evening.

This was the first time we have had two PTT birds apparently in the same flock. A question I am always asked is: "When they leave together do they stay together?" "I don't know" was the honest answer. These two didn't stay together the whole way: one stopped in the Philippines after a flight of 3,430km



A selection of Great Knot tracks to and from their breeding sites in Siberia

Global Flyway Network Satellite Tag Update 13 July 2015 cont.

while the other went all the way to China in a 4,800km flight. The Philippines site only has narrow mudflats but three suitable-looking river mouths for a godwit to feed at and only a low population of people nearby.

Two other godwits were just 80km south of this site on the west coast of the island of Mindoro. This also looks like a very suitable stop-over location. It has mudflats, river mouths, mangroves and aquaculture ponds which potentially offer good roosting opportunities.

One of the birds at this site initially landed on an island 125km due west of its current location. That site is a rocky coast with no mudflats and completely unsuitable. So the bird went somewhere with mudflats! This suggests that the bird 'knew where it was'; it didn't go north or south or west as there is nowhere suitable (close by) for it to feed, so it went due east to where it 'knew' there was suitable habitat. Another PTT bird is on the same mudflat but it got there in a direct flight. Interesting stuff.

By 20 April 2015 three Bar-tailed Godwits had stopped in the Philippines, seven were in China and one was still in Roebuck Bay. The first flight of the birds that got to China was between 4,600 and 5,200km.

By 13 July 2015, Bar-tailed Godwits have completed their northward migration and, in most cases, have already departed their northern Russia breeding grounds to staging sites even further north in the New Siberian Islands.

The first bird settled on her breeding area on 24 May and the last on 8 June; all the tagged birds are females. Flights were between 3,400 and 4,300 km long from the Yellow Sea to apparent breeding areas; most were non-stop while some birds made brief stops after about 2,000 km.

The Argos data allows us to tentatively interpret what the birds are doing. For example, when it is plotted on Google Earth, multiple data points in an arrangement like the spokes of a bicycle wheel all radiating out from a central point suggest a bird on a nest moving only short distances. If this pattern continues for around 25 days, we interpret that as the bird having nested successfully. If the bird stays in the area for 35 days, then she has likely had enough time to raise a brood.

Most of our tagged birds seemed to have had a nest but 'brood success' was mixed; several birds weren't in one site long enough to have a successful breeding outcome which is not unusual for long-lived Arctic-breeding shorebirds.

Most birds are now (13 July 2015) headed to or have arrived at the New Siberian Islands. This is a distance of ~660 km to the closest nest and ~1,300 km to the furthest nest. This is an aspect of post-breeding movement that was a surprise to the team in 2008. All that is, except our Russian colleague Pavel Tomkovich. Pavel knew about this movement and this cohort of birds are doing exactly the same movement as the 2008 birds.

We expect them to fly back to the Yellow Sea in 2-3 weeks after feeding and fattening up on the New Siberian Islands.

Note: All distances and flight times in this update are preliminary. Further statistical analysis will be done at a later stage. So all information in this document is approximate.

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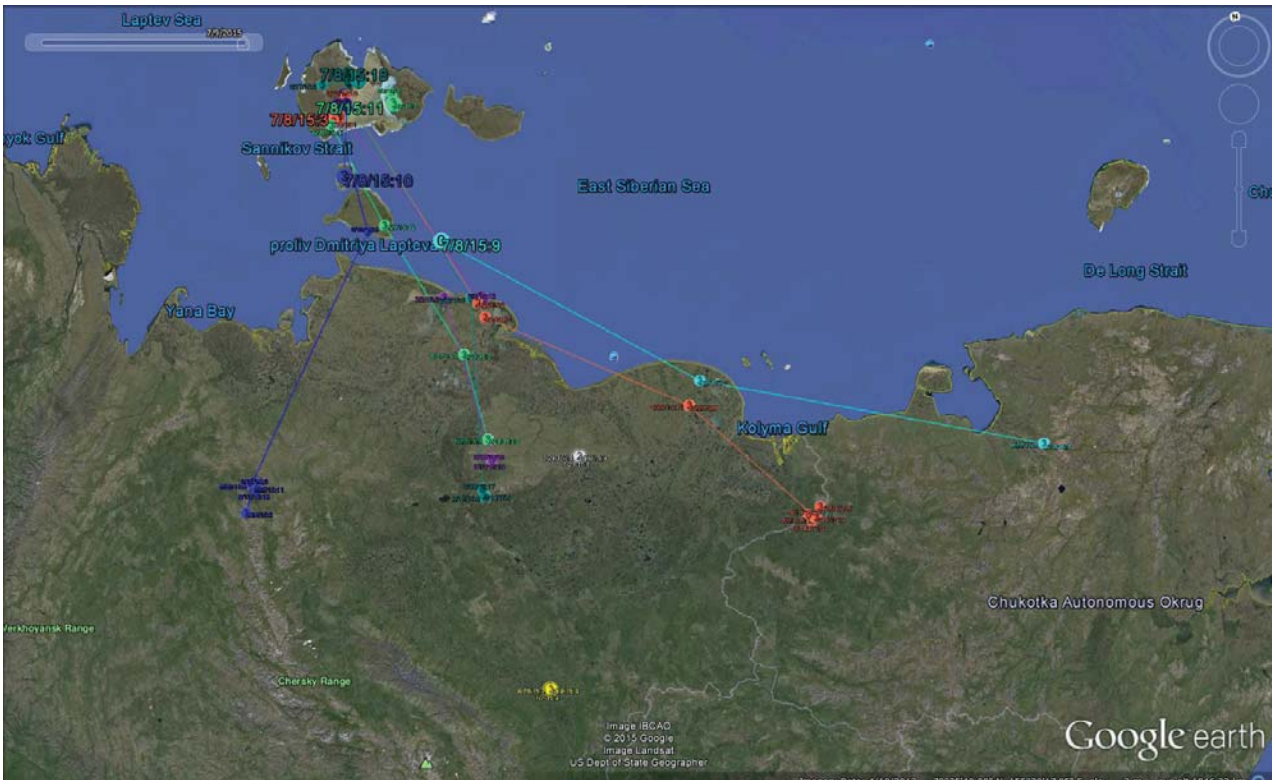

A selection of Bar-tailed Godwit tracks from breeding sites in Siberia to the New Siberian Islands.