

Tattler

Newsletter for the Asia Pacific Flyways & Australian Shorebirds 2020 Project

No. 44 July 2017

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Kentish Plover, Republic of Korea. Photo by Niall Moores

Editorial

This edition of Tattler celebrates Ken Gosbell's ongoing commitment to shorebirds which has seen him in many roles from fieldwork to diplomacy. It also celebrates the international cooperation between New Zealand and the Democratic People's Republic of Korea, in the pursuit of understanding shorebird use of that section of the Yellow Sea. And there is additional international cooperation between Australia and the Republic of Korea, where an Australian delegation witnessed conservation work in the Geum Estuary.

There are several shorebird counts at various places along the EAAF, from Tasmania to Kamchatka, thanks to the dedication of various observers; and news of Grey Plover satellite tracking as these birds fly to their breeding grounds from South Australia. Wader breeding success deduced from the percentage of juveniles in catches in southeast Australia suggests that Curlew Sandpipers had an exceptionally good breeding year in 2016.

Finally, there are opportunities for your involvement – in artworks to be part of the Overwintering Project; in the NWA Expedition for banding and flagging shorebirds; or in contributing details of your favourite shorebird books and websites so that a list can be compiled for the AWSG website.

This Tattler is late because of my difficulty in accessing the internet while cruising Indonesian waters – but I am delighted to report frequent sightings of Red-necked Phalarope on the Flores Sea in late August and early September.

Liz Crawford, Editor

Contributions are welcome and should be sent to:
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Ken Gosbell – Awarded the 2017 Hobbs Medal

Ken Gosbell is the quiet achiever of the Australasian shorebird community. He has played a large role in studies of the migrations of our shorebirds, identifying the threats that they face, and bringing the urgency of these threats to the attention of both public and government.

Although Ken has written or co-authored a number of important scientific papers about shorebirds in the East Asian–Australasian Flyway, he is not formally trained as an ecologist or ornithologist. He qualified as a civil engineer and had a long and varied career in the public service, initially working as a structural engineer in the Commonwealth Department of Works and later progressing to project management. This work took him to many interesting places in Australia and Papua New Guinea, and included leading a project to rebuild Australia's Antarctic bases. Travels like these gave him some opportunity to indulge his lifelong interest in birds, botany, photography and natural history, but it was not until he retired that he was able to fully immerse himself in these passions.

In 1995, recently retired and seeking a conservation-oriented hobby, Ken joined the Victorian Wader Study group (VWSG) on one of their regular cannon-netting catches (at the suggestion of a bushwalking friend, Rosemary Davidson). He was immediately captivated by shorebirds, and has been studying them ever since. In the early stages he learned a great deal about shorebirds and cannon-netting techniques from Clive Minton, the enthusiastic leader of the VWSG. Ken became one of Australia's few licenced cannon-netters, and a stalwart of the VWSG. But his interests went beyond cannon-netting and the migration questions it largely addresses. He also spent a great deal of time learning about monitoring methods and threatened habitats in Asia where most of our shorebirds stage, learning in particular from Jim Wilson and the late Mark Barter, and from self-funded expeditions to count shorebirds with local teams in China, South Korea and Kamchatka.

Ken's first shorebird publication was a detailed study of the biometrics and moults of Sanderling (Gosbell & Minton 2001), and for many years he led annual expeditions to count all the shorebirds in the Coorong (Gosbell & Christie 2002, 2003, 2004, 2005, 2006, 2007), maintaining the effort until sufficient local and government interest had been built up for the counts to continue without his direct involvement. Since 2007, the main focus of Ken's shorebird research has been in geolocator studies of shorebirds. Geolocators are tiny electronic devices that

measure and log light levels, and concurrently record the time. Careful analyses of these data can reveal (approximately) where the bird has been. However, it is labour intensive, not least because it is necessary to recapture a tagged bird to retrieve the data. Ken trained himself as the local technical expert, playing the leading role in working out how to attach the devices safely to shorebirds, how to download the data, and how to analyse it. A flow of publications has resulted, hugely enhancing our understanding of migration in this flyway (Minton *et al.* 2013) and making the Ruddy Turnstone the focus of a migration and disease study at Deakin University (e.g. Aharon-Rotman *et al.* 2016). Ken was one of the first researchers to realise that the light levels recorded by geolocators on the breeding grounds could be used to tell when shorebirds were incubating (Gosbell *et al.* 2012), as the geolocators of shorebirds (mounted on leg-flags) are only concealed from 24-hour arctic light when the birds are sitting. The technique can now be used as a low-cost tool to study breeding behaviour of shorebirds without ever setting foot in the arctic! It can be used as an indication of breeding success, and has demonstrated more frequent re-nesting by arctic shorebirds than was previously expected; it has also contributed to a Nature publication on interspecific variation in the incubation schedule of shorebirds (Bulla *et al.* 2016).

Ken's behind-the-scenes contribution has been greater still. He has served on the Australasian Wader Studies Group (AWSG) Committee since 1997 – initially as Secretary and later as Treasurer – so by the time he became Chairman of the group (2006–2010) he had a very full understanding of the inner workings and capacity of the group. Under his chairmanship the group increased its already substantial conservation and international outlook. With Mike Weston and Danny Rogers he conceived and initiated the Shorebirds 2020 program, hosted at BirdLife Australia – a program that has greatly increased the coverage, rigour and long-term sustainability of shorebird monitoring in Australia. The huge database consolidated and maintained by the Shorebirds 2020 program has been critical in documenting the decreases in populations of migratory shorebirds in Australia (Studds *et al.* 2016; Clemens *et al.* 2016). Ken was also a co-leader of the Saemangeum Shorebird Monitoring Program, a project to document and publicise the effect of a huge tidal-flat reclamation project on the west coast of South Korea (Moores *et al.* 2008). Although Saemangeum could not be saved, both projects have had (or contributed substantially to) some positive conservation outcomes, including preservation of the threatened Geum

Ken Gosbell – Awarded the 2017 Hobbs Medal cont.

Estuary in South Korea, a Korean Government announcement (somewhat maintained!) that it would not initiate any more major tidal flat reclamation projects, and broad acceptance by national governments that shorebird populations are declining, largely because of habitat loss on their Asian staging grounds.

Still further behind the scenes are innumerable other activities by Ken that didn't result in headlines, but were and are essential to maintain shorebird studies in Australia. An example is the banding database of the AWSG and VWSG, the foundation of hundreds of publications; it became a major internal problem when the software that drove it became obsolete. Ken quietly took the issue on, established a team to find and implement a software solution and another team to maintain the continuity of data input. It was a typical Ken contribution: carefully considering the problem, so that when the moment arrived, he was prepared to implement the solution seamlessly. Another example is Ken's role as former chair of the Shorebird Working Group of the Flyway Partnership, an affiliation of governments and non-government organisations to advance shorebird conservation in this flyway. Many shorebird-related activities are fun. This kind of liaison work is not. But it is essential that people with a good understanding of shorebird biology attend the meetings, guide their discussions, bring the ever-changing cast of bureaucrats up to speed and remain patient and committed when the complex workings of between-government negotiations move at seemingly glacial pace. There are still many challenges in shorebird conservation, but it is thanks to a handful of people like Ken that it is gradually rising higher on government agendas.

Finally, it is difficult to measure the impact that Ken has had simply in recruiting shorebirders to the cause. A count, conference or a shorebird catch can seem intimidating to a newcomer, thrown into the thick of activities with a team of variably excitable experts who are very focussed on the task at hand. Ken is a reassuringly calm and welcoming presence in those circumstances, genuinely interested in what newcomers have to say and always ready to share his huge shorebird knowledge. I have no hesitation in recommending Ken for the Hobbs Medal.

Danny Rogers

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New Zealand National EAAF Partnership Meeting

At the recent New Zealand Bird Conference representatives from Pukorokoro Miranda Naturalists Trust (PMNT) and the Department of Conservation (DOC) took the opportunity to hold a National East Asian-Australasian Flyway Partnership meeting on 3 June 2017.

David Lawrie from PMNT and Bruce McKinlay from DOC took the lead and promoted an open, relaxed side-meeting at the Conference. The agenda included a more detailed debrief on the recent PMNT expedition to the Democratic People's Republic of Korea (DPRK) and the results of another successful survey along the West Sea. David Melville and Adrian Riegen presented a paper to the conference on the progress with the survey work there. A highlight of this was hearing about the successful deployment of bands on Whimbrels in DPRK. These bands were supplied by the NZ Department of Conservation as part of its ongoing support to the PMNT surveys and relationships in DPRK. We also reflected on recent workshops in DPRK relating to the DPRK application to join the Ramsar Convention.

The Partnership meeting also discussed strategic initiatives to raise the profile and level of protection for the migratory shorebird resources in Manukau Harbour. Manukau Harbour supports the largest populations of trans-equatorial migrants in NZ and is also adjacent to Auckland City. Developing the nomination form for a Flyway Site nomination was agreed as an action point. Additionally an exercise was initiated to map the extent of the key shorebird areas within the harbour.

The National Partnership also agreed on initiating work to promote domestic protection of key wader sites at Manukau Harbour. We discussed in some detail the identification of these sites and what options there were to protect them from adverse human-orientated activities such as dogs and windsurfing.



Participants at the 2017 New Zealand National Partnership Meeting held at Te Anau, New Zealand, June 2017. Left to Right: David Lawrie (Pukorokoro Miranda Naturalists Trust representative to EAAFP); Adrian Riegen (Deputy Chair PMNT), Bruce McKinley (DOC representative to EAAFP), Keith Woodley (PMNT Shorebird Centre Manager), David Melville (Shorebird Ecologist), Gillian Vaughan (Chair, PMNT). Photo ©Les Feasey

Bruce McKinley, Department of Conservation, New Zealand Government

source: <http://www.eaaflyway.net/new-zealand-national-partnership-meeting/>

Pukorokoro Miranda Naturalists' Trust and Nature Conservation Union of Korea - Joint Shorebird Survey 2017

Pukorokoro Miranda Naturalists' Trust Team

Adrian Riegen, David Melville, Nigel Milius, Wendy Hare

Korean Team

Ko Hong Choi, Hong Hyo Song, Ju Song I, Kim Song Ho, Ri Chung Song

This year the survey comprised two parts: shorebirds banding and flagging and the shorebird survey of a new section of the West Sea (Yellow Sea) coast, not previously surveyed but just northwest of where we surveyed in 2016. Other waterbirds were counted and all other bird species recorded wherever possible, with 116 species recorded during the banding and survey period. Counts were made at the banding site, repeating those done in 2015.

Shorebird Banding 23-26 April 2017

Prior to 2017, no shorebirds had been banded in the Democratic People's Republic of Korea (DPRK) and the country has no banding scheme. The reason for attempting to band shorebirds this time was to help the Nature Conservation Union of Korea (NCUK) get a better understanding of practical aspects of banding shorebirds and how DPRK fits within the East Asian-Australasian Flyway. The Koreans have little chance of being involved in banding elsewhere or handling shorebirds, quite important for people who really want to understand these birds better. Permission was sought from the New Zealand Bird Banding Office to use New Zealand bird bands for this exercise and this was agreed to, on the understanding that all unused bands would be returned to NZ. We took all nets and banding equipment with us, and none of this was

Joint Shorebird Survey in DPRK cont.

left in the country. DPRK was allocated a flag combination of orange over white with the white being engraved with 3 digits, a number-letter-number sequence. No one else on the flyway is using this combination. Clive Minton of the Victorian Wader Study Group kindly supplied us with a selection of orange flags and Dick Veitch made the white engraved flags in a selection of sizes.

The place chosen for the banding attempts was Zhongak-ku, a site we had visited in 2015 and which seemed suitable for the purpose, with a shallow lagoon behind the sea wall and small low bare islands. The other reason for choosing this site was that we could stay at the aquaculture farm headquarters just a few hundred metres away, which saved a three-hour round trip to the nearest hotel each evening. We were confident birds would use these ponds at night if the tides were big enough to force them off the tidal flats. The high tides chosen were, it turned out, a bit early in the evening, although after dark and on moonless nights birds were coming off the mudflats very early and were roosting well before dark. Added to this the wind was very strong on the first two evenings. Normally in these conditions we would not attempt to catch. The third evening was calm with a later tide and better-positioned nets, with a small catch of Whimbrel made.

The first night in very strong winds we caught one Kentish Plover and David Melville was given the honour of banding the first shorebird in DPRK. The Koreans observed and videoed the banding procedure.

Six Whimbrels were caught on the third night and these were banded and processed, with three Koreans getting the chance to band five of the birds and all birds were released alive and

well. One of the Whimbrel was seen the following morning although not close enough to read the flag.

During the morning high tides we were able to count in the large enclosed area, which has various shallow ponds with exposed mud and deeper aquaculture ponds. We covered a larger area than in 2015 and counted 3,488 birds of which 1,335 were shorebirds and the rest other waterbirds. Key species: Common Greenshank 412, Curlew sp. 235, Red-necked Stint 139 and Great Knot 112. Two rare species in DPRK were recorded: one Brent Goose and one Avocet. Also seen were a Black-faced Spoonbill and a Eurasian Spoonbill along with large numbers of ducks and gulls. After this we moved north to the survey area.

Shorebird Survey 27 – 30 April 2017

The survey took place between Cholsan and Gwaksan in the North Pyongan Province, with the team based at the Dongrim Hotel, which was between 1½ and 2½ hours drive from the four areas to be counted. The sites were running approximately northwest to southeast over a straight-line distance of approximately 60km, between 39°46'N, 124°32'E and 39°34'N, 125°10'E. The northwestern site was approximately 40km from the eastern end of the Yalu Jiang National Nature Reserve in China. This coast is very indented with many estuaries and small islands. Very large areas of mudflats exist in this region and three of the count sites had seawalls linking islands, which had created large bodies of water behind them, being used initially for jellyfish farming. These areas also still had extensive mudflats behind the seawall, which were being used by roosting shorebirds. Birds were counted at nine roost sites in the four areas.

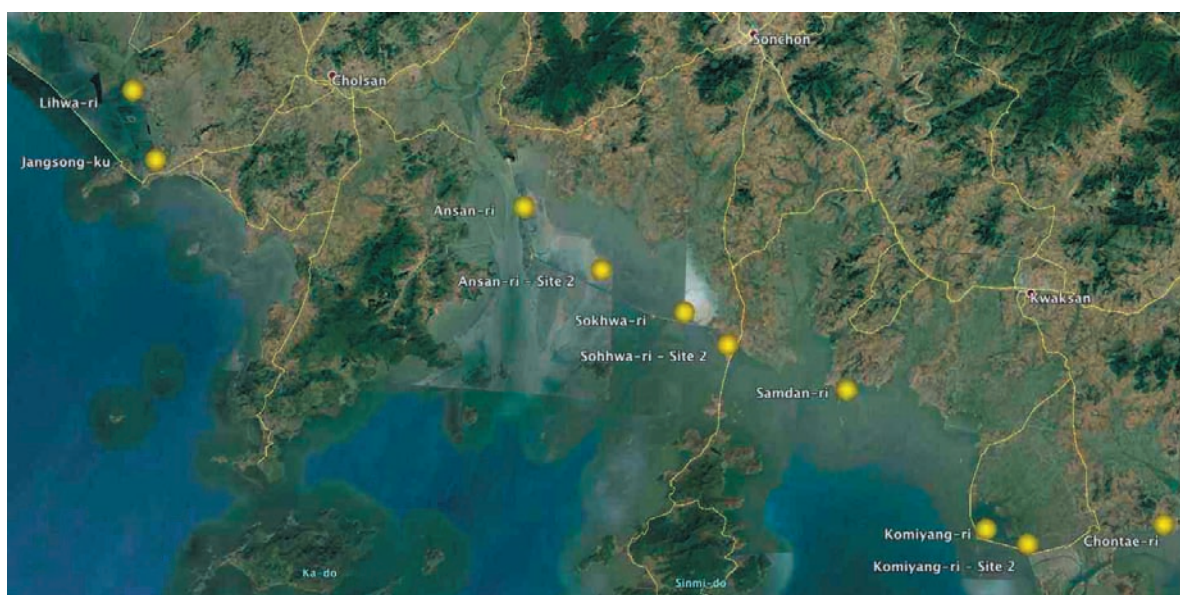


Figure 1
Count sites in
the Democratic
People's Re-
public of Korea

Joint Shorebird Survey in DPRK cont.

27 April 2017

Jangsong-ri

Aquaculture ponds, shallow lagoons and salt ponds

Total count shorebirds and waterbirds 8,404

Total shorebirds 7,427

Key species: Dunlin 5,500, Far Eastern Curlew 1,022 and Bar-tailed Godwit 558

Lihwa-ri

Aquaculture ponds and shallow lagoons next to rice paddies

Total count shorebirds and waterbirds 2,050

Total shorebirds 856

Key species: Bar-tailed Godwit 326, Common Greenshank 296 and Dunlin 210

28 April 2017

Ansan-ri (2 sites) and Sokhwa-ri (2 sites)

Three count sites behind the seawall on extensive mudflats still exposed beside a large body of water and a small count site in salt ponds.

Total count shorebirds and waterbirds 20,459

Total shorebirds 20,008

Key Species: Dunlin 13,770, Far Eastern Curlew 4,348, Grey Plover 904, Whimbrel 326 and Common Greenshank 344

29 April 2017

Samdan-ri

Due to technical difficulties, this site did not get counted but based on what we saw of the site it was likely to have been the least important of the survey sites.

30 April 2017

Komiyang-ri

Small lagoon with reeds and low clear islands in shallow water behind a small wall and inside a large aquaculture pond. Of note were four species of shorebirds preparing to breed including at least three pairs of Common Redshank, one pair each of Far Eastern Oystercatchers, Kentish Plover and Little Ringed Plover. At the far end of the large pond was an area of shallow water and reeds with water too deep for small shorebirds but ideal for the longer-legged ones, such as godwits and curlews.

Total count shorebirds and waterbirds 7,351

Total shorebirds 6,810

Key species: Dunlin 5,660, Far Eastern Curlew 330, Whimbrel 268 and Bar-tailed Godwit 131.

Very few Eurasian Curlew were seen during the survey but 30 were recorded migrating from Komiyang-ri this morning.

Chongtae-ri

A small mostly natural bay several km from Komiyang-ri where at high tide the water was shallow enough for curlews to stand. The tide dropped here first allowing birds to move onto the mudflats to feed.

Total count shorebirds and waterbirds 487 **Total shorebirds 454**

Key species: Far Eastern Curlew 340

Total count shorebirds and waterbirds during the survey 38,751

Total shorebirds counted during the survey 35,555

Total waterbird species recorded = 28

Total shorebird species recorded = 33

Far Eastern Curlew and Dunlin were found in internationally important numbers with around 20% of the Far Eastern Curlew population being recorded and around 2% of the Dunlin. How much bird movement occurs along the coast is unclear from our single visits to each site but we did observe shorebirds flying into roosts from bays that looked to have nowhere suitable to roost. The combined sites at Ansan-ri and Sokhwa-ri were by far the most important with 20,008 shorebirds counted of 18 species.

The very low numbers of Great Knots recorded was notable – and not easily explained. At Ansan-ri there were large numbers of *Potamocorbula* shells inside the seawall indicating that clams of a suitable size for Great Knots had been present previously and it seems likely that they could still occur on the remaining tidal flats outside the seawall.

We consider the survey to have been extremely successful and being able to split into two teams each day and therefore cover a greater area than in past years was very helpful.

Full details will be prepared for publication in *Stilt* later in 2017

Adrian Riegen

May 2017

Collaborative conservation in the Republic of Korea

In late May, representatives from BirdLife Australia and BirdLife International hosted Indigenous Yawuru and Murujuga Rangers from Broome and Karratha, academics from Deakin University and representatives of the East Asian–Australasian Flyway Partnership and Woodside Energy, in a visit to South Korea. While there, they witnessed first-hand, the conservation work being conducted to preserve the intertidal mudflats of the Geum Estuary as well as the destruction of muddy shorelines.

Elsewhere on the shores of the Yellow Sea, vast areas of mudflats have been reclaimed for the construction of industrial sites. This destruction of prime shorebird habitat has caused the populations of numerous species of shorebirds to decline rapidly. With the mudflats that fringe the Yellow Sea in China and along the Korean Peninsula providing an essential stop-over site for shorebirds as they undertake a long migration between their Siberian breeding grounds and their wintering grounds in Australia and New Zealand, the delegation was keen to see what mitigation actions are being undertaken in the area.

The aim of the visit was to complement research and share advice with Seochon County and the South Korean government on shorebird management in the Geum Estuary, the most important site in South Korea, which supports 90,000 migrating shorebirds, including many displaced from reclaimed areas.

A Business & Biodiversity event was hosted by the Australian Ambassador to encourage working

relationships between governments, the private sector, research institutes and NGOs using the Geum Estuary project as a case study for cross-sector collaboration with on-ground influence. Australia's Threatened Species Commissioner recorded a video message.

An International Day for Biological Diversity ceremonial event was also held at the National Institute of Ecology in Seochon County (on the banks of the Geum Estuary), hosted by the Ministry of Environment and opened by Cho Kyeung Kyu, Minister of Ministry of Environment. The event celebrated the 10th anniversary of the ROKAMBA bilateral agreement.

The delegation met with a number of dignitaries, including the Vice-Minister, the Minister of the Environment, Minister of Oceans and Fisheries, and the Governor of Seochon County, as well as the Australian Ambassador and a number of industry leaders.

The delegation also visited two universities in Seoul to build research networks and plan exchange programs.

One of the ornithological highlights was the sighting of a shorebird, banded in Victoria, on its way to its breeding grounds in Siberia.

This project is funded by a partnership with Woodside Energy.

Paul Sullivan

Chief Executive Officer, BirdLife Australia

Shorebird survey, Republic of Korea, 19–25 June 2017

The Yellow Sea region (including the Bohai) is widely recognised as a key staging area for many of the migratory shorebird species of the East Asian–Australasian Flyway (EAAF). Most survey effort has understandably been concentrated during the main northward and southward migration periods (approximately mid-March to late May and late July to mid-October respectively). The region's potential importance to immature and/or non-breeding and post-breeding shorebirds during the boreal summer (June–mid July) therefore remains very poorly understood.

As there appears to be a positive relationship between the rate of decline and the extent of dependence on the Yellow Sea region (e.g. Amano *et al.* 2010), it is important to identify which species and if possible also which age-classes and/or sex also depend on this region during the boreal summer (and boreal winter too).

Barter (2002) provided a boreal summer count of a maximum 1,718 Far Eastern Curlew at Yancheng National Nature Reserve, China; and the recently-adopted Single Species Action Plan for this globally Endangered shorebird adds that, "During the boreal summer considerable numbers of non-breeding, presumed immature, Far Eastern Curlews occur in the northern Yellow Sea and Bohai (Q.Q. Bai unpublished; N. Moores unpublished)" (EAAFP 2017), with some of the unpublished data therein referring to several hundred seen at sites in the Republic of Korea (ROK) in June including Ganghwa Island and the Geum Estuary, both towards the southeast of the Yellow Sea region. Zhang Lin (2016) also confirmed the presence of six globally Critically Endangered Spoon-billed Sandpiper at Tiaozini on the Jiangsu coast, China, in the southwest of the Yellow Sea, on 21 June 2016, five of which he aged as probable Second Calendar-years. This is an age class that has been recorded multiple

Shorebird survey, Republic of Korea, 19–25 June 2017 cont.

times on both the Chinese and Korean coasts during northward migration, raising the possibility that some might try to spend the boreal summer in the Yellow Sea. He also recorded 780 Great Knot, another globally Endangered species, most of which he also aged as Second Calendar-years.

To improve our understanding of shorebird distribution and abundance during the boreal summer in the ROK, we counted shorebirds between 19 and 25 June 2017. Funded by the conservation NGO *Spoon-billed Sandpiper in China* through the National Geographic Air and Water Conservation Fund (Grant GEFC21-16), we visited a total of eleven wetlands on both the west and south coasts of the ROK, concentrating on high-tide roosts but also searching for shorebirds in shallow ponds and rice fields at one site and at one group of freshwater reservoirs at another. Ten of these wetlands have been previously identified as internationally important for at least one species of shorebird during the main migration periods (Moore 2006; Moore 2012).

During the present survey, we found >8,400 individuals of 28 species of shorebird, with 64% of this total counted within the Geum Estuary and 17% at remaining habitat in Namyang Bay/Hwaseong. We did not have time to survey the tidal flats at Ganghwa Island or Asan Bay (this latter site is now almost entirely reclaimed), but we did spend part of two days in Saemangeum. There we found only 241 shorebirds in the areas that we had time to survey, including reclamation ponds in the outer part of both the former Dongjin and Mangyeung estuaries and the small area of tidal flat that remains outside of the outer sea dyke.

The two most numerous shorebird species recorded during this rapid survey were Far Eastern Curlew (3,398) and Grey Plover (1,510), with



Terek Sandpiper - Photo Nial Moore

Terek Sandpiper (980), Far Eastern Oystercatcher (760), Kentish Plover (556), Whimbrel (514), globally Near-Threatened Eurasian Curlew (266) and globally Endangered Great Knot (98) the next most numerous. We failed to find any Spoon-billed Sandpiper but did record one globally Endangered Nordmann's Greenshank, which we aged as a Second Calendar-year. In addition, we counted a total of 657 globally Endangered Black-faced Spoonbill; 271 globally Vulnerable Chinese Egret; and 881 globally Vulnerable Saunders' Gull. All three of these species are already known to breed regularly in the ROK.

The largest concentration of Far Eastern Curlew we found was in the Geum Estuary, with 926 counted along the mainland coast on 22 June and a minimum 1,390 counted on Yubu Island on 24 June. Tide heights and the tide-related movements we observed suggested that these birds were different, so that we consider that >2,300 were present in the whole estuary on those dates. This total represents 7% of the population estimate made in 2012 of this fast-declining species (Wetlands International 2017). The species is remarkably difficult to age well in field conditions once juveniles grow full-length bills and lose some of their beautifully warm plumage tones, but none of the birds we saw well were juveniles; and none were yet in active primary moult either, unlike several of the Eurasian Curlew which were also present. It therefore seems likely that the majority of these Far Eastern Curlew were either non-breeders or adults returning from the breeding grounds. Previous count effort in the Geum Estuary (e.g. in Lee *et al.* 2002; Moore 2012; N. Moore unpublished) suggests that this species largely departs the area by mid-May but is present again in substantial numbers by mid-June and especially in July. Other research suggests that post-breeding adults likely start to return to the Yellow Sea in late June and could even breed and arrive back in the Yellow Sea several weeks earlier than this (Choi *et al.* 2016; Danny Rogers in lit. June 2017).



Far Eastern Curlew preening - Photo Nial Moore

Shorebird survey, Republic of Korea, 19–25 June 2017 cont.

The vast majority of Grey Plover was also found on Yubu Island in the Geum Estuary (1,150), with 350 also at Namyang Bay/Hwaseong. At both sites only a handful of these birds showed any trace of breeding plumage, and many appeared to retain some worn juvenile plumage. Almost all individuals were therefore considered likely to be Second Calendar-years.

A fuller report of the survey is in preparation for SBS in China; and thanks to the additional support of a small grant received through the EAAF Partnership and the Far Eastern Curlew Task Force, Birds Korea will also conduct additional research on Far Eastern Curlew on Yubu Island in July and August this year, to improve on counts and our understanding of migration phenology and feeding ecology.

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Wader Count in Dongtai–Rudong, China, 7–12 May 2017

Between 7 and 12 May 2017 we did a wader counting tour along the coastline of southern Dongtai and Rudong counties in southern Jiangsu Province, China. The areas covered (see **Figure 1**) and the timing of visits were similar to the survey done in May 2014 with Robert Bush (see *Tattler* **33**, p. 8 "Searching for 'Spoones' in Rudong, China").

We drove an off-road Suzuki Jimny and undertook tough walking and intensive counting. Based on several years' knowledge of the counting areas, we believe most of the waders using intertidal mudflats were counted. In the whole area there are many inland aquaculture ponds, however, most of them are not favoured by waders. Thus we only counted a few of them either when there were waders feeding in them or roosting there at high tide when the intertidal mudflats were flooded. There are also many farmlands and grasslands which may be good for certain

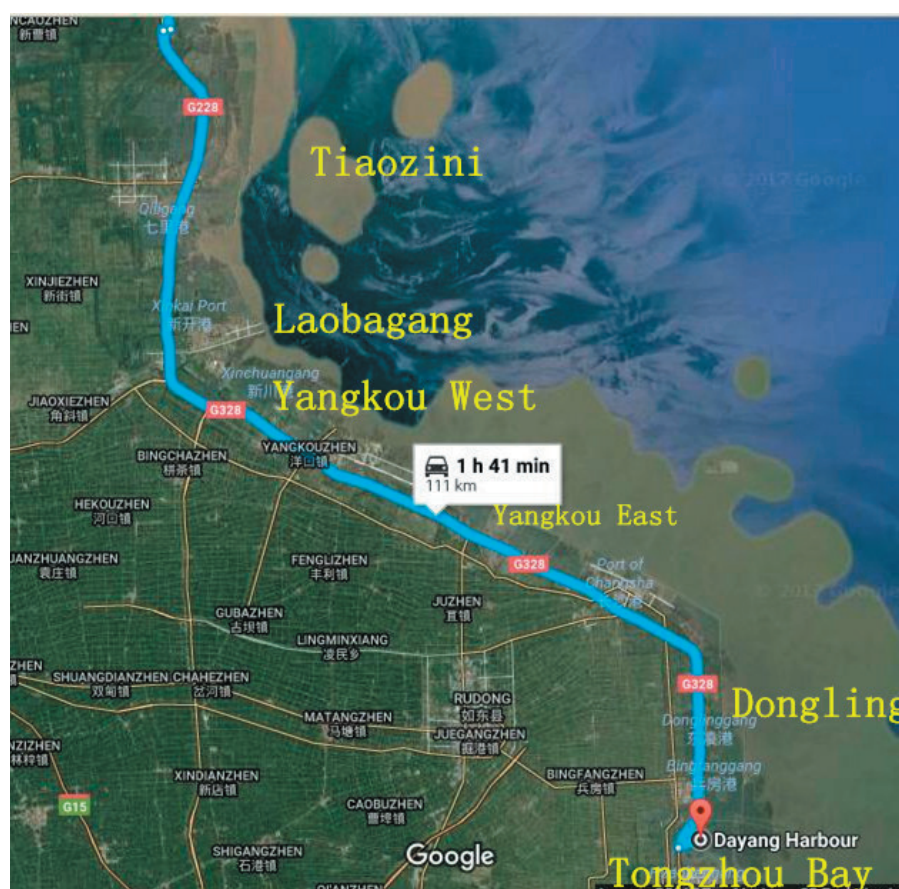


Figure 1. Our counting areas included the northern border of Tiaozini Reclamation Area in the north and northern Tongzhou Bay in the south.

Wader Count in Dongtai-Rudong, 7-12 May 2017 cont.

migratory species such as snipes, Oriental Plover, Pacific Golden Plover, Little Curlew and Oriental Pratincole or for breeding species such as Grey-headed Lapwing, Far Eastern Oystercatcher, Kentish Plover, Redshank, Black-winged Stilt and Oriental Pratincole. Since the timing is quite late for Oriental Plover and Little Curlew's visible migration peaks in mid to late April, and breeding population of waders is small, we didn't visit those kinds of habitat much.

The manpower this time was much smaller than in the 2014 count, so we didn't focus on certain rare and difficult species such as Spoon-billed Sandpiper. Instead, we concentrated on counting all the waders present and only looked for Spoon-billed Sandpiper among the small waders when time permitted.

Due to difficulties in accessing some mudflats and high-tide roosts, and due to time available, not all sites were counted before, at and after high tides. Some sites were visited only once while some were visited two to three times to get a better count (see **Table 1** and maps).

Tide heights in this round of spring tide were very good for counting. Most waders on the mudflats stayed there at high tides and thus were counted very well. The ones which flew to construction sites inside the seawall to roost were counted before they took off from the mudflats.

Although at 16:40 on 11 May at Tiaozini, Dongtai we noticed 30 Common Greenshanks leaving for the north in V-shape formation, we didn't try to figure out the turnover rate. Actually, we believe that many waders were staging in the area and the turnover rate was not high. This conclusion is also based on very similar counts on some common species after several days. Thus our counts (see **Table 2**) do not just present the minimum numbers of waders but also give a very good clue on the maximum. If combined with other counts and tracking study results in different areas in the whole flyway, the population decline and the change in northward migration pattern may be very clear.

Note that most of our counting areas are very large and many birds cannot be seen very well, so we didn't try to estimate the proportions of subspecies/sex/age groups.

Table 1. Survey locations, dates and tide states

Locations from north to south	Dates	Before high tide	At high tide	After high tide
Tiaozini, Dongtai	8, 9 & 11 May	Yes	Yes	Yes
Laobagang, Haian	7 & 9 May	No	Yes	Yes
Yangkou West, Rudong	7 May	Yes	No	Yes
Yangkou East, Rudong	8, 9, 11 & 12 May	Yes	Yes	No
Dongling, Rudong	10 May	No	Yes	Yes
Tongzhou Bay, Tongzhou	10 May	Yes	Yes	No

Maps of counting sites from north to south:



Tiaozini, Dongtai



Laobagang, Haian (birds were mainly in Dongtai County but since this is separated from Tiaozini by a river, we include them in Haian)

Wader Count in Dongtai-Rudong, 7-12 May 2017 cont.



Yangkou West, Rudong



Yangkou East, Rudong (the area between Yangkou West and Yangkou East is almost abandoned by waders as the habitats are subject to construction and *Spartina* and thus not surveyed much)



Dongling, Rudong



Northern Tongzhou Bay, Tongzhou (Southern Tongzhou Bay has lots of construction going on and was not surveyed this time)

Some interesting results:

- Tiaozini and Dongling still remain the two best sites in terms of numbers of all waders and especially for Bar-tailed Godwit, Nordmann's Greenshank, Sanderling, Spoon-billed Sandpiper, Red-necked Stint, Sharp-tailed Sandpiper, Dunlin and Grey Plover;
- Eastern part of the Northern Tongzhou Bay (marked as Roost 2 and Feeding on the map) was totally empty in a day's survey in January this year by Zhang Lin. The only waterbird recorded was a Grey Heron. It was also reported as almost empty for medium-sized waders when Peng Hebo did a survey in late April in a joint project with GFN. This time we found only very small numbers of medium-sized to large waders, although small waders such as Red-necked Stint, Dunlin and Lesser Sand Plover were quite abundant. Last year in April, Zhang Lin did a few surveys here and the numbers of medium-sized waders were clearly higher. This site has very recent reclamation and construction compared with other sites which have been reclaimed years before. The effect of these ongoing huge projects on waders needs urgent study and the GFN project may provide more clues;
- Yangkou's deterioration continues, but it still supports decent numbers of waders including Terek Sandpiper and Lesser Sand Plover in Yangkou East. In aquaculture ponds in Yangkou West Common Sandpipers gathered along concrete slopes, feeding together with wagtails and some other waders, probably on small flies. Although these ponds are next to each other and have the same way of operation and almost every one of them hosted at least one or two Common Sandpiper, only a few ponds attracted tens of them. Probably this was due to the different availability of food (emergence of flies).

Although we focused on counting the waders, we also looked for colour-marked individuals. Eleven species (Black-tailed Godwit, Bar-tailed Godwit, Terek Sandpiper, Ruddy Turnstone, Great Knot, Sanderling, Spoon-billed Sandpiper, Red-necked Stint, Sharp-tailed Sandpiper, Curlew Sandpiper and Lesser Sand Plover) were seen from thirteen banding locations. Of note were a sat-tagged female Bar-tailed Godwit from North Western Australia, a Terek Sandpiper from Sumatra, a Terek Sandpiper from Kamchatka, a Ruddy Turnstone from Tasmania, a sat-tagged Spoon-billed Sandpiper banded at Tiaozini in early May, a hand-reared Spoon-billed Sandpiper from the head-start project in Southern Chukotka, a Red-necked Stint from Java & Bali, a Sharp-tailed Sandpiper from Victoria, a Curlew Sandpiper from Hong Kong and a Lesser Sand Plover from Chongming Island ringed in or before 2005.

Wader Count in Dongtai-Rudong, 7-12 May 2017 cont.

Table 2. Survey results (numbers in **bold** reach 1% population threshold)

	Species	Tiaozini	Laobagang	Yangkou West	Yangkou East	Dongling	Tongzhou Bay	Total
1	Pin-tailed Snipe				2			2
2	Swinhoe's Snipe			3				3
3	Common Snipe				1			1
4	Black-tailed Godwit	12	50	238	2	226	355	883
5	Bar-tailed Godwit	3720	711		872	4500		9803
6	Little Curlew				17			17
7	Whimbrel	5	24	4	44	6	11	94
8	Eurasian Curlew	171	31		78	5	15	300
9	Far Eastern Curlew	52	21		124	4		201
10	Spotted Redshank	15	4	34	5	6	1	65
11	Common Redshank	25	20	4	21	42	11	123
12	Marsh Sandpiper	19		58	4			81
13	Common Greenshank	96	24	8	26	57	35	246
14	Nordmann's Greenshank	101				9		110
15	Green Sandpiper			2				2
16	Wood Sandpiper	1	2	53	6			62
17	Terek Sandpiper	120	267	10	1060	310	18	1785
18	Common Sandpiper	3	1	135	1	1	1	142
19	Grey-tailed Tattler	31	3	1	3	5	1	44
20	Ruddy Turnstone	115	24		97	71	8	315
21	Asian Dowitcher	1					3	4
22	Great Knot	2000	100		5	18		2123
23	Red Knot	25	80		2	3		110
24	Sanderling	470			2	200	1	673
25	Spoon-billed Sandpiper	9				2		11
26	Red-necked Stint	14870	343		3488	3600	8020	30321
27	Temminck's Stint				1			1
28	Long-toed Stint			13	11			24
29	Sharp-tailed Sandpiper	1764	196	111	81	550	162	2864
30	Dunlin	6575	2784		2615	21000	9900	42874
31	Curlew Sandpiper	13	70	1	3	20	5	112
32	Broad-billed Sandpiper	100	42		22	30	130	324
33	Far Eastern Oystercatcher	39	5		1			45
34	Black-winged Stilt	11		44	1	1		57
35	Pied Avocet	6						6
36	Pacific Golden Plover				17	2	6	25
37	Grey Plover	4590	344	50	199	3560	3	8746
38	Little Ringed Plover				1			1
39	Kentish Plover	23	10		8	2		43
40	Lesser Sand Plover	545	555		1335	1062	1100	4597
41	Greater Sand Plover	17	2		1	20	2	42
42	Grey-headed Lapwing	2		4	4			10
43	Oriental Pratincole				16			16
	Unidentified						200	200
	Total	35546	5713	773	10176	35312	19988	107508

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News from Kamchatka in the 2017 breeding season

Since 2011, regular monitoring of breeding waders has been conducted at two locations on the Kamchatka Peninsula – on the eastern and southwestern coasts. Transect counts for all birds are made with the width of transects ranging from 100 to 500 m depending on species. Additionally, absolute counts for Far Eastern Curlew are carried out on both sites, over 7.5 km² and 19.5 km² respectively.

Over the years, the number of breeding species has fluctuated (**Tables 1** and **2**), but we do not rush to draw conclusions about essential trends in the numbers of waders breeding in Kamchatka.

Data about the breeding population of Far Eastern Curlew is especially interesting. We have five monitoring areas for this species on Southeastern, Southwestern and Eastern Kamchatka. We have annual data for two of these areas since 2011. The most indicative data is for Ust-Kamchatsk Town vicinity (**Figure 1**).

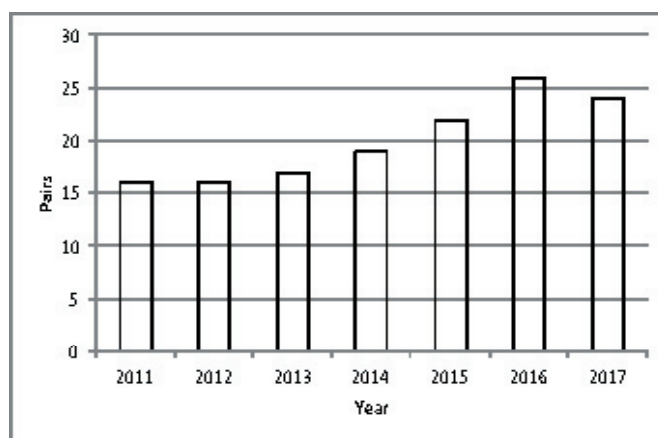


Figure 1. Number of breeding pairs of Far Eastern Curlew on monitoring area near Ust-Kamchatsk Town (data of absolute counts on monitoring square of 19.5 km²)

These results show a positive trend that contradicts data on the population change in the Flyway for this species. On the other monitoring places the number of breeding pairs of Far Eastern Curlew fluctuates. However, at these places we also do not trace a negative trend in numbers of breeding pairs.

Table 1. Breeding density of waders on sedge marshes in Ust-Kamchatsk Town vicinity (Eastern Kamchatka), pairs/km² (data of transect counts)

Species	Years						
	2011	2012	2013	2014	2015	2016	2017
Wood Sandpiper	13.6	10.2	6.3	12.4	22.5	8.4	6.1
Red-necked Phalarope	2.5	2.0	1.3	1.3	2.9	4.4	2.4
Long-toed Stint	0.6	–	–	0.6	–	–	–
Dunlin	9.6	6.1	9.6	6.3	6.1	11.2	12.3
Ruff	–	0.2	–	–	–	–	4.2
Common Snipe	12.7	6.8	6.6	6.7	7.1	5.6	5.2
Eastern Curlew	0.6	0.6	0.6	1.1	1.2	2.1	2.1
Black-tailed Godwit	0.8	0.8	1.0	0.8	1.7	2.0	3.0
Total	40.4	26.5	25.4	29.2	41.5	33.7	31.1

Table 2. Breeding density of waders in low bushes tundra in Apache village vicinity (South-western Kamchatka), pairs/km² (data of transect counts)

Species	Years						
	2011	2012	2013	2014	2015	2016	2017
Wood Sandpiper	0.3	1.0	0.4	0.7	0.3	–	0.6
Long-toed Stint	3.8	7.0	8.1	5.0	4.0	3.3	4.5
Dunlin	–	1.0	0.7	–	–	1.6	1.1
Common Snipe	3.8	10.0	7.4	9.0	8.6	4.9	2.3
Pintail Snipe	0.3	0.5	3.7	3.6	1.3	0.3	0.6
Eastern Curlew	0.7	0.6	0.7	0.6	0.1	0.8	0.7
Black-tailed Godwit	0.2	0.3	0.7	0.9	0.4	1.6	0.7
Total	9.1	20.7	21.7	19.8	14.7	12.5	10.5

News from Kamchatka in the 2017 breeding season, cont.

In early July we established a new monitoring area for Far Eastern Curlew on the Western Kamchatka coast just near our banding point during southward migration in 2014–2016. There we found 17 breeding pairs on a square less than 4 km². It was an unexpectedly high breeding density for this species. We have also noted breeding Far Eastern Curlew on other places in the same area of Western Kamchatka, but were unable to make absolute counts for other locations as such counts demand significant time.

Additional works with waders were carried out in the area near Ust-Kamchatsk Town (Eastern Kamchatka) in June 2017. Geolocators were attached to Dunlins for the first time in Kamchatka. One bird with our flags attached on Western

Kamchatka was caught during this work. Also, mass breeding of Ruffs was recorded in this area in 2017 (hundreds of kilometres to the south of the main breeding range). This species was first recorded breeding in Ust-Kamchatsk Town vicinity in 2012 when we found one female with a brood. In 2017 we observed congregations of males with up to 20–25 individuals in each studied area; at least tens of females started breeding, and two nests were found.

During July – August 2017 we plan to continue banding and flagging work at two points on the Western Kamchatka coast.

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Ruddy Turnstone on King Island, Tasmania

Population count

A total population count was made for the whole of the west coast of King Island by visiting all the known locations for Ruddy Turnstone flocks. The team split into three groups to carry out the main count over the high-tide period on 28 March 2017. Only minor adjustments were made to a few of the figures in the light of our experience during the subsequent nine days.

The count results are given in **Table 1**. There was a huge increase in population from 597 in February 2016 to 843 this year. This is the highest count since 2010. At almost every location visited, a flock of Ruddy Turnstone was present. Furthermore, the numbers were usually at the upper end of the range recorded in recent years. This was true for almost every location, but the in the southwest section it was particularly noticeable with an amazing 347 turnstones in the Surprise Bay to Stokes Point section.

Subsequent catching revealed that the exceptional proportion (31%) of juvenile (first-year) birds in the population accounted for most of this large increase. Assuming the proportion of young birds was uniform across the island there would have been 261 juveniles in the count, which more than accounted for the 246-bird increase since the February 2016 count. However, this does not allow for the natural 10–15% mortality which would be expected on the 597 birds that were recorded at the same sites in February 2016. Thus there must have been some immigration of birds from elsewhere to account for the population figure recorded this March.

It will be interesting to follow the population

trajectory in the future after this abnormal increase in the 2016/17 non-breeding season.

Catching

Seven catches were made on the nine days of catching attempts during the visit (**Table 2**). The team got off to a brilliant start, with five successive good catches in the first five days averaging almost 40 birds per catch. Maybe a touch of overconfidence, plus a group of turnstones which had not read the rules of the game, led to two frustratingly blank days on 3 and 4 April at Surprise Bay. This was partly rectified after we moved the net location to the southern end of the bay and made a nice catch of 21 Ruddy Turnstone on the morning of 5 April. It was rather disappointing to finish with a catch of just seven birds at Central Manuka – the potential for a catch of 20+ was certainly there. The total of 216 turnstones caught was the highest visit total since March 2010.

There were two other really good features of the catch data – the high proportion of juveniles and the number of geolocators retrieved, as detailed below.

Also included in this report is a summary of all catches made on King Island during the 18 visits since March 2007 (**Table 3**). Altogether, 3213 Ruddy Turnstone have been caught in 107 catches – an average catch size of 30 birds. On average 178 Ruddy Turnstone have been caught on each visit.

Percentage Juveniles

Everyone was delighted when, from the very first catch onwards, we realised that turnstones

Ruddy Turnstone on King Island, Tasmania, cont.

must have had an exceptionally successful breeding season in the arctic summer of 2016. The proportion of juveniles in every catch was high with the highest being 52% in our first catch of 27 turnstones at North Manuka. Full details of the percentage of juveniles in each catch are given in **Table 2**.

Table 4 gives the percentage of juveniles in catches of Ruddy Turnstone made on King Island over the past 11 years. Only data from the February/March/early April visits are included because it is thought that there are still a small number of juvenile birds on migration through King Island, to Tasmanian and New Zealand non-breeding areas, in November. The Table shows that the 31% figure for birds caught in the 2016/17 non-breeding season is the highest for any of the 11 years of our study.

The figures also reveal that Ruddy Turnstone is subject to wide fluctuation in breeding success. In the 11 years of the study there have been two exceptionally good breeding seasons (the arctic summers of 2013 and 2016) and four years of almost complete breeding failure (the arctic summers of 2006, 2008, 2012 and 2015).

This extreme variation in breeding success may be related to breeding in the higher arctic regions of northern Siberia. Geolocator data has shown that the New Siberian Islands are the centre of Ruddy Turnstone breeding area.

Geolocators

The VWSG has deployed 60 new geolocators on Ruddy Turnstone on King Island in each of the last four years. This is to ensure that a sufficient volume of data accrues for detailed studies by Deakin University. These especially include repeat migration data recorded by geolocators on individual birds and will test the constancy or flexibility of individual Ruddy Turnstone's migration strategy in the East Asian-Australasian Flyway.

A record number of 30 geolocators was retrieved from Ruddy Turnstone during the VWSG's most successful visit to King Island in November 2016. We had expected to have pretty well emptied the pool with that effort and for there to be very few turnstones still roaming King Island with unretrieved geolocators. We were therefore extremely surprised to retrieve another 16 on this visit, with half of these being two or more years old. On quite a few of these the unit had stopped recording new information and it will have to be sent back to the UK manufacturers for downloading. This high retrieval rate (46 units in the current 'bird-year') will enormously help our studies, especially because quite a number

of these retrievals are from birds which now have two or more migration tracks recorded. At least one bird is now carrying its fourth geolocator, because wherever possible, when we take a geolocator off, we put a new one on.

Counting geolocators put on birds in November 2016, a total of 60 new geolocators has again been deployed in the 2016/17 non-breeding season.

Deakin University Studies

Deakin University is currently working closely with the World Health Organization in sampling poops and blood for the presence of avian diseases (or the antibodies from previous infections). They have already published a number of papers incorporating King Island Ruddy Turnstone data and geolocator data. It is probable they will become even more closely involved in the future with a comprehensive analysis of all the aspects of the turnstone data we have collected in the past ten years.

Acknowledgements

The Group's successful and enjoyable fieldwork activities on King Island have benefitted from the kindness and support of many people over the years. Firstly, the VWSG itself is thanked for its members always ensuring that we have an adequate team (nine or ten people) for each visit). Jenny Marshall is thanked for very kindly making her large house in Currie available to the group as its main base/headquarters. Graham and Margaret Batey are thanked enormously for having additional members of the team sleeping at their house. Margaret Bennett is thanked for storing equipment for the fieldwork activities. Angus Roberts, the skipper of the Searoad Ferry for many years, is also hugely thanked for transporting a vehicle and equipment from Melbourne to King Island (and back) over the last ten years. Unfortunately, this ferry service has recently been terminated. King Islands Airlines has served us extremely well over the years with much cooperation and flexibility concerning transport of us and our equipment. They were especially generous on the recent visit when we no longer had the option of bringing equipment via car/ferry, transporting a whole range of equipment (weighing 200kg) free of charge.

Everyone hopes we will be able to continue our studies for some years to come. It is rare for such intensive studies of a species to be carried out on the non-breeding population of a wader anywhere in the world.

Clive Minton, Robyn Atkinson, Rob Patrick, Penny Johns

Ruddy Turnstone on King Island, Tasmania, cont.

Table 1: Counts of Ruddy Turnstone on King Island, 28 March to 6 April 2017 and previous years

West Coast	Mar/Apr 2017	Feb 2016	Feb 2015	Mar 2014	Mar/Apr 2013	Apr 2011	Mar/Apr 2010
Total	843	597	670	604	645	686	890

Table 2: Ruddy Turnstone catch details: King Island Visit 28/3/17 - 6/4/17

Date	Location	Geolocators	New	Retrap	Total	(Juv)
29/3/17	North Manuka	13 deployed, 2 retrieved	17	10	27	(14 = 52%)
30/3/17	South Manuka	17 deployed, 6 retrieved	27	18	45	(12 = 27%)
31/3/17	Dripping Wells	2 retrieved	13	15	28	(10 = 37%)
1/4/17	Porky Beach	3 retrieved	23	25	48	(14 = 29%)
2/4/17	Stokes Point	1 retrieved	26	14	40	(10 = 25%)
5/4/17	Teal Bay/ Surprise Bay	1 retrieved	16	5	21	(4)
6/4/17	Central Manuka	1 retrieved	3	4	7	(3)
Totals	West coast	30 deployed, 16 (old) retrieved	125	91	216	(67 = 31%)

Note: 70 males and 79 female Ruddy Turnstones caught = 47% males.

Table 3: Ruddy Turnstone catches on King Island 2007-2017

Date of visit	Catches	Total birds caught
March 2007	7	307
March 2008	8	428
March 2009	6	223
March 2010	8	217
November 2010	3	72
April 2011	8	211
November 2011	3	117
April 2012	7	118
November 2012	5	133
March/April 2013	10	185
November 2013	2	55
March 2014	6	168
November 2014	6	150
February 2015	5	154
Nov/December 2015	5	158
February 2016	4	79
November 2016	7	111
March/April 2017	7	227
11 years (18 visits)	107	3213

Table 4. Ruddy Turnstone catch totals and % juveniles on King Island 2007-17

Year	New	Recapture	Total	(Juveniles)	% Juv
2007	230	11	241	(0)	0
2008	354	65	419	(75)	17.9
2009	124	99	223	(0)	0
2010	123	88	211	(30)	14.2
2011	122	75	197	(29)	14.7
2012	65	53	118	(18)	15.2
2013	125	130	255	(3)	1.2
2014	81	92	173	(53)	30.6
2015	56	63	119	(16)	13.4
2016	27	48	75	(1)	1.3
2017	125	91	216	(67)	31.0
Total	1432	815	2047	(292)	14.3



Ruddy Turnstone survey sites on west coast of King Island

Note: **Table 4** only includes Feb/Mar/April visit catches, not Nov. visits.
[Poor Arctic breeding years were 2006, 2008, 2012 and 2015]
[Very good Arctic breeding years were 2013 and 2016]

Wader Breeding Success in the 2016 Arctic Summer

One thing which banders in Australia look forward to each year is the return of the northern hemisphere migrants – adults first, followed a few weeks afterwards by the juvenile birds. There is eager anticipation to know what sort of breeding season each species has had during the arctic summer.

The percentage of juveniles in the populations of waders which we cannon net in the November to March period is the best measure we can make of their relative breeding success. It needs to be recognised, however, that this data is collected, on average, some six months after the end of the arctic breeding season (June/July). During their southward migration, juvenile birds would be expected to suffer higher mortality. Therefore, the percentage juvenile figures measured will not be the same as they would have been if measured immediately after the birds had fledged in late July. However, by collecting such data in a standard manner each year (cannon netting samples of each species at a variety of locations) comparisons between years and between species can be made. But because of potential non-homogeneity in the distribution of adult and juvenile/first-year birds in their non-breeding areas, the figures should more correctly be considered an index of breeding success rather than an absolute measure.

'Percentage juvenile' data has been collected by the VWSG since the 1978/79 breeding season in southeast Australia (SEA) and since the 1998/99 non-breeding season in northwest Australia (NWA).

Results & Discussion

The 2016/17 data is presented in the usual format in **Tables 1-4**.

In southeast Australia, good samples of Red-necked Stint, Curlew Sandpiper, Ruddy Turnstone and Sanderling were obtained but only modest numbers of Red Knot and Bar-tailed Godwit and only a handful of Sharp-tailed Sandpiper. The scarcity of Sharp-tailed Sandpiper in the sampled coastal areas was caused by much suitable inland habitat being available, created by favourable rains over the winter months.

Bar-tailed Godwit and Red Knot are always difficult to catch in good numbers but the samples obtained are considered sufficient to classify breeding success. The standout result was the 46.7% juvenile Curlew Sandpipers. A similar exceptionally high figure was obtained from northwest Australia and a similar figure was even reported from India. Curlew Sandpipers must therefore have had a breeding bonanza

in the arctic summer of 2016 over a significant proportion of their breeding range. The figure means that nearly half the population in Australia during the non-breeding season was birds in their first year of life. A 40% juvenile ratio means that there were 1.3 juveniles still alive six months after the end of the breeding season for every adult breeding pair – a phenomenal reproduction rate for an arctic breeding wader! And quite unprecedented in any species monitored here in Australia over the last 39 years.

This statement might look peculiar if taken against the data for Red Knot, also included in **Table 1**. However, in the case of Red Knot the majority of young birds do not cross the Tasman Sea during their first year of life to join the large populations of adults in New Zealand. Instead the birds remain in southeast Australia, thus augmenting the juveniles figures, before crossing to their long-term non-breeding area in New Zealand at the beginning of their second year. Bar-tailed Godwit show the same behaviour but not to quite the same magnitude. Thus the norms to which we compare percentage juvenile figures are higher than might be expected in these two species, especially in the Red Knot.

Ruddy Turnstone and Red-necked Stint which spend the non-breeding season in southeast Australia also had an excellent breeding season in the 2016 arctic summer. However, Bar-tailed Godwit percentage juvenile figures were below average. Although the sample was small, it appears Sharp-tailed Sandpiper did not breed well either.

Northwest Australian wader populations also had a much better breeding year in the 2016 arctic summer compared with the previous year. Again, Curlew Sandpiper and Ruddy Turnstone stood out, as in southeast Australia. Unfortunately, Great Knot had another relatively poor breeding year. Red-necked Stint populations wintering in northwest Australia appear to have had a poorer arctic breeding season than those wintering in southeast Australia.

A feature of the northwest Australian data is that all three species which have breeding areas slightly below the arctic region had particularly poor breeding outcomes. This is especially unfortunate for Greater Sand Plover and Terek Sandpiper which have now had two consecutive poor breeding seasons.

Clive Minton, Roz Jessop & Chris Hassell

Wader Breeding Success in the 2016 Arctic Summer cont.

Table 1. Percentage of juvenile (first-year) waders in cannon-net catches in southeast Australia 2016/2017.

Species	No. of catches		Total caught	Juveniles		Long term median* % juvenile (years)	Assessment of 2016 breeding success
	Large (>50)	Small (<50)		No.	%		
Red-necked Stint <i>Calidris ruficollis</i>	4	4	2671	837	31.3	17.0 (38)	Very Good
Curlew Sandpiper <i>C. ferruginea</i>	1	3	344	164	47.6	10.6 (37)	Exceptional
Bar-tailed Godwit <i>Limosa lapponica</i>	0	1	24	3	12.5	16.5 (27)	Below Average
Red Knot <i>C. canutus</i>	0	2	31	28	90.3	65.5 (20)	Very Good
Ruddy Turnstone <i>Arenaria interpres</i>	1	18	506	145	28.6	10.5 (26)	Very Good
Sanderling <i>C. alba</i>	1	0	143	25	17.5	12.6 (25)	Good
Sharp-tailed Sandpiper <i>C. acuminata</i>	0	1	13	1	(7.7)	14.8 (34)	(Very Poor)

All birds cannon-netted in the period 2 November to 25 March except Sharp-tailed Sandpiper and Curlew Sandpiper to end February only and some Ruddy Turnstone and Sanderling to early April and one Sanderling catch in late April (2015).

*Does not include the 2016/2017 figures.

Table 2. Percentage of juvenile (first-year) waders in cannon-net catches in northwest Australia in 2016/2017.

Species	No. of catches		Total caught	Juveniles		Assessment of 2016 breeding success
	Large (>50)	Small (<50)		No.	%	
Great Knot <i>Calidris tenuirostris</i>	5	7	553	50	9.0	Below Average
Bar-tailed Godwit <i>Limosa lapponica</i>	1	5	182	20	11.0	Average
Red-necked Stint <i>C. ruficollis</i>	3	6	390	67	17.2	Average
Red Knot <i>C. canutus</i>	1	5	97	21	21.6	Good
Curlew Sandpiper <i>C. ferruginea</i>	1	7	149	60	40.3	Exceptional
Ruddy Turnstone <i>Arenaria interpres</i>	0	5	25	9	36.0	Very Good
Non-arctic northern migrants						
Greater Sand Plover <i>Charadrius leschenaultii</i>	4	6	715	87	12.4	Very Poor
Terek Sandpiper <i>Xenus cinereus</i>	0	7	120	7	5.8	Very Poor
Grey-tailed Tattler <i>Heteroscelus brevipes</i>	1	10	228	33	14.5	Below Average

All birds cannon-netted in period 1 November to mid-March

Table 3. Percentage of juvenile birds in wader catches in southeast Australia 2006/2007 to 2016/2017.

Species	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	Average (18yrs)
Ruddy Turnstone <i>Arenaria interpres</i>	1.3	19	0.7	19	26	10	2.4	38	17	2.3	28.6	14.0
Red-necked Stint <i>Calidris ruficollis</i>	14	10	15	12	20	16	22	17	19	6.0	31.3	16.9
Curlew Sandpiper <i>C. ferruginea</i>	4.9	33	10	27	(-)	4	3.3	40	5.1	1.9	47.6	15.7
Sharp-tailed Sandpiper <i>C. acuminata</i>	12	20	3.6	32	(-)	5	18	19	16	8.9	-	18.0
Sanderling <i>C. alba</i>	0.5	14	2.9	19	21	2	2.8	21	14	6.8	17.5	14.5
Red Knot <i>C. canutus</i>	58	(75)	(-)	(-)	78	68	(-)	(95)	(100)	(100)	90.3	58.1
Bar-tailed Godwit <i>Limosa lapponica</i>	26	56	29	31	10	18	19	45	15	26.7	12.5	24.0

All birds cannon-netted between 15 November and 25 March, except Sharp-tailed Sandpiper and Curlew Sandpiper to end February only and some Ruddy Turnstone and Sanderling to early April and one Sanderling catch in late April (2015). Averages (for previous 18 years) exclude small samples (figures in brackets) and 2016/2017 figures.

Wader Breeding Success in the 2016 Arctic Summer cont.

Table 4. Percentage of first-year birds in wader catches in northwest Australia 2006/2007 to 2016/2017

Species	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	Average 1998/99 to 2016/17 (18 yr)
Red-necked Stint <i>Calidris ruficollis</i>	21	20	10	17	18	24	15	19	10	11.1	17.2	19.6
Curlew Sandpiper <i>C. ferruginea</i>	11	29	10	35	24	1	1.9	23	18	0.7	40.3	16.7
Great Knot <i>C. tenuirostris</i>	9.2	12	6	41	24	6	6.6	5	6	5.7	9.0	11.3
Red Knot <i>C. canutus</i>	11	23	12	52	16	8	1.5	8	13	2.7	21.6	16.1
Bar-tailed Godwit <i>Limosa lapponica</i>	8.5	8	4	28	21	8	7.6	17	5	10.3	11.0	10.8
Non-arctic northern migrants												
Greater Sand Plover <i>Charadrius leschenaultii</i>	21	27	27	35	17	19	28	21	20	10.5	12.4	22.7
Terek Sandpiper <i>Xenus cinereus</i>	11	13	15	19	25	5	12	15	12	9.2	5.8	13.4
Grey-tailed Tattler <i>Heteroscelus brevipes</i>	28	25	38	24	31	20	18	16	19	8.9	14.5	19.8

All birds cannon-netted in the period 1 November to mid-March. Averages (for previous 18 years) exclude small samples and 2016/2017 figures.

Update on South Australian tracked Grey Plovers - 5 April 2017

Volunteers from the Victorian Wader Study Group and Friends of Shorebirds SE returned this summer to continue their valuable research for the Adelaide and Mt Lofty Ranges Natural Resources Management Board, as part of an Australian Government-funded Samphire Coast Icon Project. Last year two Grey Plover were tracked making an epic 15,000 km journey from Thompson Beach to Wrangel Island in the Arctic Ocean.



A number of satellite trackers have been deployed on Grey Plover: four birds were flagged at Bald Hill in December 2016, (with engraved flags CAU, CAR, CAS CAT), about 100km north of Adelaide.

The birds have remained close to the catch site, foraging on the intertidal flats at low tide and roosting on the beach or back clay pans or sabkas.

In March 2017, an additional Grey Plover CMN was captured at Thompson Beach and fitted with a transmitter. Unlike a GPS tracker, the small solar-powered transmitters run on a 48-hours-off charge cycle and then transmit for 10 hours. The position is calculated through shifts in transmissions received by different satellites.

In early April a high-pressure system moved in over South Australia, with favourable south-easterly winds. The Grey Plover took flight across Australia, passing over the central deserts and over the Kimberley to the Timor Sea, the initial stage of their long-haul migration from South Australia to the Arctic breeding grounds. The birds have been stocking up on the mudflats of Gulf St Vincent and the Adelaide International Bird Sanctuary Flyway Site, which provides a "shorebird supermarket".

A female Grey Plover CAR, departed sometime after the last transmission cycle on 2 April 2017. At the last tracked position she was flying over the western Timor Sea, 320 km off Australia's north-west coast and 140 km south of Indonesia. A male Grey Plover CAU also appears to be en route, and at last position was headed north from Bald Hill over Gulf St Vincent.

It is anticipated the birds will reach the Chinese coast flying non-stop for over 7,000 km over the next week.

Tony Flaherty

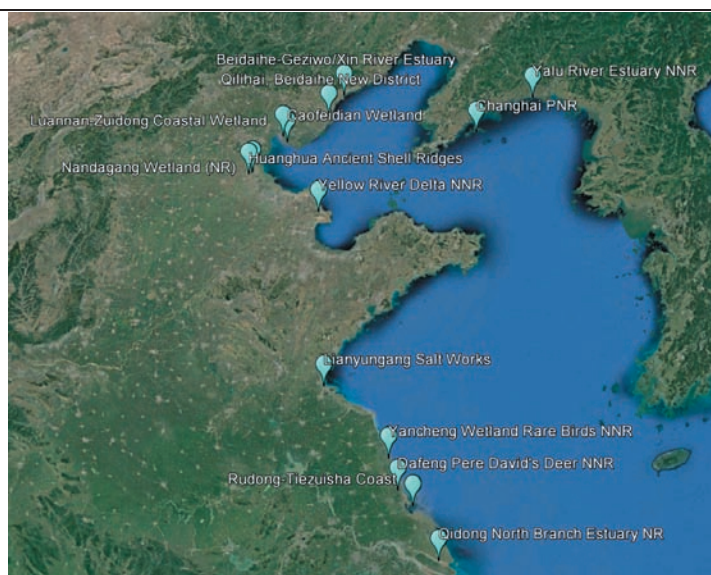
Critical Sites on the Yellow Sea Coast

In February 2017, the National Commission of the People's Republic of China submitted 14 sites on the coast of the Bohai Gulf and the Yellow Sea of China to UNESCO for consideration as World Heritage Sites – Tentative List. The "Tentative List" is developed and updated by each country. It identifies sites that the country "intends to consider for nomination".

The nominated sites involve seven Important Bird and Biodiversity Areas along the long coastline from Yalu River estuary to Yangtze River estuary, and include all the coastal geomorphological types and the deltas of major rivers. The nominated sites are all located in National or Provincial Nature Reserves, or National Parks or Provincial Scenic Areas.

Further information can be found at:

<http://whc.unesco.org/en/tentativelists/6189/>



NW Australia Wader & Tern Expedition 12 Feb-6 Mar 2018

Northwest Australia was "discovered" to be one of the prime locations in the world for wading birds during the first RAOU (now BirdLife Australia) "Expedition" there in August-September 1981. It is now known to have a peak population of nearly 750,000 waders of 50 species, nearly a quarter of the 214 species of waders worldwide. There is easy accessibility to the principal wader areas at Roebuck Bay, Broome (150,000 birds) and 80 Mile Beach (500,000 birds).

This Expedition aims:

- To obtain an estimate of the relative breeding success in the 2017 Arctic breeding season of all the main species of migratory waders. This is achieved by measuring the proportion of juveniles in catches.
- To catch additional samples of species which are less frequently caught in NW Australia, e.g. Black-tailed Godwit, Whimbrel, Grey Plover, Common Greenshank, Oriental Plover, Eastern Curlew, Little Curlew and Oriental Pratincole.
- To continue the program of putting individually lettered/numbered yellow leg flags on all the main medium/large migratory wader species caught

at Broome and several species at 80 Mile Beach. This is to facilitate the collection and calculation of survival rate data in the future and to enhance the information obtained from flagged birds seen overseas.

We would be pleased to receive early indications of your interest in attending the expedition. Please email both Clive Minton **and** Roz Jessop, of your likely availability and intentions for 2018 **as soon as possible**. This doesn't need to be a firm commitment at this stage - just an indication of the most likely/desirable situation. Such information will greatly assist in planning - especially in obtaining an adequate cover throughout the period and in securing appropriate transport etc. So please take action **now** and in due course, advise Roz Jessop of specific details and travel arrangements.

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The Overwintering Project - Mapping Sanctuary

This month I am launching my new project, *The Overwintering Project: Mapping Sanctuary*. It is a project about home, our unique environment and the migratory shorebirds that spend the greatest part of their year here, on the shores of Australia and New Zealand. Migratory shorebirds are the fastest declining group of birds in Australia, and this project is designed to make them and their habitat visible, which I hope will in turn help to save them from extinction.

Migratory shorebirds suffer from an image problem - brown birds that inhabit the intertidal zone, often mudflats - they are cryptic birds in an often overlooked landscape. Much of their habitat has been reclaimed, used for marinas, docklands, ports, cities etc.

I am inviting artists to seek out their local habitat and document their personal response to it, whether it is an industrial waterway awash with the wakes of passing container ships or a pristine tidal zone shared with sharks and turtles. As artists, we can make it visible, and in this way, we will create an intricate and personal map of our precious shorebird habitat.

Please feel free to contact me for specific information, contacts or questions.

I look forward to hearing from you!!

Kate Gorringer-Smith

www.kategorringersmith.com.au