



Newsletter for the Asia Pacific Flyways

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Tattler is the quarterly newsletter of the Australasian Wader Studies Group. Contributions are welcome and encouraged from all working with shorebirds and their habitats along the East Asian - Australasian Flyway.

Please contact the editor for more information.

Editorial

Calls for lobbying Australian government authorities are prominent in this issue - to protect Hooded Plover chicks from dogs on Victorian National Park beaches and to prevent the weakening of Australian environmental laws. I urge you to take a few minutes to voice your opinion on these issues - only a groundswell of public outcry will change the government's intent.

Among the fascinating presentations at the recent Australasian Shorebird Conference were revelations of sex-discrimination in long-flight migrants and grim reminders of the accelerating rate of habitat loss and shorebird population declines. On a brighter note, protection of shorebird habitat in saltworks now and into the future has emerged as a company policy for Rio Tinto, which has committed to net positive impact on biodiversity. It would be wonderful to see other mining companies follow their lead.

It is encouraging to see a portion of the Yukon Delta added to the EAAF site network, and the passing of Motion 32 at the recent IUCN World Conservation Congress. With Korea and China as signatories to this motion, there is some hope that parts of the Yellow Sea intertidal flats may be set aside for shorebirds.

Finally, an opinion piece to stimulate discussion on ways to strengthen conservation of shorebird habitat.

Dogs and Hoodies Don't Mix

Help ban dogs from Mornington Peninsula National Park to protect Hooded Plover Chicks

During the 2011/12 summer 98% of breeding attempts by Hooded Plovers *Thinornis rubricollis* in the Mornington Peninsula National Park, Victoria failed. Previous breeding seasons were not much better, see www.hoodedplover.com Unfortunately, under current regulations, dogs are allowed on ocean beaches where Hooded Plovers nest.

Parks Victoria are now seeking submissions to a strategy that considers a ban on dogs. Please visit the following link and make a submission in favour of Hooded Plover chick survival.

<http://parkweb.vic.gov.au/explore/parks/mornington-peninsula-national-park/plans-and-projects/dog-walking-review>

It is suspected there are now fewer than 600 Hooded Plovers in Victoria.

Malcolm Brown

Compiled and published by the Australasian Wader Studies Group

A Special Interest Group of BirdLife Australia

www.awsg.org.au

Help protect the places you love in Australia - TODAY

Australia boasts wetlands unlike others anywhere in the world and hosts important populations of threatened migratory bird species during their global migrations. To protect these special places and species, the nation is a signatory to international conventions. Our national environment laws ensure these international obligations are upheld. The *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* is the Australian Government's central piece of legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna and ecological communities.

Below are just a few examples of when our federal environmental laws have protected Australia's unique natural heritage:

1. *Shoalwater Bay and Corio Bay in Queensland are recognised as wetlands of international importance under the Ramsar convention. They boast a diverse array of habitat types, including coral reefs, seagrass beds, rocky shores, mangrove forests and Melaleuca woodland. In fact, half the wetland types found in Queensland exist in the bays. In 2008, a massive coal mine and railway line were proposed in the area and supported by the Queensland Government. The Federal Government refused the proposal under the national environment law because it would have had "clearly unacceptable impacts" on the internationally significant wetlands.*

2. *In 2007 the Federal Government refused an application to release water from Lake Crescent in Tasmania, for irrigation purposes. The release would have impacted a Ramsar site and the globally endangered golden galaxia (a fish). The Tasmanian State Government, a direct proponent of the project, referred it again in 2008. In this instance the Federal Government said up front at referral stage that the project was 'clearly unacceptable' and that they were not even going to assess it.*

3. *The Commonwealth also has the ability to enforce environmental regulation when the States fail to do so. For example, in 2004, a NSW landholder was sued under the EPBC Act for clearing and ploughing in the internationally recognised Windella wetland Ramsar site without authorisation. 100% of the site was cleared in preparation to plant wheat. The farmer had to pay a \$450,000 penalty, costs of the court proceedings, and rehabilitate the site. The State of NSW failed to enforce the State native vegetation removal laws with regard to this clearing.*

Our national environment law also ensures that the environmental effects of development are mitigated.

4. *The Whitsunday Islands on Queensland's Great Barrier Reef are famous for their pristine white beaches, colourful coral reefs and towering hoop pines. The islands' waters are important calving grounds for migrating humpback whales. In 2001, a marina was proposed for the area and the Queensland Government's assessment of this project omitted important environmental conditions. Fortunately the Federal Government's approval included plans to manage effects on threatened and migratory species*

and an independent audit to check that these plans were being carried out.

5. *In 2009, the Northern Territory Government assessed a proposal to divert the McArthur River 5.5 kilometres east to allow for open-cut mining. The Federal Government's approval resulted in additional important environmental conditions to mitigate effects on migratory birds and the nationally-listed freshwater sawfish.*

However, under the guise of cutting 'green tape' State and Federal governments have announced an aggressive plan to wind back our environmental laws. The governments propose to hand important federal environmental approval powers to the states, and fast track approvals for large developments. Clearly, this will result in unacceptable outcomes for our threatened and migratory birds.

In response BirdLife Australia has partnered with an alliance of environmental organisations from across the country to launch a national campaign to protect our nation's environmental laws. These laws protect the things we love: the places we love, the wildlife we love.

We strongly believe that the reforms proposed will set us back decades, and so have established this campaign to motivate and inspire the community to let the Federal and State Governments know that people care about environmental laws, and that we need stronger, not weaker protections.

This is a critical moment in time. It is essential that the Australian Prime Minister hears community support for the laws that protect the places and wildlife that we love. We are asking supporters and members of the public to sign our petition and write to the Prime Minister and their Federal member of parliament. We really need your help.

Go to PlacesYouLove.org today.



Curlew Sandpiper - Chris Tzaros

Samantha Vine
Head of Conservation, BirdLife Australia

Shorebird research and conservation in Mongolia

Building capacity for shorebird research and conservation in Mongolia: the 2012 workshop and expedition

Mongolia is strategically located on the inland route for shorebirds migrating between non-breeding grounds in Australia and southern Asia and breeding areas in Asian tundra, taiga and steppe regions. However, knowledge of the shorebird populations that use this route, the numbers involved, key dates and important sites is sparse. Furthermore, in-country capacity and resources to undertake research and conservation projects are limited.

Recently, a collaborative project was initiated to address these needs and ultimately assist Mongolia in managing shorebird populations and habitats throughout its jurisdiction. Proposed by Wetlands International on behalf of the National University of Mongolia and with endorsement of the Ministry of Nature, Environment and Tourism, the project meets five Key Result Areas of the Implementation Strategy 2012-16 of the East Asian – Australasian Flyway Partnership (EAAFP). Drawing on contributions from the Ministry of Environment Korea, the EAAFP Secretariat allocated a small grant to facilitate the first phase of the project.

During 10-15 August 2012, a team of five trainers from among the EAAFP Partners (three from Australia/AWSG and two from South Korea) conducted a workshop in Ulaanbaatar and a short expedition to Dashinchilen Tsagaan wetlands, central Mongolia. With excellent logistical support from the Mongolian Ornithological Society and led by Dr Sundeв Gombobaatar, seven trainees (mostly postgrad students) received desk and field training on migratory shorebirds – their ecology, threats to survival, counting methods and techniques for trapping, marking and recording biometric data. Twenty mist nets were deployed in shallow lakeshore and marsh habitats at Dashinchilen Tsagaan, a shallow lake (250 ha) with surrounding grass-sedge swamps and ponds, in tree-less grassland. A start-up set of engraved leg flags was presented to the Mongolian team: the protocol for Mongolia is blue over green.

A small sample of 24 shorebirds comprising 10 species was trapped, leg-flagged and fully processed – an ideal scenario for training, with supervised students handling diverse types of shorebirds. Plumage features revealed that most birds were juveniles. More than half of the flagged birds were of species (if not populations) that regularly travel as far south as Australia: Wood Sandpiper (7), Common Sandpiper (3)



Handover of leg flags: Sundeв Gombobaatar (Mongolia National University) and David Milton (QWSG/AWSG).



Mongolian trainees and Korean and Australian trainers cooperating to set up mist nets at Dashinchilen Tsagaan lake, Mongolia.



Mongolian trainees and Korean and Australian trainers cooperating to set up mist nets at Dashinchilen Tsagaan lake, Mongolia.

Shorebird research and conservation in Mongolia cont.

and single Swinhoe's Snipe, Long-toed Stint and Curlew Sandpiper. Other species flagged in this 2012 activity were Common Redshank, Green Sandpiper, Common Snipe, Little Stint and Northern Lapwing.

Counting revealed over 12,000 waterbirds (57 species including 33 shorebird species) in this wetland system with high numbers of Spotted Redshank (2500, well over the 1% threshold), Black-tailed Godwit, Pacific Golden Plover and Pied Avocet. Several species mainly associated with coastal habitats, such as turnstones and phalaropes, were present in small numbers. This IBA-listed site also supports breeding by globally threatened White-naped Crane and Swan Goose.

Whereas it seems certain that some of the shorebirds at Dashinchilen Tsagaan (e.g. Little Curlew) migrate to Australasia, it is not yet clear as to which shorebirds use the EAA Flyway and which use the Central Asian Flyway, in the non-breeding period. As more shorebirds are leg-flagged then re-sighted farther south, the answers may emerge. Readers are encouraged to watch out for Mongolia-flagged shorebirds and report details to EAAFP or AWSG.

Potential research projects on breeding ecology and threats to breeding migrants in Mongolia (Oriental Plover, Greater Sand Plover, Asian Dowitcher, Marsh Sandpiper) were discussed among students during the workshop. Escalating numbers of livestock in Mongolia are a serious threat to breeding success of shorebirds both in dry and marshy habitats. Subject to securing funds, a follow-up training expedition to Dashinchilen Tsagaan is proposed for the northward migration and breeding period in May 2013 and a longer expedition to eastern Mongolia is also being considered.



Mongolian team, processing mist-netted shorebirds.



Wood Sandpiper with leg flags attached in accord with the EAA Flyway's colour marking protocol (Mongolia: blue over green).

Roger Jaensch (Wetlands International); co-trainers **David Milton** and **Sandra Harding** (QWSG/AWSG), **Choi Chang-yong** and **Nam Hyun-young** (South Korea).

Sandpipers, godwits, stilts and avocets in the shallows of Dashinchilen Tsagaan lake, Mongolia

All photos by Roger Jaensch, Wetlands International



Concerns for breeding success of sand plovers in Mongolia

Mongolia is an important breeding and stopover area for migratory shorebird populations of the East Asian – Australasian Flyway and at least one other flyway. Fifty-six shorebird species have been recorded in Mongolia of which 46% breed, 41% are only passage migrants and 13% are vagrants, but shorebirds are among the most poorly studied birds in the country (Gombobaatar *et al.* 2008).

During a recent training activity in Mongolia (see separate article, this issue), we considered the conservation issues for breeding by migratory shorebirds in the steppes of Mongolia; doubtless, this matter is also broadly applicable to some neighbouring regions. Our focus was on Oriental Plover *Charadrius veredus* and Greater Sand Plover *Charadrius leschenaultii*, for which Mongolia provides extensive breeding habitat.

Mongolian counterparts associated with the National University of Mongolia and Mongolian Ornithological Society drew our attention to the problems caused by intensification of livestock grazing. Since the transition to a market economy in 1992 and with rising demand in Asia for cashmere and wool clothing, Mongolian herders have increased the sizes of goat and sheep herds. Whereas in the past goats were not the dominant component of herds (that may also include sheep, cattle, horses and/or camels), now goats commonly dominate. In 1991, goats comprised only 21% of the main livestock animals (10.5 million goats out of 51.1 million domestic animals) but by 2008 goats had increased to 46% (39.9 million goats out of 86.6 million animals: National Statistical Office of Mongolia, unpublished data). Increased goat numbers causes heavier grazing pressure on the steppe grasslands and thus greater loss of ground cover, erosion and downslope impacts on rivers and wetlands.

Overgrazing has also been influenced by climate. Due to drought in recent years, most wetlands and steppe lakes in Mongolia have been drying out; annual precipitation has decreased by 30–90 mm in the central region (Batima 2006). And observations from 60 sites distributed across the country show that the Mongolian climate has significantly changed: annual mean temperatures have risen by 1.8° C between 1940 and 2003.

For plovers and other ground-nesting birds in dry grasslands, survival of eggs and young is compromised by large dense herds of goats and other livestock that disturb everything in their path as they cross the landscape while feeding and during travel to water points (Gombobaatar *et al.* 2011). Although some nest failures must

have always occurred from traditional nomadic herding, it is the relatively recent changes in herd composition and the large increase in overall numbers of livestock that present new threats.

From monitoring in non-breeding areas like Australia, it is now known that numbers of Greater Sand Plover have declined 30–49% over 17 years across the East Asian – Australasian Flyway (Garnett *et al.* 2010). We suggest that significant breeding failure in central Asia can probably be added to the threats at migration staging sites in coastal Asia and at non-breeding sites in Australia. As the Oriental Plover is not easily monitored on its non-breeding sites in inland Australia, knowledge of its trend in population size is inadequate but a similar decline is possible based on threats to breeding success.

To quantify and better understand the threats to breeding migratory shorebirds in Mongolia and thus initiate conservation measures, we recommend that conservationists in the flyway collaborate with Mongolian counterparts to establish priority research projects for university students and help secure funding for implementation.

Roger Jaensch, David Milton, Sandra Harding, Choi Chang-yong, Nam Hyun-young and Sundev Gombobaatar.

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New management regime a win for Roebuck Bay

Situated in Western Australia's Kimberley region is Yawuru Buru (country). The Yawuru people are the traditional owners of the lands and waters in and around Broome. Part of the resolution of the Yawuru native title determination in 2010 was the identification of a new conservation estate under two indigenous land use agreements (ILUA's) signed by Yawuru, the West Australian Government and the Shire of Broome.

The new Yawuru conservation estate comprises around 100,000 hectares of lands and waters to be jointly managed by Yawuru, the WA Government and the Shire of Broome. These lands and waters comprise significant cultural, environmental and recreational values including the internationally recognised Roebuck Bay Ramsar wetland.

The management of the Yawuru conservation estate is overseen by the Yawuru Park Council comprising representatives from Yawuru, the Department of Environment and Conservation (DEC) and the Shire of Broome. Currently conservation estate management plans are being developed by the Park Council for the marine areas encompassing much of Roebuck Bay as well as coastal parks running from Willie Creek in the north, through to Eco Beach in the south and encompassing areas within the Broome townsite. These management plans will guide long-term management of the new conservation estate for a ten-year period at the end of which they will be reviewed.

The Yawuru Conservation Estate has significant benefits for Broome's internationally recognised shorebird populations including the migratory species that are under increasing pressure on many fronts. The conservation estate has brought with it funding, full time staff, including 4 trainee Yawuru rangers and secure conservation tenure allowing planned management for cultural, environmental and recreational values into the future. Some works that are already underway and will be happening soon include education activities, weed control, access management and associated erosion control, rehabilitation

projects, installation of management and interpretive signage, provision of facilities to sustainably manage compatible recreational activities, regular and targeted ranger patrols as well as supporting existing and commencing new research and monitoring projects.

The strong links built up over the years between AWSG, Yawuru and DEC in communication, logistical support, field work activities and financial contributions will be maintained and there are no plans to curtail any research activities.

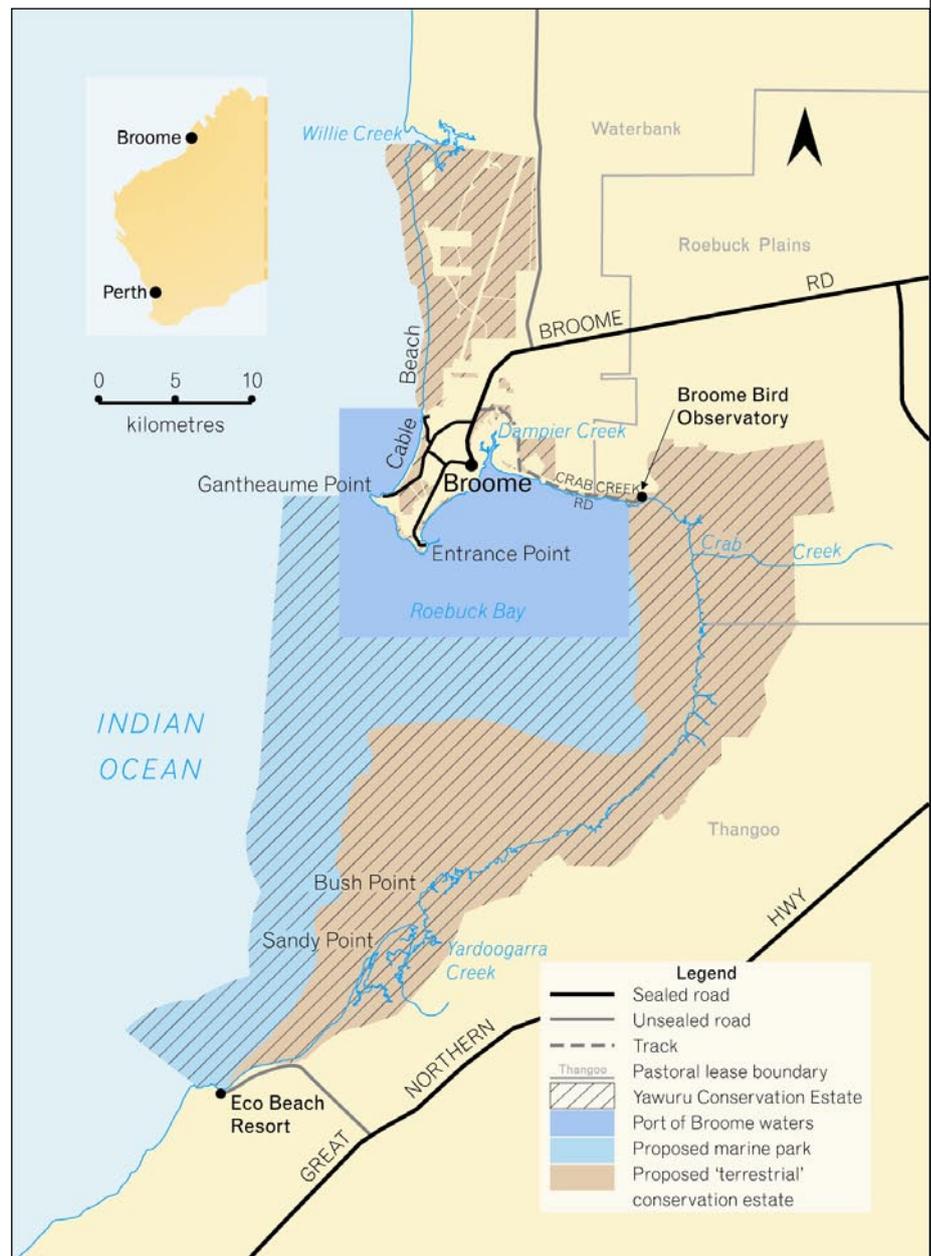
For more information please contact

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Broome Bird Observatory

It's a great time to be birding in and around Roebuck Bay at the moment as it's prime wader migration time with new birds arriving every day, swelling the already huge flocks of birds wheeling in front of the red Pindan cliffs. While it's quite tricky pin-pointing the exact dates that the main arrivals of adult birds occur, it's great scanning through the flocks trying to pick out the first returning juveniles. The first juveniles, back in early August were Greater Sand Plovers (not really a surprise as these breed further south than most other species), followed by Black-tailed Godwit and Curlew Sandpiper juveniles before the end of August. The main arrival of juveniles from the high-arctic breeding species was in mid-September, with most turning up in the period from 10 to 21 September. Juveniles included Great Knot, Ruddy Turnstone and Red-necked Stint in Roebuck Bay and Wood Sandpiper and Sharp-tailed Sandpiper at the freshwater

lakes, amongst others.

September and early October also saw the first returning species which do not over-winter in the area such as Oriental Plover, Little Curlew and Oriental Pratincole – birds high on many visiting birders' wish lists! This period also produced a few surprises including a Ruff out on Roebuck Plains Station on 18 September, an unprecedented group of five Banded Lapwings hiding from the intensifying sun at a cattle bore on the Station (only three previous records of single birds!) and a cracking breeding-plumaged Little Stint roosting at high tide with hundreds of Red-necked Stints on 5 October 2012, providing a fabulous and rare opportunity to compare the two species side by side.

Simon Davies
Assistant Warden

NW Western Australia 2013 wader and tern banding expedition

There are still places available on the next AWSG Expedition to North-west Australia which takes place from **Saturday 23 February to Saturday 16 March 2013**. Would anyone who is interested in taking part please contact Clive Minton at: mintons@ozemail.com.au as soon as possible? The usual team of around 25 people is needed for the successful fieldwork during which 3-4000 waders and terns, of around 25 species, are usually caught. Time will be approximately equally divided between Roebuck Bay, Broome, and 80 Mile Beach. The team will be based at Broome Bird Observatory and Anna Plains Station.

Full details of the itinerary, costs etc. are available from Clive Minton. Participants from other countries in the East Asian-Australasian Flyway, outside Australia, will be particularly welcome.

Geolocators

New geolocators were applied to waders in March/April 2012 in both south-east Australia (VWSG) and north-west Australia (AWSG).

At Broome geolocators were put onto 44 Red Knot and six Great Knot in early March – the first time these species have received geolocators in our Flyway. Several Red Knot and one of the Great Knot carrying geolocators were seen in the Flyway during migration. One geocator has been recovered already from a Great Knot since it returned to Roebuck Bay and a small team will be visiting Broome from 26 October to 5 November to retrieve further geolocators. Downloading of the Great Knot geocator gave a record of its northward migration flight path to the Yellow Sea but unfortunately the geocator then failed due to sea water ingress.

In south-east Australia 44 more geolocators were put onto Sanderling in the south-east of South Australia. An attempt will be made between 28 November and 4 December 2012 to retrieve some of these geolocators to add to the information obtained from the single geocator retrieved from a Sanderling last wader season. Thirty-two more geolocators were applied to Ruddy Turnstone in King Island and a special visit to retrieve these is scheduled for 14 to 22 November 2012. In the past it has been possible to retrieve a good proportion (40%) of the geolocators deployed on Turnstone in King Island. This is due to their extreme site faithfulness plus a lot of patience/perseverance by the VWSG catching team.

Clive Minton

Hybrid Red Knot x Great Knot

A bird considered to be a Great Knot/Red Knot hybrid was caught at Broome in early March 2012. It was close to Great Knot in size but had much different spotting on the breast, a red wash on all the underparts, and a wing pattern much more similar to Red Knot than Great Knot (large white blotches on the primary wing covets).

Wader hybrids have occasionally been reported in the past (most notably the Curlew Sandpiper/Pectoral Sandpiper hybrids once named as a separate species, Cox's Sandpiper) but this appears to be the first example of a Red Knot/Great Knot hybrid.

The attached pictures were taken by members of the NWA 2012 Wader Expedition.

Clive Minton



Photos of Red Knot x Great Hybrid by Sioux Plowman (above two) and Kuan-Chieh Hung (right four).

Yukon Delta portion added to EAAF

Good news!

An official signed letter from the chair of the East Asian-Australasian Flyway Partnership approving the nomination of a portion of the Yukon Delta National Wildlife Refuge as an East Asian-Australasian Flyway (EAAF) Network Site was received by the Regional Director, US Fish and Wildlife Service - Alaska Region on 10 October 2012. EAAF status is similar to the Western Hemisphere Shorebird Reserve Network, except it includes sites along the East Asian flyway.

This accomplishment should be credited to Brian McCaffery (Yukon Delta NWR) and Doug Alcorn (FWS, Assistant Regional Director, Migratory Birds and State Programs) for completing the nomination package, and Doug Alcorn for hand delivering this during recent meetings of the EAAF Partnership.

From **Richard Lanctot** 13/10/2012

The **East Asian–Australasian Flyway Site Network** is a non-legal, collaborative project involving over 90 sites across thirteen countries. The Flyway Site Network has been operating since 1996 and it is now supported by the East Asian–Australasian Flyway Partnership. Below are some points from a briefing paper for Site Managers provided on the EAAFP website:

<http://www.eaaflyway.net/nominating-a-site.php>

Site Managers are expected to ensure that the waterbird values of their site are maintained and enhanced where possible. Recognising that waterbird values are one of the range of management objectives for a site, managers are expected to encourage the adoption of

sustainable land use practices at the site with the range of stakeholders including local communities, industries and governments. Opportunities to work with other Site Managers in the conservation of shared species will also be an important aspect of the management of the site.

All important sites for migratory waterbirds are impacted by the activities of the local community, whether within or adjacent to the site. Improving site management is dependent on gaining local recognition of the role and importance of the site. Site Managers are therefore expected to use the Flyway Site Network status to promote local recognition of the site.

Strong local community support greatly assists in achieving conservation outcomes for the site. The Site Manager is expected to actively seek local community support. Site dedication ceremonies and specific site-based activities that encourage local involvement are effective ways of engaging and strengthening local community participation in conservation of the site.

The **Western Hemisphere Shorebird Reserve Network** was the first system of linked reserves to protect important shorebird habitat. Hemispherically important Delaware Bay, USA, was the first site accepted into the Network, nominated by the governors of the states of New Jersey and Delaware and dedicated on 21 May 1986. The importance of Delaware Bay to Red Knots is highlighted in Phillip Hoose's recently published book "*Moonbird: A Year on the Wind with the Great Survivor B95*". This engaging, delightfully written book connects people with this long-lived representative of migratory shorebirds and highlights the interdependence of all living things.

Avian influenza/H5N1 and wild birds

John Curran, Adjunct Lecturer at Murdoch University, Broome, WA, has completed his PhD thesis titled: ***The surveillance and risk assessment of wild birds in northern Australia for highly pathogenic avian influenza H5N1 virus***. The thesis is available for download from Murdoch Uni at the following website: <http://researchrepository.murdoch.edu.au/8587/>

The first paragraph of the Abstract states:

Highly pathogenic avian influenza (HPAI), caused by infection with H5N1 virus, is a transboundary disease which has had a significant socio-economic impact on the poultry production systems of Eurasia, and spillover events with mortality in humans and wild birds. In northern Australia, prior to the current study there was poor

*understanding of the ecology of avian influenza viruses (AIV) and the risks of H5N1 transmission by wild birds. In this study, the biological pathways of risk for HPAI H5N1 by migratory birds were estimated as a negligible to very low risk to the wild birds of northern Australia. Following stochastic modelling the highest mean frequency of outbreaks was 1 year in 36 years (range 1 in 25-53 years; annual incidence of 0.028) for the Little Curlew (*Numenius minutus*), followed by the Sharp-tailed Sandpiper (*Calidris acuminata*) (1 in 56 years, range 36 to 91 years).*

Thesis chapters include surveillance on shorebirds and waterfowl and risk assessment.

John can be contacted by email on jcurran@tpg.com.au or phone 08 91935771.

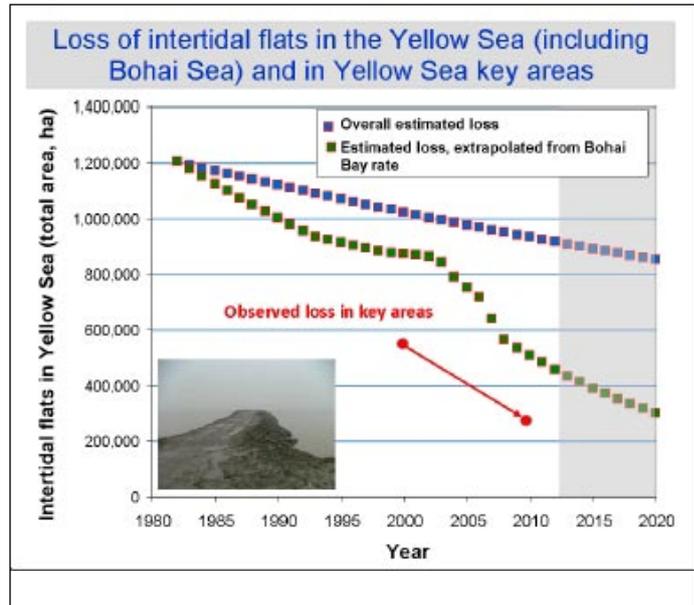
IUCN Motion 32 passed at recent IUCN World Conservation Congress

The recent IUCN World Conservation Congress was held in South Korea in September 2012.

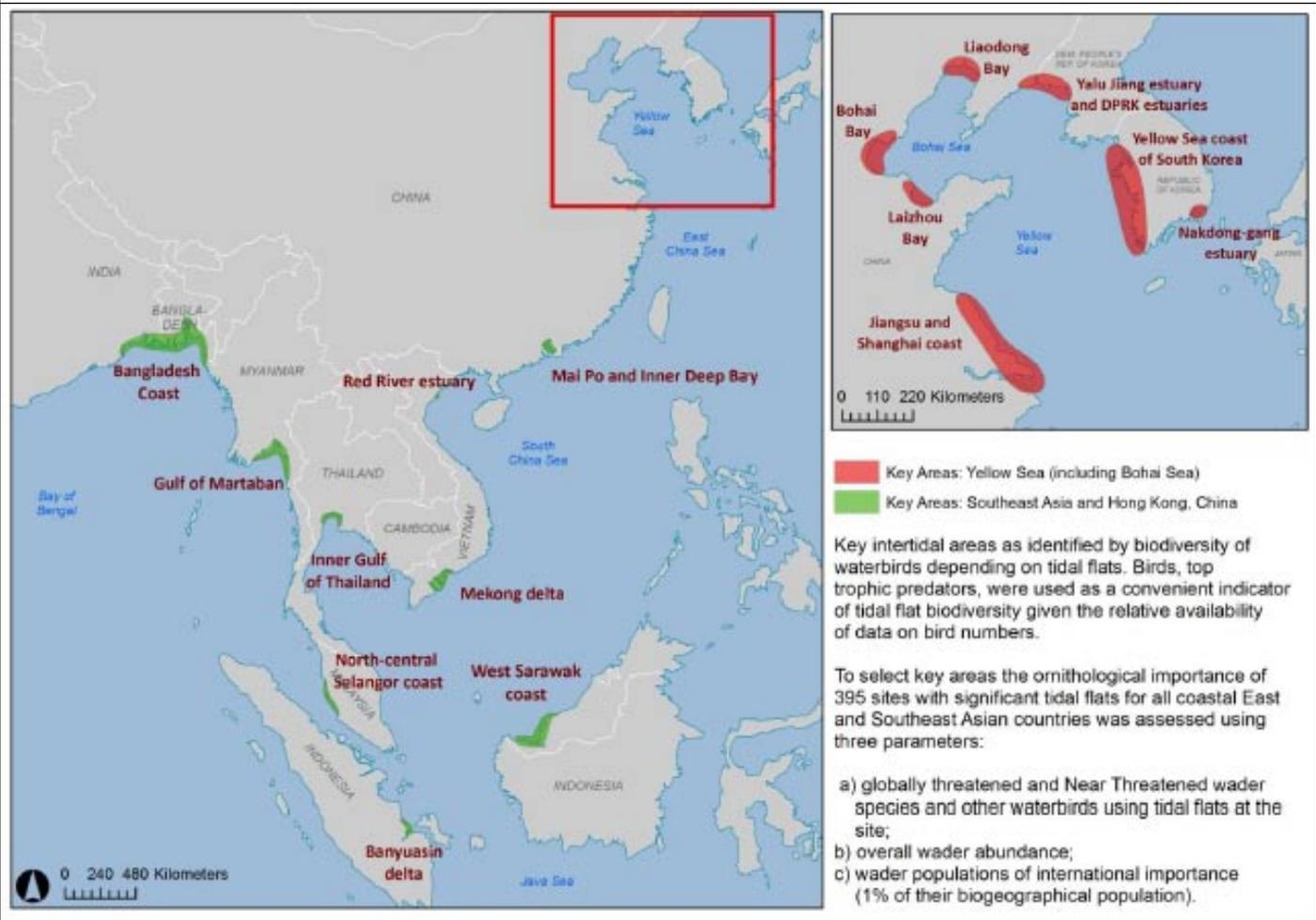
Motion 32, about the dire situation for shorebirds in the EAAF, was based on the situation analysis of East and Southeast Asian intertidal habitats, with particular reference to the Yellow Sea (including the Bohai Sea) (see figure below). The situation analysis report can be downloaded at:

http://www.iucn.org/about/work/programmes/species/our_work/regional_initiatives/asian_coastal_wetlands/

The report presents an analysis of ~390 coastal sites used by waterbirds along the EAAF and identifies 16 key areas (see figure below). The findings show that there is cause for significant concern over the status of the intertidal zone along the EAAF (see figure upper right). Fisheries and vital ecological services are collapsing and ecological disasters increasing, with concomitant implications for human livelihoods. Observed rates of declines of waterbird species of 5-9% per year (and up to 26% per year for Critically Endangered Spoon-billed Sandpiper *Euryrhynchus pygmeus*) are among the highest of any ecological system on the planet (see figure p.11). Breeding success among migrating species in their Arctic breeding grounds and survival on most wintering

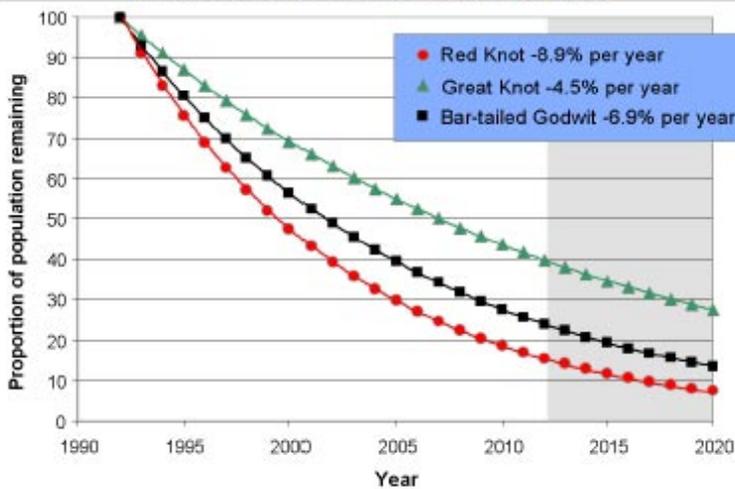


grounds (for northern breeding species) at the southern end of their migrations appears satisfactory, at least where hunting is sustainable. However, problems are clearly occurring along the EAAF during migration. Unless major steps are taken to reverse current trends, the EAAF is likely to experience extinctions and associated collapses of essential and valuable ecological services in the near future.



IUCN Motion 32 passed at recent IUCN Conservation Congress cont.

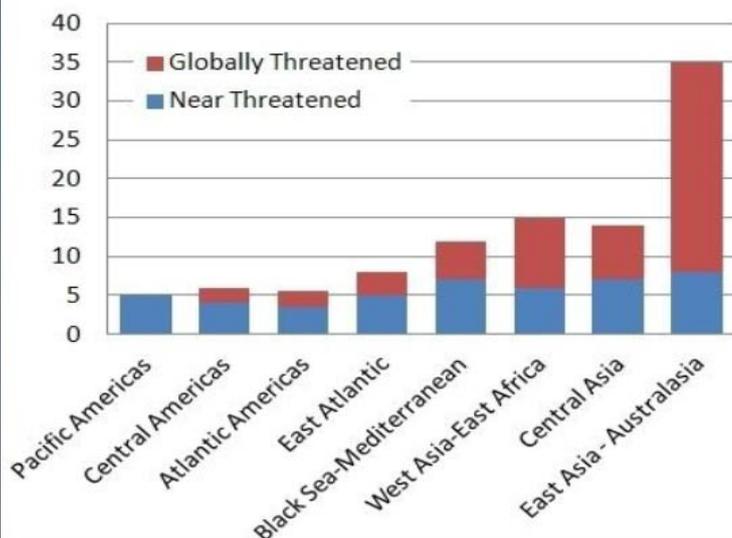
Projected population losses in three shorebird species given current rates of decline of 5-9% per year



In summary, IUCN Motion 32:

- Acknowledged with concern the critical state of the EAAF and the consequences of increasing deterioration, particularly in the Yellow Sea;
- Requested the IUCN Commissions to undertake extensive scientific studies of the ecosystem services of the Yellow Sea, and to find sustainable means of managing intertidal wetlands;
- Encouraged governments to halt further reclamation at priority sites until a full assessment is made;
- Encouraged all governments along the flyway to cooperate in developing international and national action plans by 2014.

**Total No. of waterbird species by flyway:
Globally Threatened and Near Threatened only**



Other initiatives that are being undertaken in the EAAF include:

- EAAF Partnership – will be a driver of the implementation process;
- Rio Tinto is the first Corporate to join the Partnership and is examining a proposal for a Centre at a Bohai Bay site with Wetlands International;
- The Global Flyway Network is undertaking important scientific studies at Tianjin and Bohai Bay;
- WWF (Hong Kong) is developing a Plan of Conservation Priorities for Shorebirds in the EAAF;
- University of Queensland project; and
- Princeton University Ecosystem Services study that has just commenced.

AWSG's role:

- While a lot of the post-IUCN Congress strategy will be driven from Europe, Australia and New Zealand must be key players - both governments and NGOs.
- Communicate and encourage national governments to develop and fund action plans arising from the IUCN Resolution. Use this as a catalyst to continue the constructive dialogue with China and Korea in particular. Upcoming Bilateral meetings with China and Republic of Korea provide the first opportunity.
- Funds will be needed to support studies, particularly in North Asia.
- Educate the community on the massive problems facing migratory waterbirds in our flyway and the need for international action.

Based on **Ken Gosbell's** presentation to the 8th Australasian Shorebird Conference in Adelaide, September 2012

Figures are sourced from the IUCN Situation Analysis report on East and Southeast Asian Intertidal Habitats in the EAAF.

Summary of 8th Australasian Shorebird Conference - Adelaide 2012

Within the over-arching theme of **The Role of Science in the Conservation of Shorebirds**, two days of papers covered six sub-themes:

- Migration
- Ecology of Migratory Shorebirds
- Resident Shorebird Ecology
- Shorebirds and Saltworks
- Flyway Population Monitoring
- Conservation and Adaptive Management

The **keynote address** by David Paton discussed the *Ecological consequences for the Coorong from over-extraction of water in the Murray-Darling Basin*. His presentation exposed the competition for natural resources between humans and other animals - humans are winning, birds in particular are losing as their wetland habitats are robbed of essential water. Lack of water flows through the Murray mouth allowed the mouth to close and killed off the wetland plant *Ruppia tuberosa*, essential for the healthy ecology of the Coorong. Lack of tidal fluctuation in the Coorong restricted foraging shorebirds to a narrow static fringe around the water body. Under intergovernmental agreements with other countries along the East Asian-Australasian Flyway (EAAF), the Australian government is committed to protecting migratory shorebird habitat. This commitment finally pushed the government to dredge the Murray mouth to re-instate tidal fluctuations and improve shorebird habitat. Key points from David's talk were that:

- water is over-allocated in the Murray-Darling Basin
- the environment is not valued enough
- there is a problem of scale - someone extracting water 1000km upstream has no idea of the downstream consequences
- there are time lags in changes in the natural environment - leading to cumulative deterioration that can be catastrophic

More information on the Coorong can be found in David's book titled *At the End of the River: The Coorong and Lower Lakes*, published in 2012 by ATF Press, Hindmarsh.

Migration

Clive Minton discussed results of geolocators attached to Ruddy Turnstones, showing that these birds followed a narrow path on northward migration with many completing an initial non-stop flight of 7,600km to Taiwan. Most later staged in the Yellow Sea before continuing north to their high-arctic breeding grounds. Southward migration paths generally showed a much wider spread, ranging from Mongolia to the central Pacific, including a bird that moved east to the Aleutian Islands before making a long trans-

Pacific flight in two successive years - a round trip of 27,000km each year!

Geolocators weigh one gram and record light intensity. Ken Gosbell showed how the information they record can be used to determine their location (day length is related to latitude) and also when incubation occurs. Most Ruddy Turnstones arrive on the breeding grounds before 1 June and are now known to share incubation and to re-nest after 5-8 days if the first clutch fails. Researchers anticipate that a one gram electronic device that can be detected by the Icarus satellite will be available for use in tracking shorebirds in 2015 - this will provide even more detailed information on the whereabouts of shorebirds.

Danny Rogers made a study of museum specimens and live Grey Plovers caught in Australia and found that over 98% of Grey Plovers in Australia are female! They breed in the arctic tundra and then migrate thousands of kilometres southwards to non-breeding grounds, with females migrating further south than males. Conversely, the northern-most non-breeding population in the EAAF is dominated by males.

Ecology of Migratory Shorebirds

Lemming cycles in the arctic have been correlated with shorebird breeding success in the African-Eurasian Flyways - when lemming populations crash, predators prey on shorebirds and their breeding success is poor; when lemmings are abundant, shorebird breeding success is high. Yaara Aharon-Rotman's study of breeding success in the EAAF showed no correlation with lemming cycles since the 1980s, possibly because birds coming to Australia breed over a very broad area in the arctic, including areas not necessarily affected by lemmings. Furthermore, lemming cycles have shown a tendency to disappear over the last two decades, perhaps climate change is influencing lemming lifestyles.

As Sora Estrella stated, "since 20% of shorebird species that regularly migrate along the East Asian-Australasian Flyway have been officially classified as globally threatened, due at least in part to habitat degradation along the flyway, there is an urgent need to monitor and conserve the remaining important sites in the flyway." Since 2005 blooms of toxic cyanobacterium (blue-green algae) *Lyngbya majuscula* have increased in intensity and extent in Roebuck Bay, Broome, WA and appear to be related to changes in diversity of benthic invertebrates on which shorebirds feed. Although there were no significant differences in foraging success of Bar-tailed Godwits during a bloom compared with

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foraging during a non-significant bloom, there were differences in the types of prey obtained. The long-term consequences of such changes need to be evaluated.

Chris Hassell presented a very sobering picture of the rapid industrialisation of tidal mudflats in the Yellow Sea, threatening many species of migratory shorebirds. A small area of mudflat in the northwest of Bohai Bay that is surrounded by industrial development is a staging site for 75% of Red Knot on the EAAF. But there are plans to develop this small area...Where will the knots go? Reclamation of other tidal flats has already pushed more birds into this area. WWF-China, Wetlands International-China and Wetlands International-Oceania are all making political efforts to save Bohai Bay mudflats from further reclamation.

Jing Li from China talked about coordinating shorebird surveys in China, involving 13 sites along the east coast of China from Yalu Jiang (near the border with North Korea) south to Hong Kong. The surveys cover nature reserves and Important Bird Areas and take several days to accomplish. There was a big drop in population for all sites except Yalu Jiang in 2008 when shorebird populations fell by 50% on average at 9 sites. Reports on the China Waterbird Census are available at <http://www.chinabirdnet.org/edupub.html>

Resident Shorebird Ecology

In May 2010 Banded Stilt had a successful breeding event on an island in Lake Torrens National Park, following heavy inland rainfall during February to April 2010. Stilts lay up to 5 eggs per nest and the colony contained approximately 70,000 nests. It is likely that 200,000 chicks left the island. Following a subsequent breeding event, Reece Pedler attached satellite transmitters to several Banded Stilt and tracked individual birds flying both west and east from the colony. Cross-continental scale movements demonstrated that the degree of interconnectedness between eastern and western Australia is likely to be much greater than previously thought and that regular movements of hundreds of kilometres are commonplace for this species.

Intervention to manage site-based threats to Hooded Plovers on beaches of southeast Australia has resulted in increased fledging success at heavily threatened sites compared to similar sites with no intervention. During BirdLife Australia's five-year project, managed by Grainne Maguire, management efforts have included fencing nesting sites, signage, wardening and chick

shelters. The project is ongoing and increasingly important as human populations continue to grow and threaten ever more beaches.

Shorebirds and Saltworks

Saltworks are an important habitat for shorebirds, with over half of approximately 500,000 migratory and wintering shorebirds using saltworks in Europe. Jose Masero discussed how coastal saltworks can provide functional wetlands for non-breeding shorebirds depending on salinity gradients, time of year and geographical location in the flyways. The role of these hypersaline habitats as foraging grounds for shorebirds depends on the birds' ability to cope with high salt concentrations.

Gulf St Vincent in South Australia has long been recognised as internationally significant for shorebirds. Chris Purnell discussed the importance of commercial salt evaporation ponds (salinas) in the Gulf, which provide supratidal foraging habitat for shorebirds, with nine species present in internationally significant numbers (>1% EAAF population). Closure planning for such ponds needs to focus on conserving such habitat into the future.

In 2004, Rio Tinto's CEO Tom Albanese made a commitment at the IUCN conference for Rio Tinto to have a Net Positive Impact on biodiversity. Rio Tinto's salt operations at Lake MacLeod, Dampier and Port Hedland in Western Australia are all recognised as Important Bird Areas. Steve Rusbridge outlined how Dampier Salt has undertaken a significant research programme to define the relationship between production ponds and migratory species that use them. Rio Tinto is also engaging with various NGOs to investigate opportunities to invest in the protection of intertidal habitats along the EAAF that are vital to the future of migratory species found at the saltworks sites.

The Inner Gulf of Thailand supports significant populations of over-wintering shorebirds, with areas containing traditional saltpans having higher species richness, abundance and diversity than areas with aquaculture. Saltpans provided both roosting and supplementary feeding opportunities during high tide. Siriya Sripanomyom asserts that collaboration between researchers, salt farmers and planning authorities to manage saltpans as important shorebird roost sites is urgently needed.

Shorebirds feeding on small prey items such as *Artemia* in saltpans use surface tension transport to efficiently achieve high intake rates when the

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prey was available in high densities. Using high definition video, Sora Estrella found that bill flexing (distal rhynchokinesis) enhanced feeding efficiency when using surface tension transport.

Flyway Population Monitoring

Rob Clemens discussed progress in the University of Queensland project on identifying the causes of declines in migratory shorebird populations in Australia. Using Landsat data, researchers have mapped the extent of intertidal wetlands in the Yellow Sea region in the 1980s and 2000s. A large proportion of intertidal habitat has been lost primarily to coastal reclamation. However, lack of sediment supply (due to damming of rivers) has also contributed to tidal flat loss.

Dan Weller of Shorebirds 2020 stressed the importance of long-term data sets in monitoring shorebird population changes around Australia. The database provides essential information to guide management and conservation outcomes for shorebirds around Australia as well as in the EAAF.

Biannual counts of shorebirds in the Hunter Estuary since the 1980s and regular monthly monitoring since 1999 show declines in migratory shorebird populations at this site, which is considered the most important shorebird site in NSW. Chris Herbert showed graphs of declining shorebird populations and predicted that very few shorebirds would be present in the Hunter Estuary by 2030 if these rates of decline continued.

Conservation and Adaptive Management

Shorebird monitoring in Botany Bay has shown declines in shorebird populations, partly due to major infrastructure development on the north side of the bay for the third airport runway and port facilities. Chelsea Hankin revealed that rehabilitation of a small estuary on the north side of the bay aims to offset the previous habitat destruction and encourage the return of small waders such as Red-necked Stint, Curlew Sandpiper and Pacific Golden Plover.

Using the media to promote bird conservation is a tricky but necessary art - Mr and Mrs Ordinary have to be engaged in conservation issues so that through them, the issues reach the national agenda. Karen Hunt, editor of www.thebirdsnest.net.au stressed the need to develop a media strategy alongside research projects.

Conference Organisation

The excellent diversity of papers and presenters provided a very stimulating and informative 8th Australasian Shorebird Conference. Despite the gloomy forecast of declining shorebird populations in the Hunter Estuary, Golo Maurer, Shorebirds 2020 Manager, presented the Best Paper Award to Chris Herbert. Congratulations and thanks are due to Paul Wainwright and the organising team for a great conference.

Liz Crawford

Australasian Wader Studies Group Membership

Membership of the Australasian Wader Studies Group is open to anyone interested in the conservation of and research on waders (shorebirds) in the East Asian-Australasian Flyway. Members receive the twice-yearly journal *Stilt*, and a quarterly newsletter, *Tattler*. Visit www.awsg.org.au for more information.

Please direct all membership enquiries to:

BirdLife Australia
Supporter Services
Suite 2-05, 60 Leicester St
Carlton, VIC 3053, Australia.
Ph: 1300 730 075

Annual subscriptions:

Australia / New Zealand A\$40.00
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Membership forms can be downloaded from:

<http://www.awsg.org.au/membership.php> or
http://www.birdlife.org.au/documents/JOIN-AWSGMay_2012.pdf



Opinion and constructive critique about shorebird conservation

NOTE: This article is founded on over 20 years in-the-field-research and on international conservation experience with migratory birds and biodiversity worldwide. It is sparked by the 8th Australasian Shorebird Conference theme "The Role of Science in the Conservation of Shorebirds", but presents a long-formed view about the conservation management problems shorebirds face while many agencies and scientists still claim (or act) otherwise.

So far, science, shorebirds and conservation management have proved to be hostile bed fellows: after lost decades this is an urgent call for major improvements, institutional change and global sustainability.

Many shorebirds are declining, globally as well as on the East Asian-Australasian Flyway (EAAF). It is no surprise that wilderness, good shorebird habitats, healthy watersheds and atmosphere are also declining. For decades, climate change and related economic growth have been known to be among the major destructive forces on the natural world. Since the 1990s, we have missed achieving biodiversity targets (Mace *et al.* 2010) and social targets (Easterly 2006). Now, after decades of extreme capitalism, global economic policy failures are discussed in most nations, while the failure of reaching any climate change agreement and the failure of the Kyoto protocol are facts future generations will need to live with. All of this is detrimental to shorebird conservation. But what can shorebird scientists and amateurs really do about it, and how can they improve shorebird conservation and promote a science-based management?

Along the EAAF, Australian and New Zealand shorebird groups can be seen as major players in the Pacific Rim; they shaped many shorebird initiatives and efforts, and did so for decades. By now, their actions and 'conservation science culture' can be tracked well, and their success or otherwise can be reviewed. But despite a few gains here and there, the state of shorebirds along EAAF is nothing to be very proud of; Saemangeum is a good example of a re-active, instead of a pro-active, science and management. It was shown convincingly by other researchers – some even with a Nobel prize – that such action and science presents a subsidy for exploitation because it does not halt the destruction. Any textbook on wildlife management states that unwanted population declines, and listing of animals as endangered species, must be seen as a failure. So what went wrong in the EAAF and its science, and the amateur work?

Well, there is nothing wrong really with the amateur efforts in shorebird conservation. But considering the pitiful status of shorebirds (specifically true for many Arctic, Australian and New Zealand shorebirds), the many efforts simply have not achieved relevant sustainability. And thus, there is a serious problem with the leadership and scientific guidance, and the underlying conservation science model and vision of the huge amateur work carried out. Trust and effort by the amateurs has been mislead and got mis-used, as judged by the decaying state of shorebirds. So let's quickly look at the current science done on shorebirds for the EAAF in the last few decades:

-the bulk of field work and data collection is done with,

and by, guided amateurs;

-much of the data collection lacks a statistical and scientific review of conservation and policy rigor;

-strong reliance on publication outlets that are not internationally peer-reviewed;

-lack of publicly-available field raw data (that includes reliable population estimates, flag reports, and primarily, bird banding, telemetry and geolocator data; and with metadata). Also important to have are latest environmental habitat layers, e.g. climate, shoreline and watersheds;

-strong governmental, agency and NGO involvement in funding, administration, agenda-setting and policy but without many achieving performance metrics;

-lack of valid and progressing hypothesis discussions for shorebird conservation and management;

-a stereotype, limited and one-sided set of statistics applied as inferred from narrow experiments, and to show environmental impacts in an otherwise multivariate ecological setting; and

-lack of a reviewed scientific model that promotes holistic sustainability and transparent decision-making and management, as can be seen and tracked by the status of shorebirds and their habitats, as well as for the atmosphere we all live in (man-made climate change).

Despite over 40 years of intense shorebird work and related research, there still is virtually no achieving, accepted and central science-based management authority and concept for shorebirds that actually works. Many 'cooks' are involved while many relevant shorebird metrics are 'down', certainly not prospering at all. The last decades have engaged in a destructive, at best 'neutral', scientific management model; it has widely resulted in a conservation sink with no good progress. It reminds me of 'Tobacco science', where research is used by industry to show there are no impacts from smoking. How could that happen? I would also ask the many National Academies of Science along the flyways why to this very day, there is virtually no agreed adaptive or other science-based management scheme (or ecosystem-based, resilience or otherwise), into which the collected and published shorebird data can readily feed, and be used. (This problem can easily be resolved by the required policy legislation for doing effective wildlife management, but this is missing or dubious, at best). There is still no specific academic university degree for shorebird scientists nor for shorebird managers nor for a profession to safeguard shorebirds. Involvements and student degree projects from prestigious universities have not helped. Shorebird workers and managers are virtually not certified and can simply act on good will, personal belief or wishful thinking; they are certainly not assessed for job performance related to shorebird well-being. There is no personal liability when failing and when shorebirds decline. There are no consistently agreed upon animal care and ethical standards even along the EAAF. The best tool that western science tends to apply to wildlife protection, National Parks, is not widespread along the EAAF and is known to fail with migratory birds and climate change. There are only a few universities along the EAAF and Pacific Rim that host shorebird (conservation) research, with some good budgets, where uncensored critical thinking with a balanced debate and with an inviting intellectual atmosphere, is carried out to safeguard shorebirds from declines and

Opinion and constructive critique about shorebird conservation

habitat loss. This situation almost makes for an anti-science statement in shorebird management.

A widely-used UK, Holland or even US government-based science scheme has not much to offer when it comes to dealing with wilderness and holistic shorebird protection or with taking climate change and carbon reduction really into account globally (the scale where shorebirds live). After 40 years, the so-called 'objective science', solely defined and guided by research agencies, but without a relevant faculty and amateur debate or similar wider frameworks guaranteeing conservation progress, and without a performance review, cannot achieve shorebird conservation. Top-down management does not work well, and when bottom-up (amateur) approaches are not encouraged, no mechanisms exist to achieve conservation. Clearly, without having social economics and ecological economics embraced in shorebird conservation science and management, no relevant progress can be achieved. The widely used hope that even more narrow and techno-science, e.g. physiology and genetics, or more intense tagging, and its summary publication in flashy commercial or non-peer-reviewed journals would prove useful for conservation has failed us once again (Note: *Science* and *Nature* are commercial journals with no conservation interest nor with a scheme for achieving conservation). Such work primarily creates a public news flash but hardly leads to long-term sustainability. A social network analysis of the most-cited shorebird scientists of the EAAF and in shorebird conservation, quickly reveals very few players, a rather narrow science profile and with a high top-down professional inbreeding coefficient. The relevance of NGOs and contractors, and their funders (often from outside), can be rather overwhelming also. It is worth mentioning that virtually all national players in the shorebird game tend to be active in corporate 'mining', 'oil and gas' and 'windkraft' games, and often impose such 'industrial' cultures upon shorebird conservation. Such characteristics and set ups are known to harm the profession, as well as shorebird status alike.

While powerful defenders of the status-quo and business-as-usual still persist and tend to argue '*all is fine*', '*some loss is unavoidable*', and '*things are soon changing for the better*', here I would like to emphasize that we live in times of a global (shorebird) crisis, without foreseeable and relevant progress towards conservation. Time matters, and we cannot wait another 7 years until narrow mark-capture-recapture studies give us answers with a bias and unsatisfactory variance. Declining shorebird populations speak for themselves; pro-active action is needed. If that is not enough, then just envision 'Big Australia', an Asia with higher consumption levels, an even more widespread human footprint, and a world with 9 billion people, apart from ongoing climate change, a melting Arctic, watershed decay, ocean acidification and increased sea levels. Where would a mislead amateur research lead us to?

Currently, along the EAAF, we lack a coherent and pluralistic science-based management that represents all stakeholders and which achieves well-being for shorebirds, their habitats and humans alike. Our ecosystems are already widely overcommitted. We have no good shorebird conservation ethics to value

life. We do not use science sufficiently to deal with these questions, nor is a sustainable funding scheme put in place by agencies, institutions or individuals in charge. A debate on, 'science - what for and by whom?' still needs to be held and a sustainable and holistic outcome developed. As long as shorebirds decline and habitats are lost, we are clearly engaged on the wrong science-management model. So far, and despite the huge and heroic but often mislead efforts of amateurs, we have already lost many shorebird paradises. And as it now stands, we will lose much more for the coming decades unless we engage in an honest conservation review, 'change of business', and put shorebirds first. The rights of Mother Earth and its limits matter.

(The author would be delighted to engage in a wider and constructive discussion on shorebird management, or to provide scientific citations as needed in support of statements made here)

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What hope for shorebirds?

Feeding

When the tide is out, the mudflat shows,
And that is where our shorebird goes.
It seeks out its prey with probe and prod,
Finds a small crab underneath its clod
Of earth, dismembers it with a shake.
Of such small morsels, its meal does make.

Its footprints stand starkly in the mud,
They'll wash away in a tidal flood.
A walker comes by, with dog off leash.
"It is my right to be on this beach."
The bird is wary and flies away
Its meal must wait for another day.

Roosting

When the tide's high they gather in flocks,
To quietly roost on sand or rocks.
With their heads tucked in, they rest or sleep.
They cannot hunt when the water's deep.
They'll rest here until the water drops
It's the only time their feeding stops.

The roost site is near their feeding ground.
They don't fly far to be safe and sound.
Peace is short, a fishing boat comes by.
It approaches close, and they have to fly.
They settle elsewhere, not where they'd like.
At risk now from a predator's strike.

Migrating

The breeding ground lies so far away.
Though the summer's short, it has long days.
They fly for weeks, their trip's without peer.
There, and back, each and every year.
Along the way they will rest and feed
At staging sites, when they have the need.

But land is scarce all along their route
So the mudflats are "reclaimed" to suit.
And because they have no voice, these birds,
The politicians don't hear their words.
So they can't feed, and thus they perish,
From loss of land, these birds we cherish.

Alan Stuart