

## Bohai 2018 - Update 5

As our 7<sup>th</sup> week in Bohai comes to a close, the dataset is looking good! Since the previous update we have had some very productive scanning. Good tides combined with lots of birds have resulted in some very satisfying days where we have recorded 50, 60 and even 80 (!) colour-bands during a field session.

Unlike the last few years, the Red Knot have generally been reliable and predictable. At the time of writing approx. 15,000 remain at Nanpu with few Red Knot recorded in neighbouring coastal areas or in the salt ponds. The salt ponds remain unusually high which is undoubtedly playing a role in their behaviour but perhaps the food resources at Nanpu are particularly good this year? There have been plenty of benthic samples taken so we will find out in due course.

To-date, we have recorded 3,776 colour-banded or flagged birds, the majority of which are from northwest Australia. We have precisely 1,000 Broome/80-mile Beach colour-band observations, of 321 individual combinations dominated by 273 Red Knots. Our total of 876 individually identifiable birds includes birds banded in Australia (Victoria, Queensland, South Australia), Russia (Chukotka & Kamchatka), New Zealand, Thailand, Japan, and Hong Kong, among others.



*A Curlew Sandpiper banded in Hong Kong roosting on a pond wall. Note the white flag has some staining.*

Additionally, throughout the season we have been monitoring the changing status of Red Knot subspecies passing through this stretch of coast. Early in April, they are mostly of the *rogersi* subspecies but this swings in favour of *piersmai* birds during May. So far, in 2018, we have assessed 38,275 individuals and watched the ratio change from 92 % *rogersi* on 14<sup>th</sup> April to >80 % *piersmai* in the last few days. This adds more to the intrigue of the data of 2016 and 2017 when there appeared to be a change in the 'usual' pattern of timing. Watch this space for more discussion in the annual report and some colourful graphs...

We are in the home stretch now, with about a week of fieldwork left and ever decreasing numbers of birds to look at. Despite this, as the Red Knot numbers are still high we hope there are lots of bands and flags to record.

In the diverse world of non-shorebirds, migration has slowed since the spectacle of early-May. Later migrants such as Arctic Warbler, Black Drongo and Black-naped Oriole have been seen regularly, as well as a few unusual species. A Blunt-winged warbler has been holding territory by the Nanpu sea wall, seen or heard over several days this week. Our second Tiger Shrike of the season was in the 'Prison Trees', where

Kamchatka Leaf Warbler has been [heard calling](#) a couple of times. A Swinhoe's Minivet, photographed by a visiting birder, slipped through without us seeing it which was all the more frustrating when we revisited a 'mystery' [sound recording](#) from the same day and recalled discussing at the time that is "sounded like a Minivet"!



*Grey Nightjar, roosting in the 'Prison Trees'*

There have been many positive statements coming from the Chinese Government in the past 7 or 8 months, going back to Xi Jinping's address at the 19<sup>th</sup> Chinese Communist Party congress in October 2017. Without a doubt these are positive signs for the environment in China, including the intertidal mudflats of the Yellow Sea used by migratory shorebirds. However, it should be noted that such big ideas do take some time to be realised and the grand statements from the State Oceanic Administration (SOA) may not come to pass as that Bureau no longer exists. The SOA has been split across 3 other Bureaus, but the good news is that one of these is the newly-formed Ministry of Natural Resources (MNR) and another, the Ministry of Ecology and Environment (MEE).

It should be noted that in one of these statements, the government committed to "*nationalise reclaimed land with no structures built on it, and will **halt reclamation projects that have yet to be opened and are against national policies.***" Many huge projects are already underway and there is no explanation of what 'national policies' are. As is the case in all and any nation in the world, the economy will take precedence over the environment.

One such massive industrial project is happening right now in one of our less frequented study sites between Beipu and Hangu Wind Farm. This is an area we have seldom visited due to the difficulty of access to the mudflats and limited opportunities for scanning. Over the years, we have done some exploration of the ponds (now reclaimed) in that area but we know little about shorebird use of the mudflats there. A classic case of losing something before it is even documented what ecological value it has.

The area is now called the "Hebei Fengnan By-port Economic Zone".

The new zone is going to host 5 steel companies, each moved from their current locations within or near urban areas, to the coast. This will undoubtedly bring an economic upturn to the area with additional jobs and investment. The project started in August 2017 and is scheduled to be complete by July 2021. The total investment will be around the equivalent of A\$4 billion.

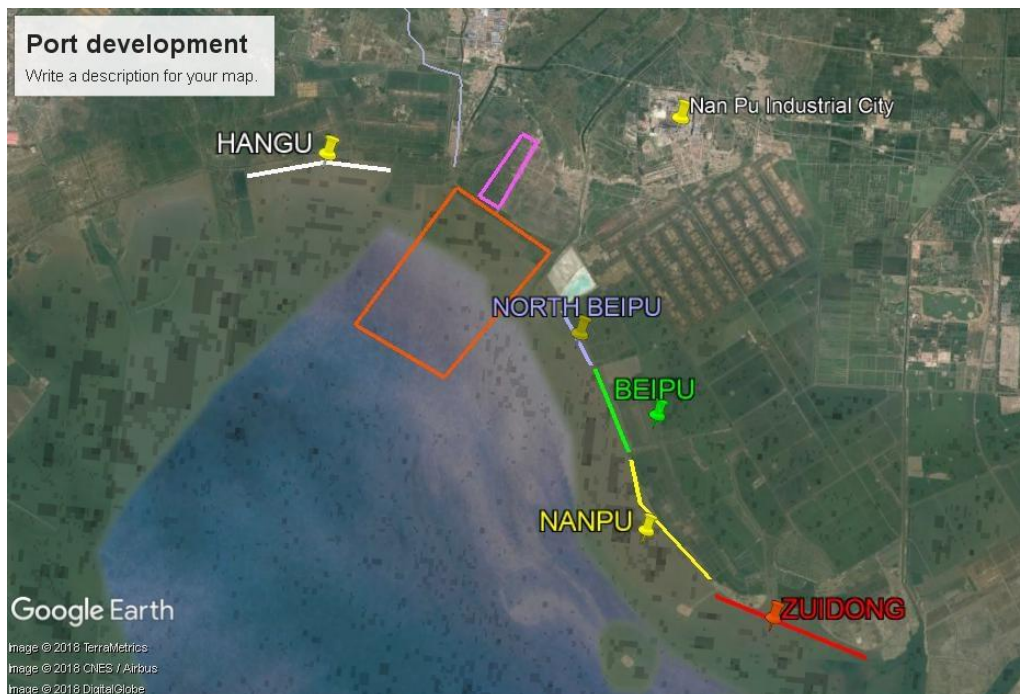


We drove past the construction site recently and it is a sight to behold, with all construction seemingly going on at once, throughout the 3.7 km long, 1 km wide site. The land on which the steel works is being built was reclaimed many years ago and used as aquaculture ponds, before being filled in for this project.



*The steelworks under construction seen from the Hangu wind farm site.*

In addition to the Steelworks, a port will be developed. This will, from our understanding of the 'information boards' at the site, cover some 54 square km of intertidal mud and shallow sea and become an imposing feature of the coast. Another large chunk of mudflat set to disappear!



*A representation of the coast with the GFN study sites marked. The new steel works is marked in the pink box and the proposed port in orange. Note these are our own interpretations and not official maps.*

Some of you would have read our comments over the years about the problem of the introduced Smooth Cordgrass, *Spartina alterniflora* (Spartina). This highly invasive plant is now present on nearly all mudflats along the Yellow sea coast of China.

When we first started our work here in 2009, *Spartina* had not started growing in our main survey area of Nanpu. We noticed it in 2011 and 2012 and, knowing how much of a threat that this would be, we started some small-scale spraying trials in 2013 and 2014. Without follow-up work during the summers when we were absent, and the fact that we could not access some patches due to the very soft, deep mud between the grass and the seawall it quickly spread. It became clear that our efforts, using a small backpack sprayer of herbicide, were not a viable option to control it. Since these trials, it has expanded rapidly along the Nanpu mudflats and is now present at all our survey sites. The good news; however, is that this year the problem has been acknowledged by the local government, and a team of workers have been busy clearing out the dead grass to allow better access to living stems. This will hopefully make the herbicide application more effective when it is sprayed on a large-scale in the next few weeks. It is fantastic news that this issue has been taken seriously and combatting the *Spartina* in its early stages of colonization will hopefully allow the mudflats to continue to be a great habitat for shorebirds and fishermen well into the future.

We are all looking forward to see the results of the eradication work next year.



*The spread of *Spartina* at Nanpu: 30<sup>th</sup> May 2015 on the left and 30<sup>th</sup> May 2018 on the right*



*A team of workers clearing the dead *Spartina* in preparation for spraying, May 2018*