

## Scanning Red Knot at Anna Plains

Scanning (searching through flocks of birds for marked individuals) Red Knot on 80 Mile Beach at Anna Plains Station in April had become a much loved part of GFN field work but, the pandemic meant it wasn't possible in 2020. That made the trip this year even more special.

By April the Red Knots are in all states of breeding plumage from about 25% of what they will attain to some already at 100%. A striking sight when they are in flocks of 1,000's. Interspersed with the riot of colour are some grey and white birds, the immature birds that won't migrate this year. The first day on the beach produced only about 100 Red Knot in 47 km of beach. A worrying sign? No. Red Knots are not evenly distributed on 80 Mile Beach and the following day in the next 10 km of beach we had about 25,000 to look at.



The scene as the tide recedes and the Red Knots start to forage

We are looking for birds that we have captured and given an individual combination of 4 colourbands and a flag, although we record all and any marked birds for the various projects throughout the EAAF.

We recorded 118 marked Red Knot from the GFN project and 133 from other projects.

The 118 resights equated to 116 individuals, 2 of the same birds were seen in different 'sections' of the beach. We split the beach in to 5 km sections for recording purposes to gain accurate distribution information.

The following information is not rigorous statistical analysis (not my thing) it is a snap shot of these 116 birds and what they do and where they go. I know that birds banded in the bay often move to the Anna Plains section of 80 Mile Beach and spend the non-breeding period of their lives there. I know some return through Roebuck Bay on northward migration and some on southward migration. I know a lot of them go to Bohai Bay <http://globalflywaynetwork.com.au/wp-content/uploads/2019/09/GFN-Bohai-Report-2019-Web-1.pdf>

Of the 116 birds 56 had been banded in Roebuck Bay and moved to Anna Plains. The remaining 59 were banded at Anna Plains. 1 bird was missing the flag giving it an incomplete combination so I am not able to determine where that bird was marked.

31 of the birds banded at Anna Plains have passed through Roebuck Bay in one or more years on northward migration. When they do this they spend between a week and a month there before taking off on the first leg proper of their migration. 21 of the 116 marked birds have passed through Roebuck Bay on southward migration. There was a strong bias for birds banded in Roebuck Bay to visit their original banding site of Roebuck Bay on either north or southward migration.

These data are, of course, biased by where the observers are but, despite the huge effort put in to resighting work in Bohai Bay it's obvious the site is currently absolutely critical to Red Knots from north west Australia.

And so to the birds visiting Bohai Bay, most particularly the northern area where GFN have just started the twelfth year of resighting studies, this year led, as was the case in 2020, by Kathrine Leung.



The study site in Bohai Bay, China

I have speculated that up to 80% of the NWA Red Knots are passing through that one small area.

From this cohort of sightings it was 72.4%, 84 out of 116. But, as I have not taken out the immature birds that won't migrate, it could be higher. Although it would be a small increase as we haven't marked any Red Knots for over a year due to COVID.

6 birds were seen away from Anna Plains or Roebuck Bay but not at Bohai. 3 in Jiangsu Province, China. 1 in Shenzhen, China (southern). 1 in Russia and 1 in New Zealand. And 1 bird was seen in both Jiangsu and Bohai but, in different years.

Another set of data we collect is to identify the marked birds to subspecies level. The dominant subspecies here in north west Australia is *piersmai* and also present is *rogersi*. There is a good explanation of the plumage characteristics we use to do this as part of this article <http://globalflywaynetwork.com.au/wp-content/uploads/2013/01/Red-Knot.pdf>

There were 70 birds with sufficient plumage and good enough views to assess. 58 (85%) were *piersmai* and 11 (15%) were *rogersi*. This is consistent with other studies we have done here. We hope to be able to check how accurate our field observation assessments are by doing DNA work on the large sample of blood samples we have collected that are stored safely in The Netherlands at NIOZ.

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GFN thank the Stoate family of Anna Plains Station for having us stay on their property and access to the beach.

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