



The Great Knots and Bar-tailed Godwits carrying solar-powered Platform Terminal Transmitters (PTT) have been doing much as we would expect for the last 2 months although with the data gathered from the PTT we get a great insight in to individuals behaviour rather than 'the Great Knots' or 'the Bar-tailed Godwits'.

If I am asked how does a Great Knot migrate to its Siberian breeding grounds I give an answer that is general to all Great Knots, 'they fly to southern areas of the Yellow Sea take one or a few hops to the northern Yellow Sea, finish fattening up there and then go to the breeding grounds'. That is broadly correct but of course there is a great deal of individual variation within that general strategy.

These individual migration tracks are just what the PTT's reveal to us.

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

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

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

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

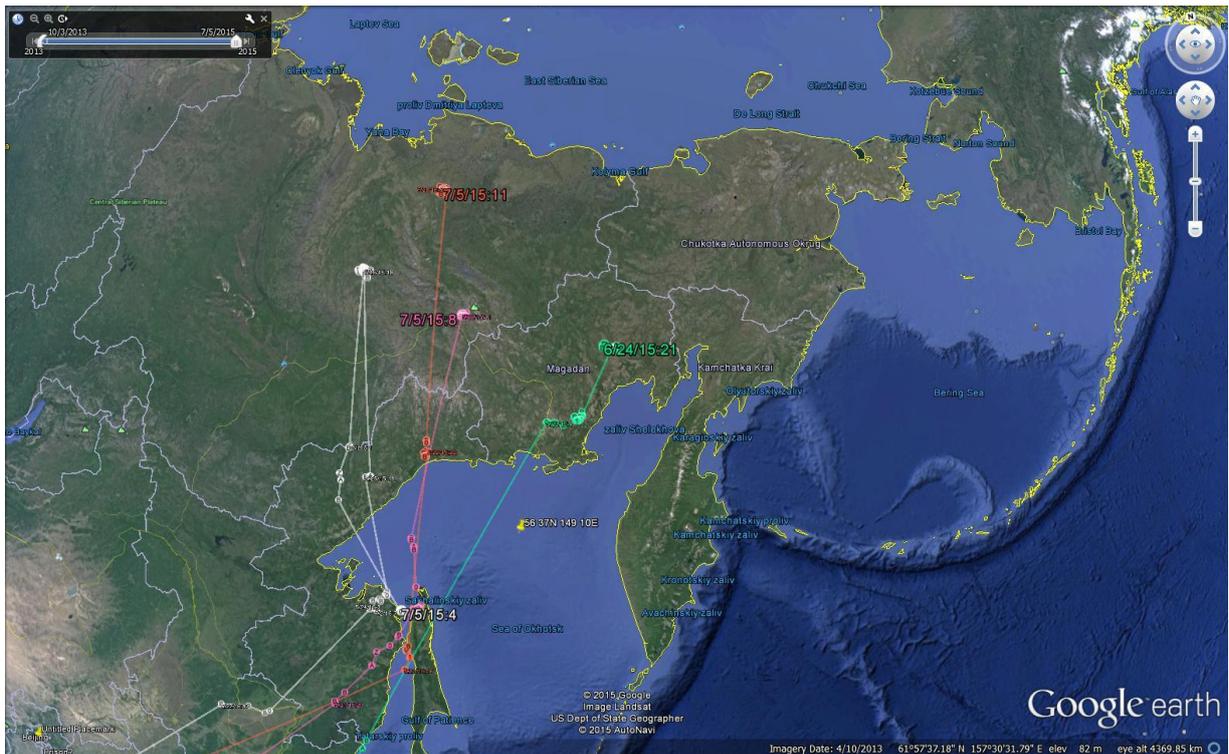
We expect the Great Knots to return to Roebuck Bay via the Yellow sea, but let's wait and see!

A Great Knot in splendid 100% breeding plumage from a 'short-term' staging site on the Sea of Okhotsk 24/05/2015 (not a PTT bird).



Image A. Kondratyev

A selection of tracks of Great knots to and from their breeding sites



Bar-tailed Godwits have also completed their northward migration and, in most cases, have already departed their northern Russia breeding sites to staging site even farther north in the New Siberian Islands.

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

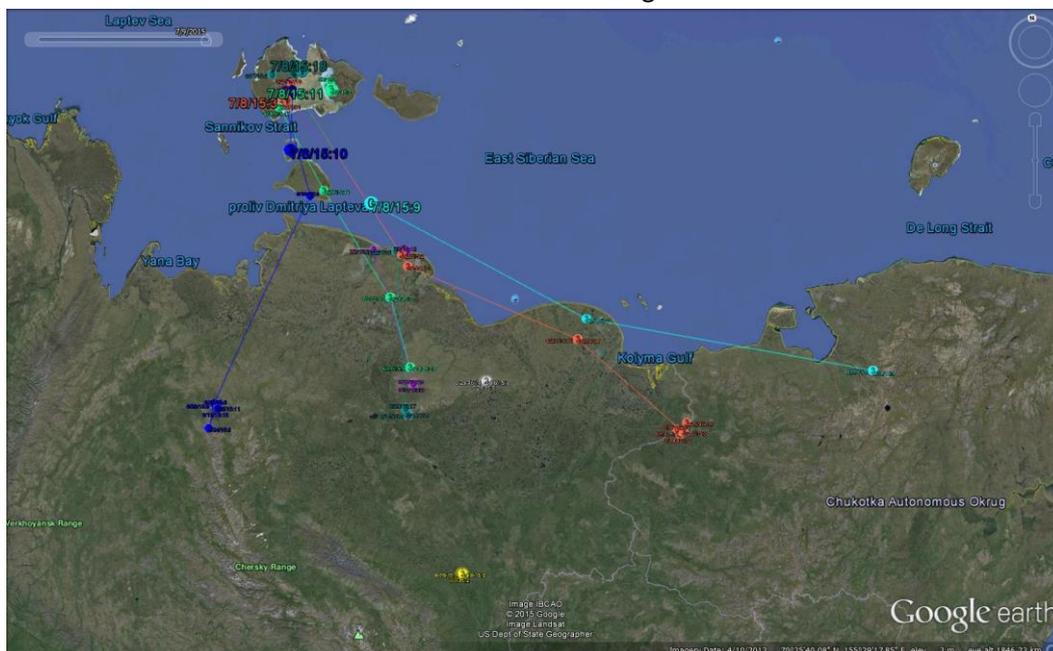
The Argos data allows us to tentatively interpret what the birds are doing. For example, when it is plotted on Google Earth multiple data points in an arrangement like the spokes of a bicycle wheel all radiating out from a central point suggest a bird on a nest moving only short distances. If this pattern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

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

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

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

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



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

The Global Flyway Network (GFN) PTT Team