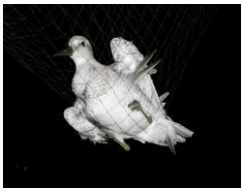
MSc/BSc research project:

Red Knot foraging paths on a known food landscape

General framework

Red Knots are shorebirds that feed on bivalve prey hidden in the sediment of inter tidal mudflats in the Wadden Sea. At high tide knots aggregate at roosts from where they distribute themselves across the mudflats in search of prey. ***How do they find their hidden prey?***



To answer this question we will obtain red knot position data as well as bivalve distribution data. We will get position data by placing a novel type of transmitter on red knots which will give us their locations every second at several meters accuracy. To obtain food distribution data we will sample bivalve densities across mudflats.

Within this project it is possible to come up with your own research questions, but **examples of research question are**: do red knots find the highest prey densities? Do individual knots have fixed foraging routines? Does food processing capacity determine foraging distribution? Which birds 'lead' the group from the high tide roost to the foraging grounds? Do red knots use social information to find their prey?

Activities

This project will consist of much fieldwork such as catching red knots and sampling bivalve prey. All the work will be centred around the island of Griend (a nature reserve) where we have all facilities necessary. The bivalve sampling will be done by foot from Griend or by rubber boat from the research vessel Navicula. During the period we are measuring red knot movement (August – September) we additionally estimate intake rates and prey selection of foraging knots. After fieldwork there will also be lab-work to estimate lengths and ash free dry mass (energy content) of the sampled bivalves as well as determining diet by dropping analyses.

Practical issues

Preferably you start around June 2011 for the duration of at least 3 months. For the project you will be based on the island of Texel at the Royal Netherlands Institute of Sea research (NIOZ) department of Marine Ecology (MEE). For the duration of your project the NIOZ will provide a monthly allowance as well as individual housing at "de Potvis" on Texel.

Contact

If you are interested in this project or have further questions please contact Allert Bijleveld: 06-55116798 / allert.bijleveld@nioz.nl or Theunis Piersma theunis.piersma@nioz.nl