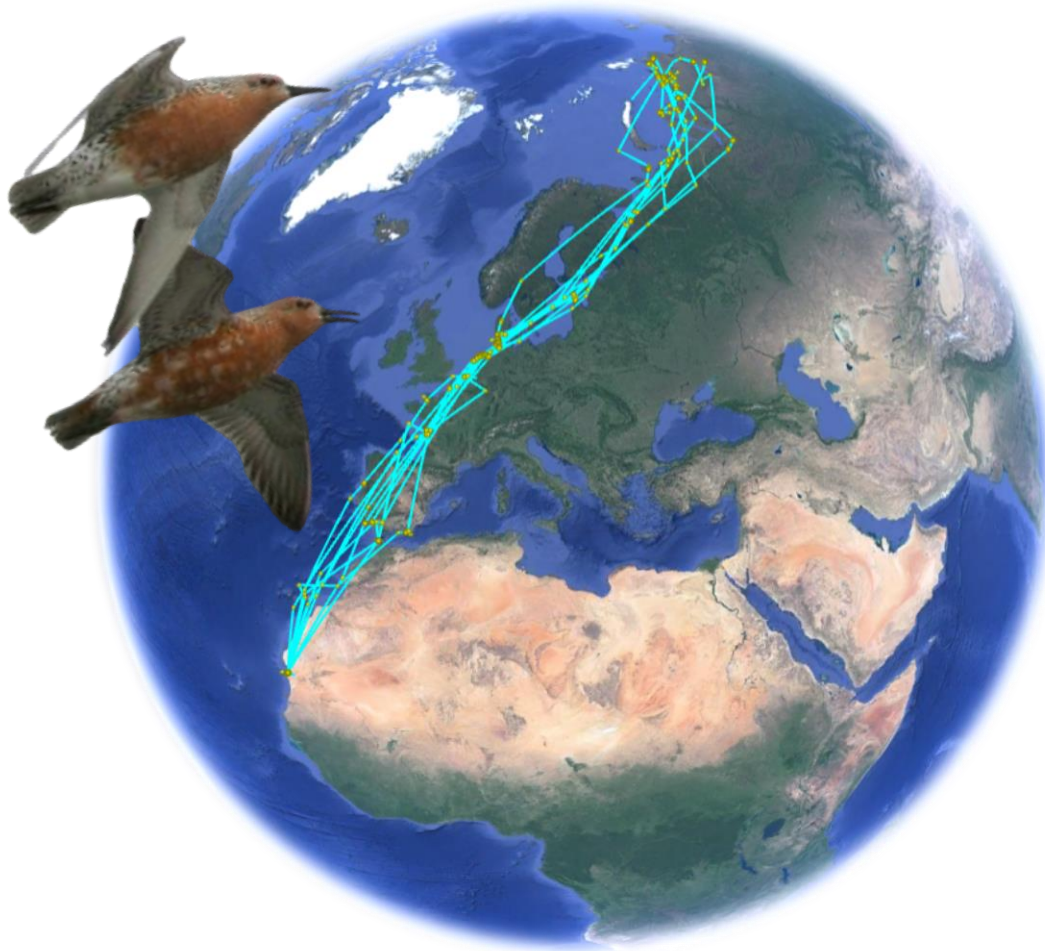


# EFFECTS OF WIND ON THE MIGRATION OF RED KNOTS

## STUDENT PROJECT



Red knots are shorebirds that spend their winters in West-Africa and in summer they breed in Taymir on the high-Arctic tundra.

During spring they fly about 9000 kms to get from their wintering grounds to the breeding grounds.

Arriving on the breeding grounds in time is important, because then their chicks will grow up during the seasonal food peak.

In this project, we will analyze the tracks of individuals with satellite-tags on the travel to their breeding grounds.

These tags measured exact locations, altitude, and speed of the birds in flight.

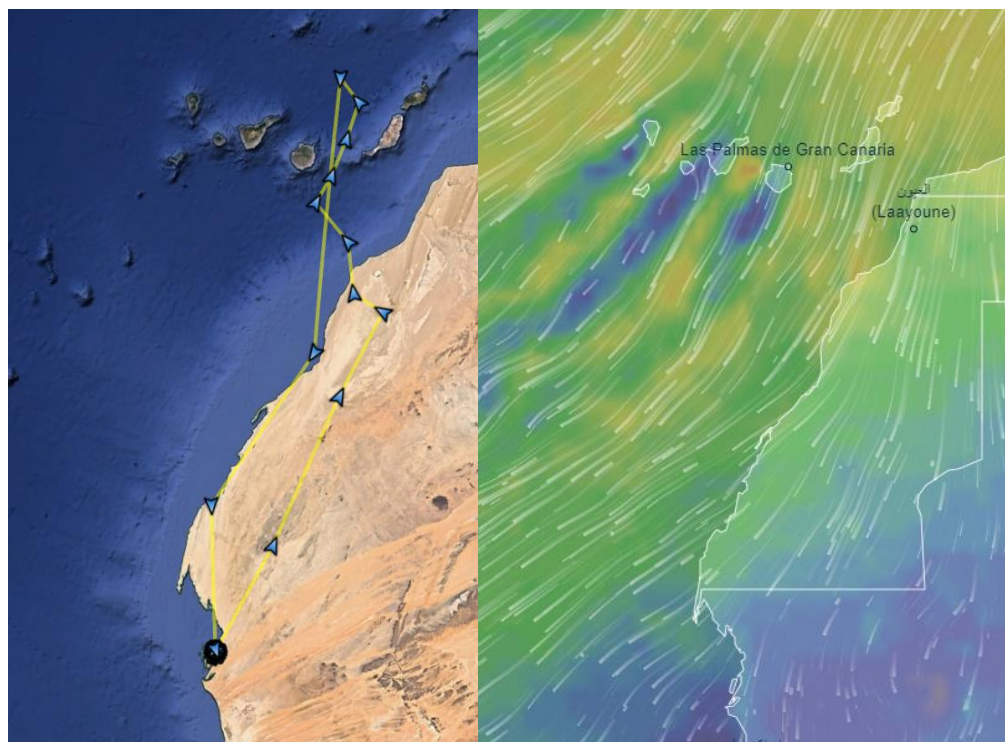
We are especially interested in the wind conditions the birds encounter during their flights and how they cope with this.

Wind data will be obtained from climate models and the work includes processing those large datasets.

One challenge that the birds could encounter are strong headwinds off the coast of West-Africa (see the figures on the right). We will explore how many individuals encounter these and if climate change makes this more likely to happen in the future.

This project is part of a collaboration between the Royal Netherlands Institute for Sea Research (NIOZ), University of Groningen (RUG) and the Royal Netherlands Meteorological Institute (KNMI).

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*Example of a track of an individual bird that returned around the Canary Islands, because of strong headwinds.*