

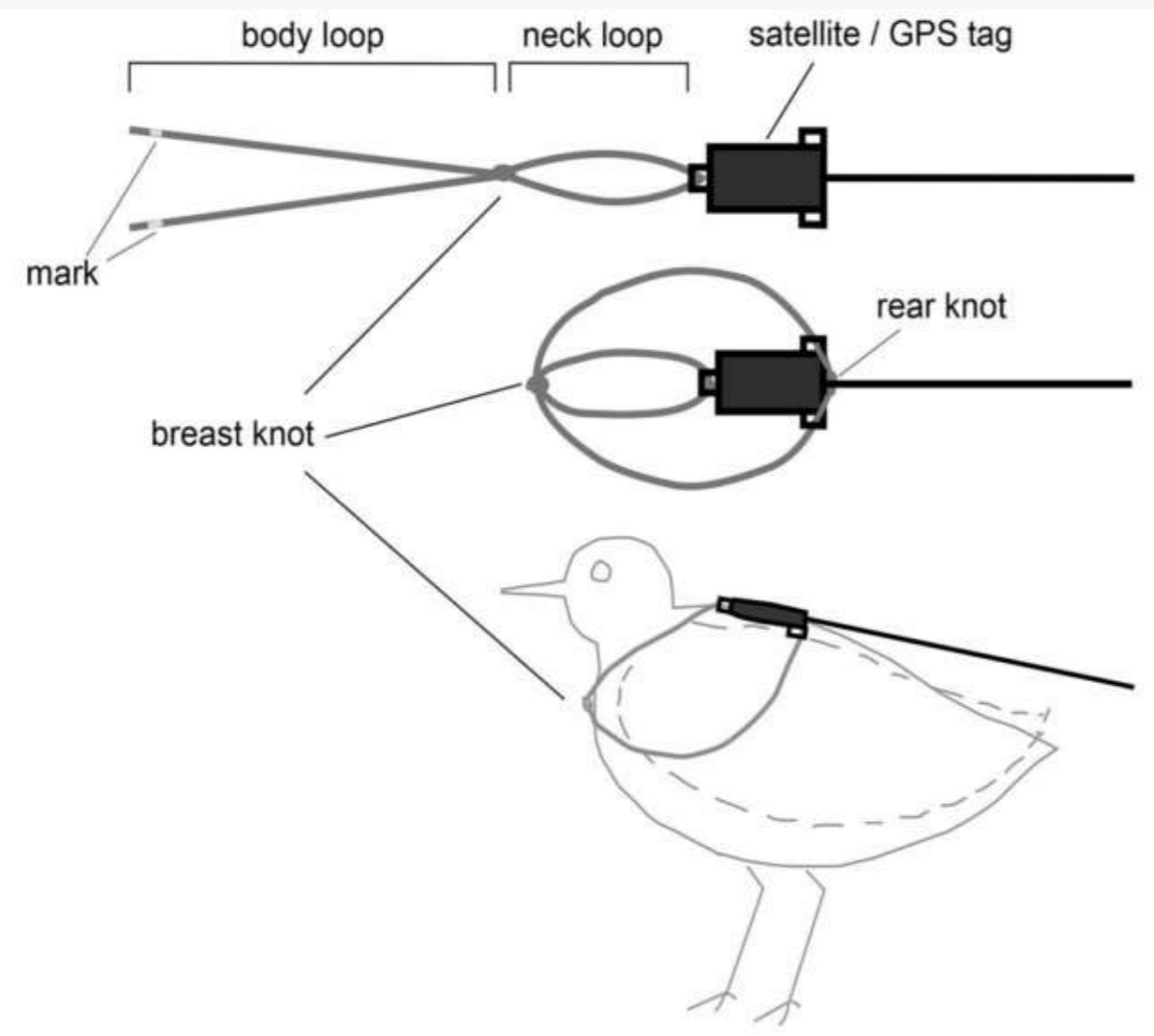
# Paula, the pioneer

One tagged Red Knot commutes from Wadden Sea to Canadian breeding grounds and finally shows us the details of this migration

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## The Technique



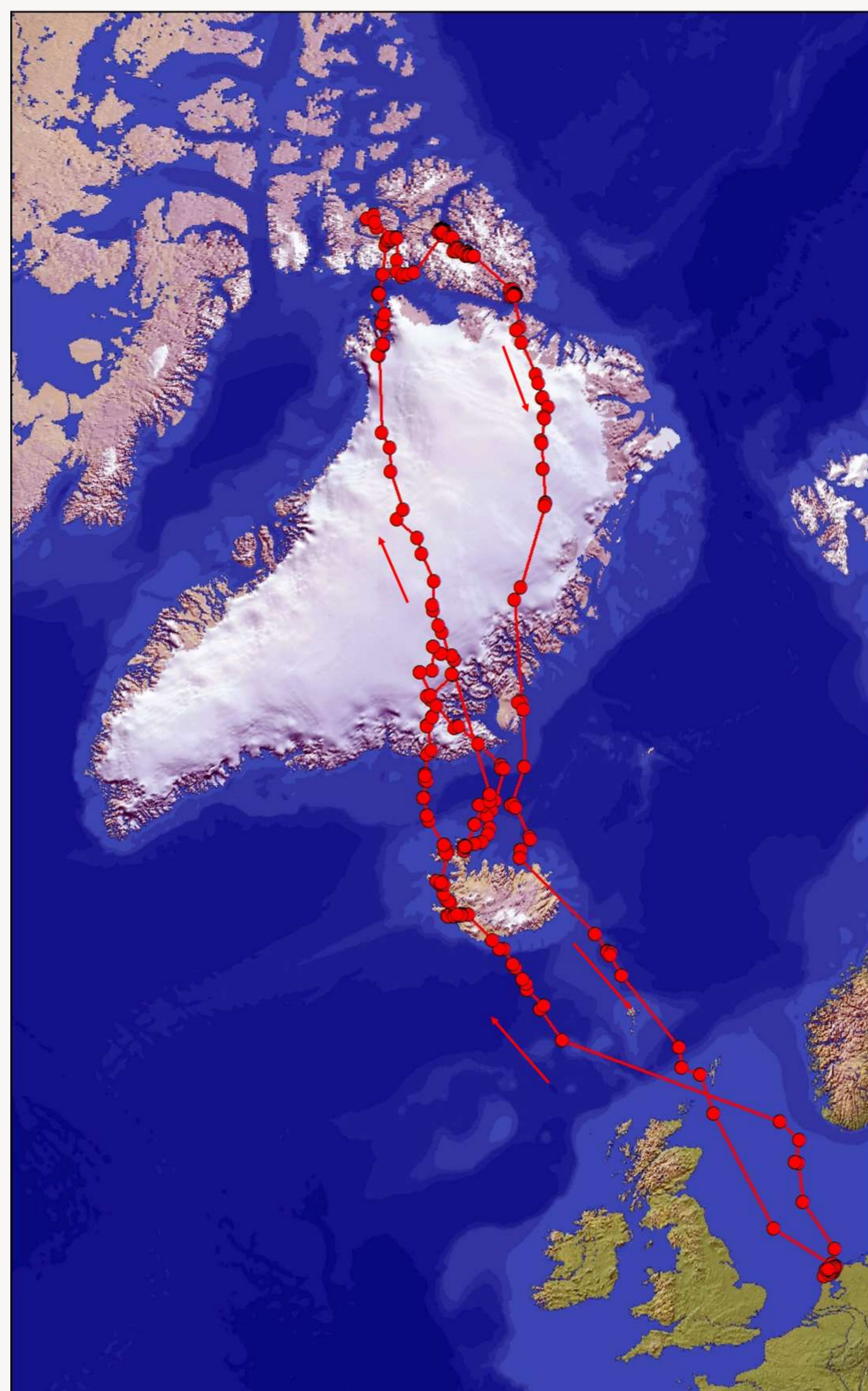
- 2g Solar PTT
- Transmits virtually continuously
- Integrated full-body harness [1]

## The Bird



One adult (2+ cy) female Red Knot (*Calidris canutus islandica*) released in the Wadden Sea on 22 April (left). She returned to the Wadden Sea on the 16 July (right).

## The Track



Spring Fall

8<sup>th</sup> -26<sup>th</sup> June

12<sup>th</sup> July

4<sup>th</sup> June

18<sup>th</sup> May

17<sup>th</sup> May

15<sup>th</sup> July

## How the first successfully tagged bird helps confirm or reject earlier inferences about Red Knot migration

1. Wadden Sea wintering Red Knots breed on Ellesmere Island [2] **YES**
2. Red Knots fuel up on arthropods on dry tundra before they leave the breeding grounds [3] **YES**, contra [4]
3. Red Knots follow the rhumbline route when crossing the Greenland icecap [5] **YES**
4. On southward migration some Red Knots skip Iceland [6] **YES**
5. Red Knots prefer to embark on long-distance flights at dusk [7] **NO, NOT ALWAYS**

## One new finding

6. Red Knots may make exploratory flights over the Greenland Icecap!

[1] Chan, Y., Brugge, M., Tibbitts, T. L., Dekinga, A., Porter, R., Klaassen, R. H. G. & Piersma, T. 2015. Testing an attachment method for solar-powered tracking devices on a long-distance migrating shorebird. *J. Ornithol.* 157: 277.

[2] Morrison, R. I. G. 1975. Migration and morphometrics of European Knot and Turnstone on Ellesmere Island, Canada. *Bird-Banding* 46 :290-301.

[3] Piersma et al. unpubl. observ.

[4] Nettleship, D. N. 1974. The breeding of the Knot *Calidris canutus* at Hazen Camp, Ellesmere Island, N. W. T. *Polarforschung* 44: 8-26.

[5] Alerstam, T., Hjort, C., Högsted, G., Jönsson, P.E., Karlsson, J. & Larsson, B. 1986. Spring migration of birds across the Greenland Inlandice. *Meddelelser om Grønland, Bioscience* 21: 1-38

[6] Dietz, M.W., Spaans, B., Dekinga, A., Klaassen, M., Korthals, H., van Leeuwen. C. & Piersma, T. 2010. Do red knots (*Calidris canutus islandica*) routinely skip Iceland during southward migration? *Condor* 112:48-55

[7] Piersma, T., Zwarts, L. & Bruggemann, J. H. 1990. Behavioural aspects of the departure of waders before long-distance flights: flocking, vocalizations, flight paths and diurnal timing. *Ardea* 78 :157-184.

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