

Understanding shorebird movements along the East Asian-Australasian Flyway

Decades of leg-flag sightings and new geolocator data reveal how shorebird migration is changing and why it matters for wildlife and people along the East Asian-Australasian Flyway (EAAF)



Migratory shorebirds have unique importance because they can carry diseases and signal ecosystem health across their vast ranges. This project will investigate how migration schedules have changed in response to global change, using long-term tracking data and citizen science. The outcomes of this project will strengthen biosecurity and conservation policies for declining shorebird species.

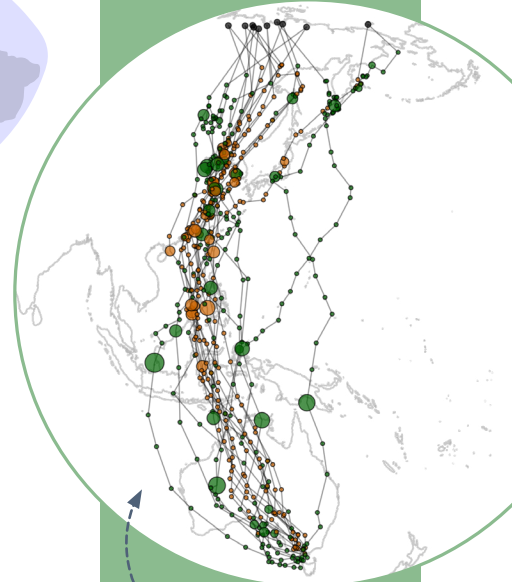
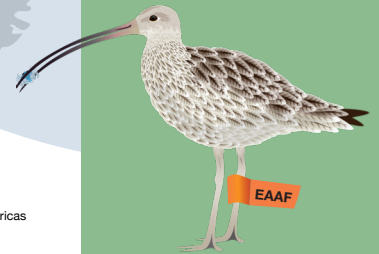
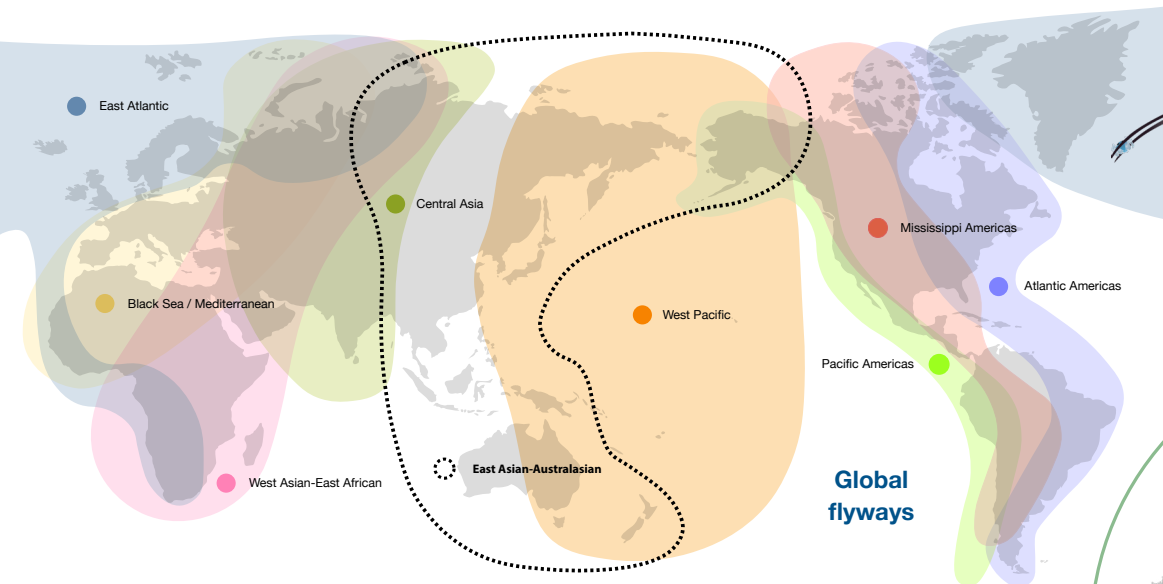


Marine
and Coastal

National Environmental Science Program

PROJECT 4.26

Modelling shorebird migration to assess disease risk amid global change



Frequent flyers

As frequent travellers who connect Australia to East Asia and Siberia, migratory shorebirds are among the prime suspects for spreading zoonotic diseases, like high pathogenicity avian influenza, across their range. Furthermore, shorebird populations in the EAAF have declined drastically, making them a significant conservation concern. Changes in migration timings and routes, potentially driven by climate and habitat change, can increase the difficulty of predicting risks to these threatened birds and potential disease incursion into Australia.

The dataset

This project integrates nearly 400 geolocator tracks with over half a million citizen science observations of individual shorebirds to

identify causes and consequences of changes in migration. These insights inform disease dynamics and forecast disease incursion risk under future global change scenarios.

Visualising migration

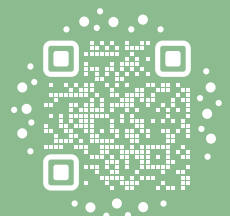
Using the unique geolocator dataset and leg-flag observation database, this project is creating the most detailed picture yet of migration along the EAAF.

To further strengthen this work, new collaborations are sought across the Flyway through expanded geolocator studies, additional leg-flag observations, and avian influenza sampling along the EAAF. Such partnerships will improve capacity to forecast disease risk and support conservation of declining shorebird species.

Representative geolocator tracks of Ruddy turnstones.



For collaboration opportunities, please contact the project leaders. Shorebird leg flag sightings can be reported at birdmark.net



Scan to visit birdmark

Photo of Ruddy turnstone by Adrian Boyle.



Project leaders

Dr Sara Ryding
Deakin University
s.ryding@deakin.edu.au

Prof Marcel Klaassen
Deakin University
marcel.klaassen@deakin.edu.au

Dr Simeon Lisovski
Alfred Wegener Institute
Helmholtz Centre for Polar
and Marine Research
simeon.lisovski@awi.de



This project is jointly funded by these partners and the Australian Government under the National Environmental Science Program.