Shorebirds 2024 Newsletter 3

Welcome back migratory shorebirds!

Every year, during September and October, Australia's migratory shorebirds begin arriving back along our shorelines and waterways, after completing an epic journey to their northern hemisphere breeding grounds. This is, for many birds, a dangerous 20,000km round trip to the Arctic circle and back. The route they travel is called the **East Asian Australasian Flyway** and it passes through many countries and some of the most densely populated areas in the world.

Migratory shorebirds are the long-distance fliers of the bird world – *the super athletes*. Migratory shorebirds arriving on our shores now will stay in Australia for six months. This period is called 'overwintering' which is a bit confusing as they are here in our summer!

Image credit: Queensland Department of Environment and Science

The migration story

Shorebirds migrate to follow the food, from the shellfish of the Yellow Sea in April-May to the mosquitos in the Arctic Circle in June-July, and finally to the shores of Australia during summer to rest and recover then prepare to repeat the journey next year.

This migration journey starts here in Australia during February and March when the migratory shorebirds that have been resting on our shores all summer, start to prepare for their long journey north to breed and ensure the survival of their species.

Before the shorebirds migrate, they need to make some changes to their bodies to survive the long distances they will fly. Shorebirds can't swim so they flap their wings throughout the entire distance of their flight. To do this they need to feed almost nonstop to more than double their body weight, so they have enough energy for their flight. They increase their chest muscle size to drive the wings and increase their heart and lung size so there is increased oxygen to keep the flight muscles working. They also decrease the size of organs they won't need while flying, like the stomach and gizzard (the bird term for the gut) and many will start to change their feathers to new flight feathers and breeding plumage.

Following the summer north to the Yellow Sea

In April the shorebirds are ready to head to the northern hemisphere to breed. They are following the food, arriving in the Yellow Sea at a time when shellfish are abundant.

No-one knows precisely how they find their way, but scientists think they can sense the Earth's magnetic field and tell a northward route from a southward one, and it is believed that they can use markers such as stars, the Sun and landscape features like mountain ranges, to map their migrations. They also seem to detect changes in the weather before it happens and utilise the additional push of a storm or strong winds going in the direction they are heading. One day you will go to the shore, and they will still be there and then next day they will all be gone. They fly at high altitude and use the jet streams to assist with their flight.

Initially many smaller flocks will head to the northwest coast of WA or the NT and feed for a short period while other flocks arrive, until there is a large flock. Then off they go, heading towards the South China and Yellow Seas, a journey of about 6000 kms to one of the most important stopover areas, where they will rest and refuel. Bordered by North and South Korea and China, this is an area of fertile shorebird habitat through which thousands of shorebirds will pass annually on their migrations. The birds are here to feed and fatten for the next stage of their journey to their breeding grounds.

Heading further to the Arctic north

At the beginning of June, the shorebirds are on the move again to their final destination, the Arctic tundra in Russia or Alaska with the aim of arriving as the Permafrost melts and insects' hatch after an icy winter. This is another journey of approximately 5000 kms.

While in the Yellow Sea, the birds have changed their plumage and are more brightly coloured than they were in Australia. The plumage change is to attract a mate as well as provide camouflage in the multi-coloured tundra vegetation.

It is now a frantic six-to-eight-week period where the birds find a mate, lay eggs, hatch chicks, and put on weight for the return journey. Shorebird chicks, perfectly camouflaged against the sedges and rocks of the tundra are born with the ability to feed themselves.

Bar-tailed godwit chicks in nest. Image credit: Wing Threads https://wingthreads.com/

Heading south to the Australian summer

Within weeks of the chicks hatching, their mothers will take flight on the long journey southward, to be followed soon after by their fathers. The newly hatched juvenile shorebirds are left to grow and fatten for another couple of weeks before they too negotiate the flight to the southern hemisphere on their own. This is a journey fraught with danger from storms and exhaustion.

For some birds, such as the bar-tailed godwit, the super long-distance flyer of the bird world, this is a journey of between 11000 and 13000 kms from Alaska to their usual home in Australia, flying non-stop over an 11-day period. Other shorebird species will break the trip into two by returning via the Yellow Sea to fatten up again before continuing to Australia. The birds have been recorded returning to the same places year after year in Australia to overwinter.

Completing the circle

When they arrive in Australia at the completion of their journey, migratory shorebirds are usually so exhausted they just flop onto the beach. They will rest before starting the search for food.

While in Australia, the birds rest and recover from the long return flight and the breeding period, then fatten up ready to do it all again on the return journey the following year. It is essential that the birds do this for their individual survival and the ability to breed for the species survival.

For birds like the bar-tailed godwits they are estimated to have flown a distance over their lifetime equivalent to taking a trip to the moon. They are indeed amazing birds!

Did you miss Newsletters 1 and 2?

If you missed Newsletter 1, which introduced shorebirds, or Newsletter 2, which explained our Shorebirds Competition postcard activity, you can find them here:

Newsletter 1: Introduction to shorebirds

Newsletter 2: Postcard activity for students

Get your entries in! The Shorebirds Competition is closing soon…

Student's postcard entries can be posted anytime and must arrive at ANSTO by the **closing date: 18 October 2024. Please follow the instructions for entering on our website or in Newsletter 2.**

Don't hesitate to call us on (02) 9717 3090 or email competition@ansto.gov.au if you have any questions.

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