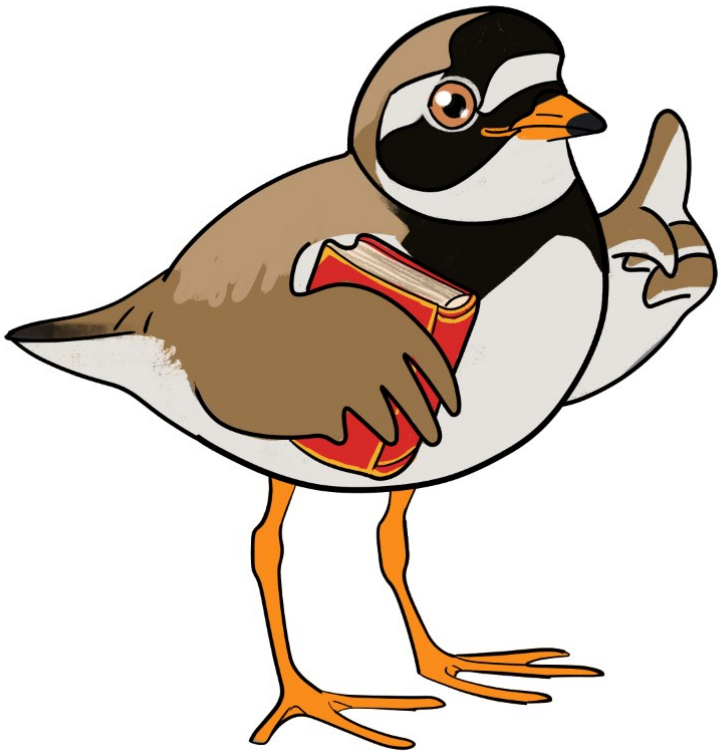

WADER GURU

WADER QUEST

'What is the longest flight ever recorded for a wader?'

'What is the longest flight ever recorded for a wader?'

Short answer: 13,050 kilometres / 8,109 miles by a Bar-tailed Godwit.

Long answer: A Bar-tailed Godwit holds the record for the longest known, non-stop flight of any land bird. The birds of the subspecies *Limosa lapponica baueri* breed in Alaska and Siberia and winter in New Zealand and Australia. A satellite tracking study of these birds has been carried out by the Pukorokoro Miranda Shorebird Centre since 2007.

These godwits have a history of breaking records. The first time a flight from Alaska to New Zealand was recorded, and therefore proven, was in 2007 when a bird named E7 made the flight of 11,570 km / 7,190 miles in 8.5 days. That record was broken in 2020 by a bird known as 4BBRW, its title referring to the colour rings attached to its legs by researchers, when it arrived in New Zealand after a 12,199 km / 7,580 mile flight. However the same bird surpassed itself in 2021 when it ended up in New South Wales in Australia instead of New Zealand having travelled 13,050 km / 8,109 miles in just under 10 days. The flight had a duration of 239 hours with the bird averaging 55 kph land speed.

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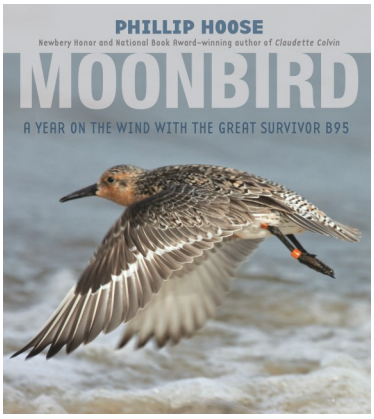
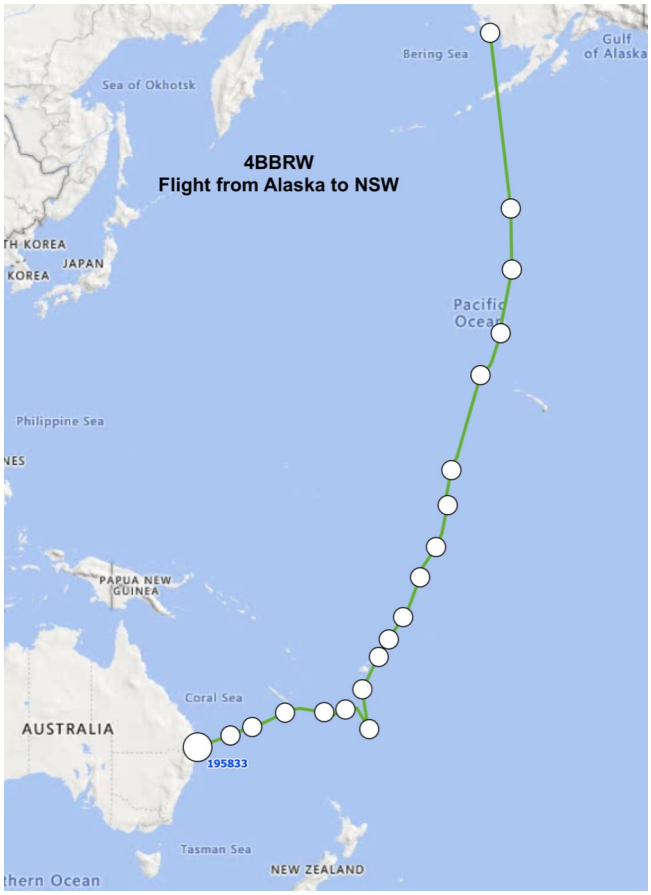
Further to this information concerning the longest direct flight, the same species (and subspecies) gets pipped at the post for the longest overall return flight of any wader. On average the distances travelled by the Godwit on its elliptical migration route can be around 29,000 km / 18,020 miles (see Fig 1). However the Red Knot, which travels between Arctic Canada and Patagonia each year, has a return trip of around 32,000 km / 19,884 miles. (see Fig 2.) One bird was known to live for at least 22 years and so in that time had travelled some 704,000 km / 437,445 miles. The distance from the earth to the moon is 384,400 km / 238,855 miles so this bird, once it had flown that distance, received the moniker 'Moonbird' and it then went on to fly almost the same distance back again. This famous bird had an eponymous book written about it.





4BBRW's flight track Map by Adrian Riegen

Bar-tailed Godwit 4BBRW in Australia © Geoff White

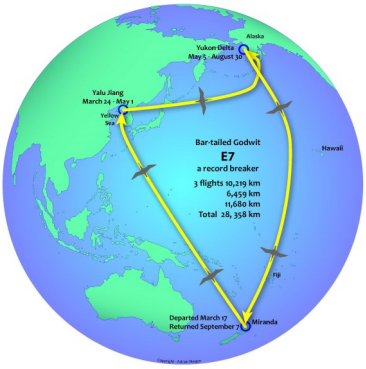


Fig 1; route taken by 'E7' on its return migration routes Alaska to New Zealand and back.
Map by Adrian Riegen.

Fig 2; route taken by 'Moonbird' on its return migration routes Canada to Patagonia and back.
Map by Adrian Riegen.

4BBRW in flight © Geoff White

'What is the longest flight ever recorded for a wader?'

The remarkable feats that these birds undertake each year are mind boggling, even with multiple stop-overs as some birds make, but imagine not eating, not drinking, not sleeping and not stopping for over 10 days! Our bodies are not designed for such things, but long distance migrants have some special adaptations that make this possible.

Long distance migrants, regardless of family, tend to have pointed wings. This configuration, where the longest primary is near to the leading edge of the wing, helps a bird fly at speed. If you have a long distance to travel, then flying fast means you can cover a greater distance in any given time. Making long distance travel viable.

But being quick alone will not grant you the ability to fly long distance in prolonged and sustained flight.

Obviously weight is an important factor, that's why we all have to cram all our holiday accoutrements into a case that has a weight restriction on an aeroplane. The fact that birds put on weight by accumulating fat is a widely known phenomenon, but it does sound a little counter intuitive as in we humans, those of us that are, shall we say, not at an optimum height / weight ratio, find it hard to exercise at all, let along carry out multiple marathons back to back.

But birds don't just simply put on a layer of fat, they also trim down their intestinal organs. If you are about to embark on a journey where you are not going to eat or drink, then you have no need for a gut. Obviously birds don't lose their gut altogether but, for a period before departure their guts and livers atrophy and become smaller, reducing in turn their weight to prevent excess baggage which, unlike in our case where excess baggage costs us a few dollars, it could cost the bird its life.

Part of the additional weight will be accounted for by additional muscle tissue and, as we know, muscle weighs relatively more than fat. The need for strengthened flight muscles is obvious but the heart is a huge muscle too and that also will be boosted. The importance of increasing the heart size is to increase the circulation of blood to feed the muscles with the all important oxygen they need to function and, as the haemoglobin, which carries that oxygen, is also increased, the heart has to work hard to makes sure the system works efficiently.

As the bird flies the fat supplies are gradually used up and eventually the muscles begin to reduce too, at the same time, the gut and liver begin to increase in size, after all the bird is going to need them as soon as it arrives at its destination. This is why birds look so skinny when they arrive at their destination.

In terms of conservation, understanding how important stop over points for migrating birds are, is vital if we are to protect our migrant waders not just on their breeding and wintering grounds, but at all the places in between that they need to get successfully and in good health from one to the other.

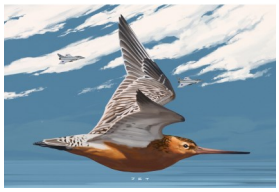
Further reading;

Meet the Godwits

The incredible E7 Bar-tailed Godwit - Record breaking migration flight.

10 facts about Wader migration for World Migratory Bird Day

"Jet" – Bar Tailed Godwit – A4 print available via the Wader Quest shop



'Jet' © Tom Henderson - House of the Wild

A Bar-tailed Godwit of the race *baueri* having just arrived on a New Zealand beach after a non stop flight from Alaska some 12,000 km. No wonder its wings are drooping. © Elis Simpson