

# Whimbrel



We use four colour rings, two on each upper leg. The colours used (in different combinations, allowing identification of individual birds) are: Black, White, Green, Lime, Yellow, Orange and Red.

Whimbrel in flight and perched. **Photographs:** Tómas G Gunnarsson (left) and Camilo Carneiro

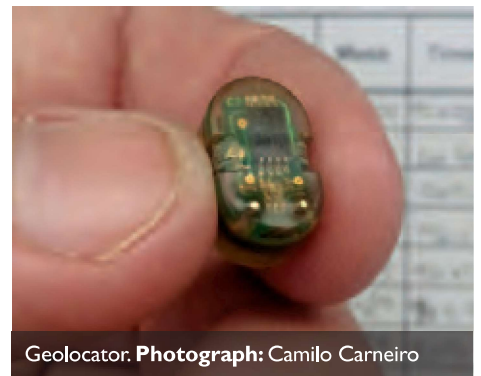
Whimbrels breed across much of subarctic North America, Europe and Asia, with some breeding as far south as Scotland, though not in Ireland. The Whimbrels we see in Ireland are generally on passage between Icelandic breeding grounds and African winter quarters. Curiously, we see them more often in spring than in autumn. Researchers have been investigating why, as **Jim Wilson** reports.

Irish birders have long suspected that Whimbrels have different migratory strategies for spring and autumn. Over many years, they have observed thousands of Whimbrels in late April and early May, but far fewer during autumn passage, even though the population is larger than due to the recruitment of juveniles post-breeding. So, they knew something was going on ... and indeed it is.

After gathering ring recoveries from abroad over several years, researchers in Iceland suspected the same. The picture from count and ringing data hinted that Whimbrels flew directly to their winter quarters in West Africa in autumn after breeding in Iceland, but on the return journey the following spring they made stopovers, most of them in Ireland.

To investigate this further, and taking advantage of recent technological advances, geolocators were fitted to ten Whimbrels in Iceland in 2012. Geolocators are ultralight devices, weighing about one gramme, which record light levels continuously and possess a very accurate clock. This allows the time of sunrise and daylength to be recorded at regular intervals and stored on the geocator. This data makes it possible to infer the bird's geographic position on the globe, as these parameters change with latitude and longitude for any given day of the year (with the exception of the equinoxes).

Unfortunately, such devices do not transmit data, so it was necessary to try to recapture the birds in 2013 and retrieve the geolocators to determine when and how these individuals migrated between Iceland and West Africa. This was possible because Whimbrels are faithful to their breeding territories and their return rates are high.



Geocator. **Photograph:** Camilo Carneiro

Six of the ten tagged birds returned to Iceland in 2013. Of the six, five were recaptured, but one geocator had failed, leaving four complete datasets to analyse. At last, we could figure out their migrations!

When the journeys of the Whimbrels were mapped and analysed, earlier suspicions were confirmed. Whimbrels do fly directly from Iceland to West Africa in autumn and, during spring migration from West Africa to Iceland, they do not always fly so directly: they perform a stopover in Ireland.

In autumn, all four birds flew directly from Iceland to West Africa, covering somewhere between 3,900 and 5,500 kilometres in five days. This is why Irish observers find relatively few Whimbrels in autumn – most Whimbrels are flying offshore over the Atlantic!

On the way north in spring, different strategies were observed: two individuals stopped during migration, and two again flew directly from West Africa to Iceland. Those that made a stopover represent the Whimbrels detected by Irish observers and the associated



Camilo Carneiro about to release a colour-ringed Whimbrel in Cobh, Co Cork, in April 2016. **Photo:** Jim Wilson



peak in numbers during late April and early May each year. These two individuals stayed in Ireland for 11 and 15 days respectively, likely fuelling up before taking off for Iceland.

Although headwinds were frequently encountered on migration, speeds of around 86 km/h were recorded for these Whimbrels. Such headwinds were more prevalent during spring than autumn, and this might be the reason why Whimbrels make a stopover in Ireland. It could also explain the annual variation in Whimbrel numbers in spring, as harsher conditions in some years might force more individuals to stop.

Alternatively, some Whimbrels might depart West Africa with only enough fuel to reach Ireland and rely on the local resources of Irish wetlands and fields to refuel before completing the final leg of their migration to Iceland.

Whatever the main reason may be for the Irish stopover (e.g. wind, refuelling needs), the peak in Whimbrel numbers detected every spring reflects the importance of this country as a major stepping stone for Whimbrels on their incredible journeys.

This was a very exciting finding and it raised many questions. Do individuals follow the same strategy every year, or are they flexible to change given conditions, internal and external? Do different spring strategies have an effect on their breeding performance? What about the wintering grounds: is it better for Whimbrels to spend the winter in the Bijagós archipelago in Guinea-Bissau, or 1,000 kilometres further north in the Banc d'Arguin in Mauritania? And what about the stopover in Ireland: do the Whimbrels spend the entire period at one site or do they arrive on the south coast and hop northwards before making the final flight to Iceland?

## Colour-ringing

Unfortunately, geolocators have a low geographical accuracy ( $\pm 200$  km), so to answer these questions we need to use something else. Colour rings are an efficient tool, particularly in areas with a long tradition of keen volunteer observers, which are a vital force in migration studies. We have therefore considerably increased our colour-ringing of Whimbrels in Iceland since 2015. Several

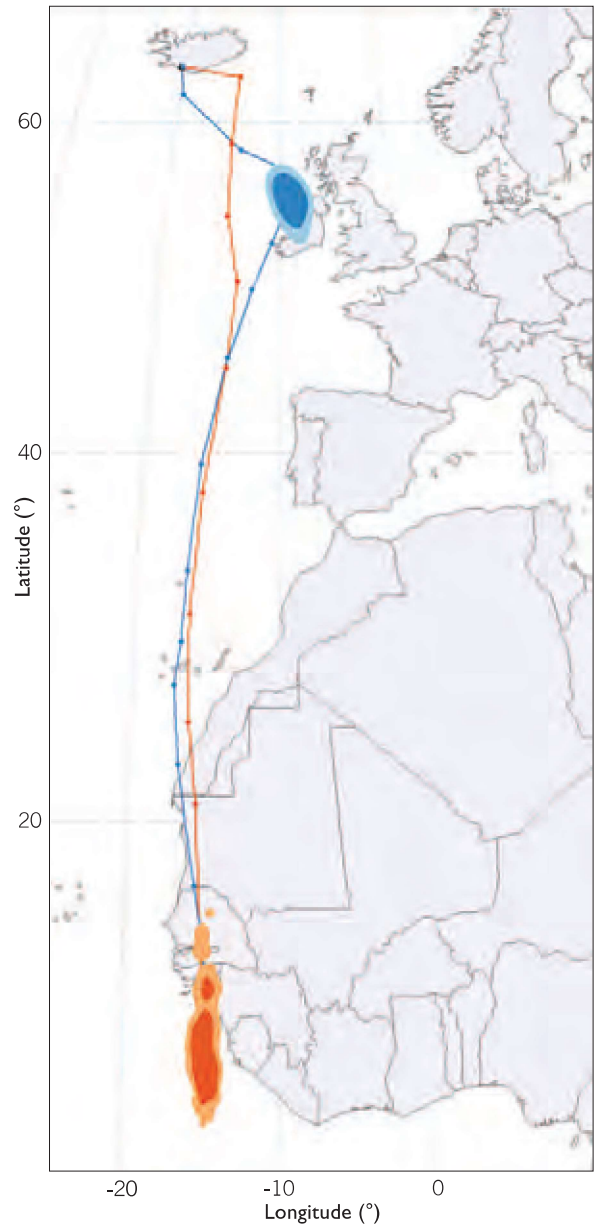
hundred Whimbrels are now wearing colour rings, and re-sightings of these birds in Ireland (we get very few re-sightings from West Africa) can help us unravel their stopover strategies.

A way of increasing re-sightings from Ireland is to mark Whimbrels in Ireland during spring passage; these birds are most likely to occur here again on future migrations and be seen by Irish birders. With this in mind, we visited Cork Harbour in April 2016 and, with the help of another local ornithologist, Barry O'Mahony, we surveyed the area and nearby sites for catching opportunities and managed to make a small catch of three individuals, one of which was immediately spotted two days later, showing the good coverage by birders in the area.

Besides marking these birds, we gathered valuable information regarding catching sites and designs, opening the door for future work to try to unravel the stopover patterns of Whimbrels.

Although the chances of spotting a colour-ringed Whimbrel are still relatively low, these will increase over the coming years as the number we have ringed grows. Every spring, we already get a few records, some of which are of individuals carrying a geolocator.

So, please do check the legs of Whimbrels for colour rings if you get a chance. We look forward to hearing from you. To report a sighting of a marked Whimbrel, email [icelandwader@gmail.com](mailto:icelandwader@gmail.com) with the colour sequence of the rings, date, location and time of day, flock size and habitat. You will receive in return the complete life-history of that individual. – **With additional reporting by Camilo Carneiro and José Alves** ■



Example track of one adult Whimbrel tracked during autumn (orange line) and spring (blue line) migration from Iceland (black dot) to wintering areas in West Africa (orange cloud) and at stopover areas in Ireland (blue cloud). Clouds represent 75% (light tone) and 50% (dark tone) kernel densities of locations attained between migratory flights.

Flock of Whimbrels flying in from the sea. **Photograph:** Dick Coombes

