



Purple Sandpiper

Purple Sandpipers (including colour-ringed bird in centre).
Photo: Kendrew Colhoun

Helen Boland finds out where the Purple Sandpipers that spend the winter here come from.

Migratory shorebirds – or waders – are some of the most ambitious of all migratory birds. They travel some of the greatest distances, navigating their way between the latitudinal extremes of the planet. And they do this every year. Twice.

These migrations are the ultra-marathons of the natural world, with endurance champions like the **Bar-tailed Godwit** covering 10,000 kilometres – nonstop (!) – over nine days, between New Zealand and Alaska. Not even a quick pitstop to ‘refuel.’

Much smaller than the Bar-tailed Godwit,

the **Purple Sandpiper** is a hot contender for champion in its own weight division, flying 3,500km from Arctic Canada all the way to County Clare (for example) in just 2½ days, also nonstop. But more on that later.

Brief sketch

The Purple Sandpiper is a small, stout shorebird that visits Ireland each winter. Its longish, slightly drooping orange bill and its yellow-orange legs are probably its most distinctive features. Its breeding grounds are in the Arctic and the sub-Arctic rim from northeast Canada to Greenland, Iceland, Scandinavia and Siberia. Its

wintering range is more northerly than most waders: it extends across Iceland, Scandinavia, Britain, Ireland, France, northern Spain and the Atlantic seaboard of North America.

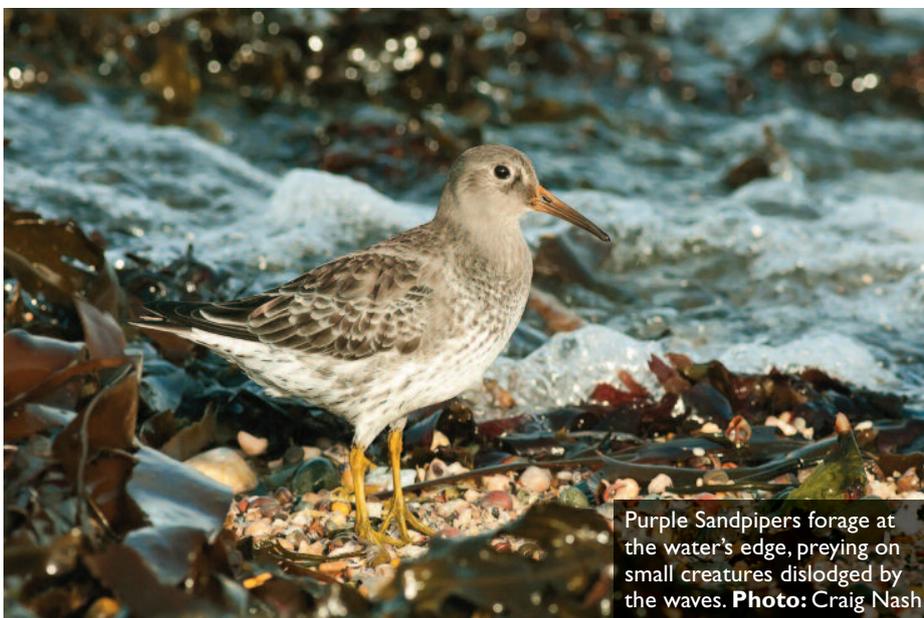
Where to see them

In winter in Ireland, Purple Sandpipers are strictly coastal in their distribution. They can be found foraging along rocky shores – eating insects, gastropods (snails) and crustaceans – usually near the tideline or around piers, typically in small numbers and often associating with **Turnstones**.

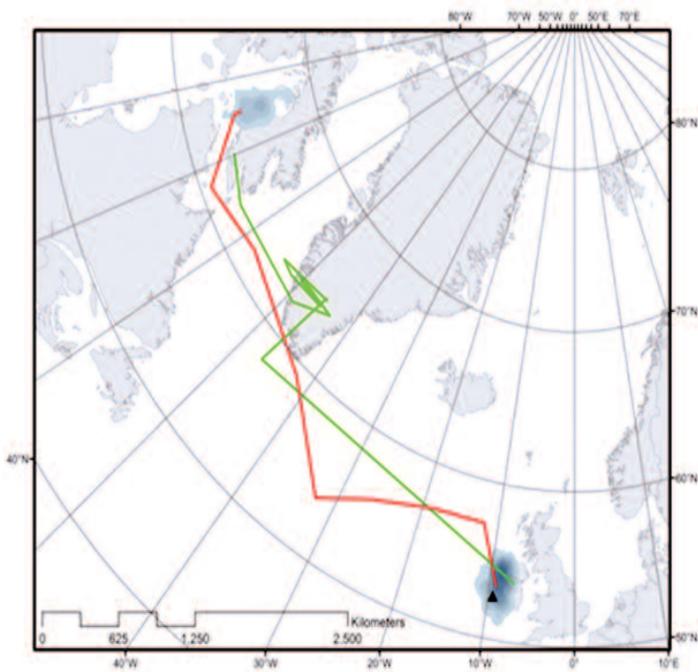
There is a good chance of seeing them wherever there is rocky seashore, though more of this habitat occurs on the west coast, with the east coast dotted with estuaries and fringed with long, sandy beaches. In saying that, several great Purple Sandpiper haunts are found in Dublin, including the piers in Dún Laoghaire and the rocky north Dublin coast.

By far the largest concentration of Purple Sandpipers in Ireland occurs along the Clare coastline at the beach in **Quilty**, where several hundred have been recorded together during the **Irish Wetland Bird Survey (I-WeBS)**. This wide, sandy beach is not wholly typical habitat for the species, but the consistent presence of large accumulations of rotting seaweed at the high-tide line, crawling with life, are the great enticement.

It is interesting to note that, in Ussher and



Purple Sandpipers forage at the water's edge, preying on small creatures dislodged by the waves. Photo: Craig Nash



Location and track of a Purple Sandpiper wintering in Ireland. Triangle shows marking site, green line shows spring migration route, and red is the winter route. Source: *Ardea* 102: 139-152 (2014).



Purple Sandpiper with lightweight geolocator attached to back. Photo: Simon Foster

Warren's *Birds of Ireland* (1900), no record whatsoever of Purple Sandpipers in the county of Clare was mentioned. And in the updated version in 1954, Ruttledge writes that "a party of six were [sic] seen in mid-February on the coast opposite Mutton Island." This is precisely the location of the beach at Quilty! Clearly, this has become a special place for Purple Sandpipers over the last sixty years.

Fidelity to wintering sites

Somewhat surprisingly, considering the herculean migrations they undertake, Purple Sandpipers are remarkably sedentary in their habits once they are on their wintering grounds, generally returning each year to the exact same spot. They are easily overlooked due to their tendency to occur on rocks, where their plumage blends marvellously with their seaweed surroundings, but once you see them it is often possible to get very close. The old term 'Deafie' for Purple Sandpipers in Shetland is perhaps derived from their seeming lack of appropriate response to potential danger.

Where do Ireland's Purple Sandpipers come from?

Technology is now helping us answer this question. For many wader species and their populations the migration routes and phenology (the timing of life-cycle events) are relatively well known. Migrations of Purple Sandpipers wintering in Britain and Ireland, on the other hand, had been rather poorly understood until recently. What was known through colour-ringing was that birds wintering on the east coast of Britain migrated to Norway to breed, but that the

population wintering in northern Scotland – with longer bills and wings – staged in Iceland en route to breeding grounds elsewhere, presumed to be the Canadian Arctic, though without evidence. It was possibly a long shot for a colour-ringed bird to be observed in that vast, uninhabited wilderness.

It turned out that the Purple Sandpipers in Ireland were also long-billed and long-winged and that Ireland had some really good spots for Purple Sandpipers, with Quilty topping the list. This was the catalyst for a Scottish-Irish-Canadian journey of discovery.

Amazing new findings

In April 2010, ringers and researchers from both sides of the Irish Sea decamped to a little beach in west Clare that was known to be teeming with Purple Sandpipers; this was a joint project of the **Highland Ringing Group**, the **Wildfowl and Wetlands Trust** and **BirdWatch Ireland** and was supported by the **Heritage Council**. The team of experts caught 86 birds using a method called 'cannon-netting' (which is as exciting as it sounds) and carefully fitted a selection of them with data-logging devices called 'geolocators.'

Geolocators operate by recording light levels to detect the sunrise and sunset each day, the timing of which is specific to a given place on Earth, making it possible to calculate the daily positions of the birds on the planet. For a device that weighs only 0.75g, it stores an awful lot of useful information.

The site-fidelity that Purple Sandpipers show to their wintering sites meant that, one year later, after the birds had completed one

migration cycle, they could be re-caught in exactly the same spot and the devices safely removed in order to retrieve the data – assuming they had made it back in one piece.

Ron Summers of the Highland Ringing Group in Scotland, who co-ordinated the research, was delighted to reveal evidence, for the first time ever, that 'our' Purple Sandpipers breed in the East Canadian Arctic and specifically on Devon and Baffin Islands.

The data recorded on the geolocators also told us that our Purple Sandpipers tended to refuel in Iceland and/or Greenland during their spring migration, before they reached their breeding grounds in Arctic Canada.

Not only that, but we also learned that the return journey from Canada to Ireland the following autumn was often made without staging, but instead in one phenomenal nonstop flight at an average speed of about 1,400km per day. Not bad for a bird that weighs only 50-100g! Bear that in mind next time you see this often overlooked wader.

Purple Sandpiper fitness check this winter

A specially designed survey to assess the species that occur along non-estuarine coasts – including Purple Sandpipers – is taking place this winter, in December 2015 and January 2016. The survey is called the coastal Non-Estuarine Waterbird Survey, 'NEWS,' and is being carried out under the I-WeBS umbrella. Please see page 9 for more details.