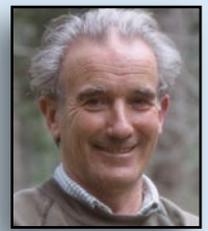


Could They Really Fly So Far Over the Atlantic Ocean?



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The osprey is one of the biggest conservation success stories in the British Isles, with the population increasing from just one pair in the 1950s to more than 230 pairs in 2009. While celebrating this increase, we recognised that, when compared with other populations, it was slower than we might have expected from the number of chicks raised every year. What was going on? There were all sorts of guesses. Were young birds shot on migration? Were they failing to find enough fish, or getting lost in the Sahara Desert?



Photo by Roy Dennis

Nimrod – male osprey caught for satellite tagging.

It was only with the advent of suitable transmitters, in 1999, that we were able to solve the mystery of the missing ospreys.

Following satellite-tagged birds as they set off on their autumn migration, we soon saw that experienced adults, when leaving Scotland, flew south through the British Isles and crossed the English Channel into mainland Europe, while more young birds than expected headed west of south and into great danger. One of the earliest chicks we tagged, the first to demonstrate the dangers of long-distance flights over oceans, flew to Ireland to find itself faced with a 1000 km direct flight over the Atlantic to northern Spain. Another chick ran into a low pressure system south of the British Isles, was carried out over the Atlantic and finally blown ashore in Portugal after an epic 60 hour, 3000 km non-stop flight over the sea (see map). And these chicks had only been flying for six weeks. The first made it safely to Africa, while the other stayed in Portugal and was found nesting in Scotland three years later. A few



Osprey SSK's dramatic 3000 km 60 hour migration autumn 2002.

ringed ospreys had rested on fishing boats but we never realised that big ocean journeys were more common than we thought, and that so many must be lost at sea.

I wondered if the same autumn migration hazards faced another long-distance migrant – the honey buzzard – which, like the osprey, has recolonised Scotland after being exterminated in the raptor killing era of the nineteenth century. Its population in Scotland is very

small, and in the last thirty years has increased extremely slowly, despite the fact that pairs regularly rear two young. We supposed that they were getting lost on migration but as the honey buzzard is known for its use of very short sea crossings from Europe to Africa, something didn't quite add up. Starting in 2003, we tagged a small number, including one adult in 2004. The tagging of father and son revealed a dramatic difference in their migration patterns. The adult male migrated down the eastern side of the UK to make the short sea crossing to France and continue safely to Gabon. His chick, meanwhile, headed off down the western side of the UK and was swept out by easterly winds into the open Atlantic. Flying the wrong side of the Azores, he was blown south-east towards Madeira but landed in the sea well short of the island and died. It had been a 108 hour, 6000 km non-stop journey over the ocean, an incredible but hopeless flight. But we now know they regularly cross the Bay of Biscay.



Male honey buzzard's track (yellow) from Scotland to Gabon; tragic migration of juvenile - 6000 km in 108 hours before dying in the North Atlantic.

These two species have, we think, recolonised Scotland principally from Scandinavian migrants, which, on their way north in the spring, were drifted across the North Sea by bad weather and stayed to breed in Scotland. Experienced adults have learnt to use short crossings of the English Channel to France, but the young, using just their inherent genetic migratory information, tend to head west of south, as they would have done from Sweden to Spain and on to West Africa. Some, of course, are lucky and get back on track with the help of westerly winds, while others take the right path to begin with. Many, sadly, do not.

In 2007, we started to use the new GPS Argos transmitters from Microwave Telemetry, and are now really refining our knowledge of raptor migration. They allow us to understand the use and importance of stopover and wintering sites, crucial to the year-round conservation of ospreys, while flight and altitude data give us an extraordinary insight into bird behaviour. An osprey named Logie migrated over Wales at her normal altitude of about 150 metres, but climbed to seven times that height to cross a big estuary swarming with gulls. A male named Nimrod gave a thirty hour master class in migration, flying non-stop through France and Spain, including an all-night flight by full moon, heading out into the Atlantic to avoid the Atlas Mountains and coming ashore in southern Morocco after an amazing 2300 km. Last spring, on his way north over the Bay of Biscay, he climbed to 1500 metres to pick up strong tail winds which pushed him north at close to 100 km/hour.

The new satellite transmitters and Google Earth mapping allows us to map virtual migrations on our website (www.roydennis.org), so that people can nearly fly with them and fully appreciate the wonders of migration and the hazards they face. It's sad to watch the hopeless migrations of some young heading out into the ocean; you wish you could just say 'Left a bit!' to get them back on track. But the more we know, the better we can address the many threats to their future survival.