



Manx Shearwater
Photo: Andrew Kelly
Inset: Copeland Bird
Observatory logo



Ringling tales: Manx Shearwaters

In the sixth in our series on bird ringing, **Brian Burke** interviews **Kez Armstrong** about the long-running programme of ringing Manx Shearwaters at Copeland Bird Observatory in County Down

■ What is the focus of your project?

The **Copeland Bird Observatory** is the only bird observatory in Northern Ireland, off the north coast of County Down, situated within an Area of Special Scientific Interest (ASSI) and a Special Protected Area (SPA). The running of the observatory and the huge ringing, conservation and research effort each year is carried out by wardens and volunteer bird ringers, many of whom have been involved with the 'Obs' for decades.

The **Manx Shearwater** colony on the Copeland Islands was first recorded in 1939 and currently numbers around 4,900 pairs. We estimate burrow occupancy at around 55%, which means that there's plenty of space for population expansion. The main focus of our project is to assess site fidelity (do the same birds come back each year? Do chicks hatched here return to breed here?), longevity, breeding success and migratory behaviour of the birds at this very important colony, through our partnerships with the **University of Oxford** and **Queen's University Belfast**.

The first Manx Shearwaters were ringed on Copeland in 1952, and the ringing project is now in its 69th year. As they are the longest-living birds in Ireland, some of the birds ringed in the first ten years of the project may still be alive today!

■ How do you catch the birds to ring them?

Manx Shearwaters are perfectly adapted to living at sea, with long narrow wings and their feet placed far back on their bodies, which means they are incredibly efficient swimmers. However, this also means they are very clumsy on land. This clumsy walk or shuffle means that it is relatively easy for our trained ringers to catch them by hand to ring them, or to record their ring numbers if they're already ringed.

Ringing is done during the night, so a good headtorch and sturdy shoes are essential for walking around the island and spotting the birds. The welfare of the Shearwaters is always our top priority, and great care is taken not to disturb any of the rabbit burrows they might be nesting in.

■ What interesting things have you learned so far?

Tens of thousands of birds have been ringed on Copeland over the years, and unsurprisingly more 'Manxies' have been ringed here than any other species. Through this long-term study, we have had >25,000 'recaptures' (i.e. birds recorded again at Copeland), 330 individual birds recovered (i.e. found dead) at over 212 locations, and 60 'controls' (i.e. birds later caught by ringers elsewhere) at eight different locations. Of those controls, 22 came from each of **Bardsey Bird Observatory** and **Skokholm Bird Observatory**, both off the coast of Wales. This also highlights the value in having a network of bird observatories and ringing stations around the coastlines of Ireland, Britain and Europe, each complementing the work of others and helping piece together these stories of migration and dispersal of our birds.

Ringed Manx Shearwater on the Copeland Islands. **Photo:** Brian Burke



The team from Oxford are also recording movements through GPS tagging, both during the breeding season and outside it too. This has allowed the team to see how far our shearwaters travel on foraging trips during the breeding season; one bird was recorded foraging over a 1,300-mile round-trip to the west of Ireland before returning to feed its chick.

■ Have you recorded any significant movements or long-lived birds?

Until 2004, a Manx Shearwater breeding on Copeland was the oldest known living wild bird in the world. It was ringed as an adult in 1953, when it was at least five years old), making it at least **55 years old** when re-trapped in 2003!

Recovery information has shown some exciting movements of our Copeland birds, with controls from as far afield as the Amazon rainforest, but also some unusual recoveries in Detroit, USA and Switzerland.

Though these make for some exciting stories, some of the most useful information from an ecological and conservation point of view is the site fidelity of our shearwaters. One of our most interesting birds, with ring **EB48782**, was re-trapped at Copeland 36 times during 13 of 32 years from 1977 to 2009. It was originally ringed as an adult, meaning it could have been many years older than 32 when it was last seen.

■ What other research is ongoing with Manx Shearwaters on Copeland?

As Manx Shearwaters are a long-lived pelagic seabird with a prolonged pre-breeding stage (usually they don't start nesting until they're five years old), they are valuable bioindicators for ocean health and climate change. **Niamh Esmonde's** (Queens) PhD research is using our vast database of ringing and recovery records (over 37,000 rings deployed with roughly 75% recaptured) to investigate annual survival probabilities, population estimates and growth rates, and how these are affected by conditions such as ocean storms during their migration, which might facilitate or hinder migration.

So far, Niamh has been able to confirm that our Manx Shearwater population is showing an 80% survival rate, and we are really looking forward to learning more from her research in the coming years.

As well as working with Queen's University Belfast on their population and survival estimates, we are delighted to have an ongoing partnership with the University of Oxford's **avian navigation research group** ('OxNav') who have been deploying data-logging geolocators on birds from the Copelands. This should reveal interesting similarities, or differences, in migratory behaviour between our shearwaters and those from other colonies. This research is vitally important to learn more about migratory stopover sites, foraging areas and timing and movements involved in long-distance migration, all of which are vital to know for the conservation of this species. We know that shearwaters make fantastically long transatlantic migrations to South America during the non-breeding season, and we're really looking forward to seeing the results of the precise journeys of our birds in the future.



Manx Shearwaters often sit outside their burrows at night, when they can be caught by ringers
Photo: Laurie Campbell



Copeland-ringed Manx Shearwater recoveries from countries outside Ireland and Great Britain. Image: Copeland Bird Observatory

■ How can people find out more about Copeland Bird Observatory?

As an observatory we rely on volunteers and membership to help us continue to monitor and record the birds breeding on and migrating through the Copelands, as well as to maintain the nesting habitat there each year. This support is also vital to ensure we can maintain and improve the standard of accommodation and facilities on the island, which are vulnerable to wear and tear given their age and exposed location in the Irish Sea.

You don't have to be a member to join us on weekend or day trips for birdwatching and exploring the island, although we do offer weekend visits at a discount to members. You can find out more on our website www.the.cbo.org.uk or follow us on social media for news on Twitter; [@CopelandBirdObs](https://twitter.com/CopelandBirdObs), or on Facebook, www.facebook.com/copelandbirdobservatory ■

The Copeland Islands, Co Down. Image: Copeland Bird Observatory

