

Recovering Recoveries

For the past few years, we have been working on computerising all Calf of Man bird data. There remains work to do on the overall project, but in 2020 we did manage to verify and compile all our bird movements data into a single analysable database. Here is the story of how we did it plus some of the statistical highlights from within the data.

The value of fitting a ring to a bird's leg goes far beyond the basic question of where birds actually go. Handling a bird enables us to record a range of biometrics and statistics which enable monitoring and understanding of bird demographics and populations. Nevertheless, at the end of the day, there is a feeling of personal reward in finding a bird wearing a 'foreign' ring or hearing that one of 'our' birds has been found somewhere else. Until recently we did not know exactly how many such recoveries of birds from the Calf of Man had been made, but now we do!



In fact, by the end of 2019, there were 1353 records of birds found on the Calf of Man that had been ringed elsewhere (also known as 'controls') and there were 3766 records of birds ringed at the Calf of Man and found elsewhere (also known as 'recoveries').

Until a few months ago, these numbers were unknown because, although ringing data from the past decade is computerised and accurate, information from the preceding 50 years had been inconsistently stored. Some of the old data was on computer (but not in one place or format) and much of it was only on paper in separate un-catalogued locations.

How did we do it?

All bird movement records that the Calf of Man possessed were entered onto a spreadsheet with as much detail as possible (not all records were complete e.g., missing grid references). Finding the historical movement records entailed laboriously trawling through past Calf of Man annual bird reports and inputting them onto the spreadsheet.

At the same time, we requested from the British Trust for Ornithology a data extract of every bird movement that they had for the Calf of Man. Bird ringing data is mostly computerised since 1980 so BTO data after this date was pretty good, but prior to that, BTO computerised records are less complete.

We then had 2 spreadsheets - one of everything the Calf of Man knew about and the other, everything the BTO knew about. A comparison was then made between the two on ring number, dates, and species. The first pass total on discrepancies was 1309 records not on the BTO system and 869 records not on the Calf of Man spreadsheet. The majority (1804) were recoveries rather than controls (374). Every single discrepancy then had to be manually checked to determine why the difference had occurred. Many discrepancies were erroneous e.g., duplicates or typo's on dates and ring numbers (why is a 0 shaped like an o!).

The resulting single spreadsheet of all bird movements was then verified to ensure grid references were correct. The location data on the BTO dataset was used as the basis for this and then any remaining discrepancies on place names and distances manually checked via the internet.

How many recoveries did we recover?

After all the cross-referencing work, the final result is:

- Controls (birds found on Calf of Man, ringed elsewhere):
1353 records in total by end 2019, of which, prior to this exercise, 184 were not apparently on the BTO system and 121 were unrecorded on the Calf of Man archives.
- Recoveries (birds ringed on Calf of Man, found elsewhere):
3766 records in total by end 2019, of which, prior to this exercise, 645 were not apparently on the BTO system and 520 were unrecorded on the Calf of Man archives.

Looking at the recoveries data in more detail helps explain the discrepancies. The table below shows the majority (86%) of recoveries 'missing' from the BTO dataset are from the 1960's and 1970's, a period for which not all ringing data has been computerised. Since the 1980's, the main explanation for the BTO not knowing about a recovery is that they probably have not been told about it. The best example of this is the 40 'missing' records from the 2010's, all of which relate to seabird colour ring sightings. The process of informing the BTO of colour ring sightings has been standardised in recent years although there is still a risk of human error.

Recoveries - in the CoM archive but missing from BTO data extract (2020)							
Decade	1960's	1970's	1980's	1990's	2000's	2010's	Total
Total	140	421	32	10	2	40	645

Data missing from the CoM archive (below) is less serious (from a BTO central analysis perspective). The gaps in data are caused by changing Observatory wardens, systems, and processes over the years. Plus, there is a possibility that prior to 2010 the BTO central system was not infallible in always delivering a recovery notification to the Calf of Man.

Recoveries - in BTO data extract (2020) but missing from CoM archive										
Decade	1930's	1940's	1950's	1960's	1970's	1980's	1990's	2000's	2010's	Total
Total	3	17	16	74	4	138	83	98	87	520

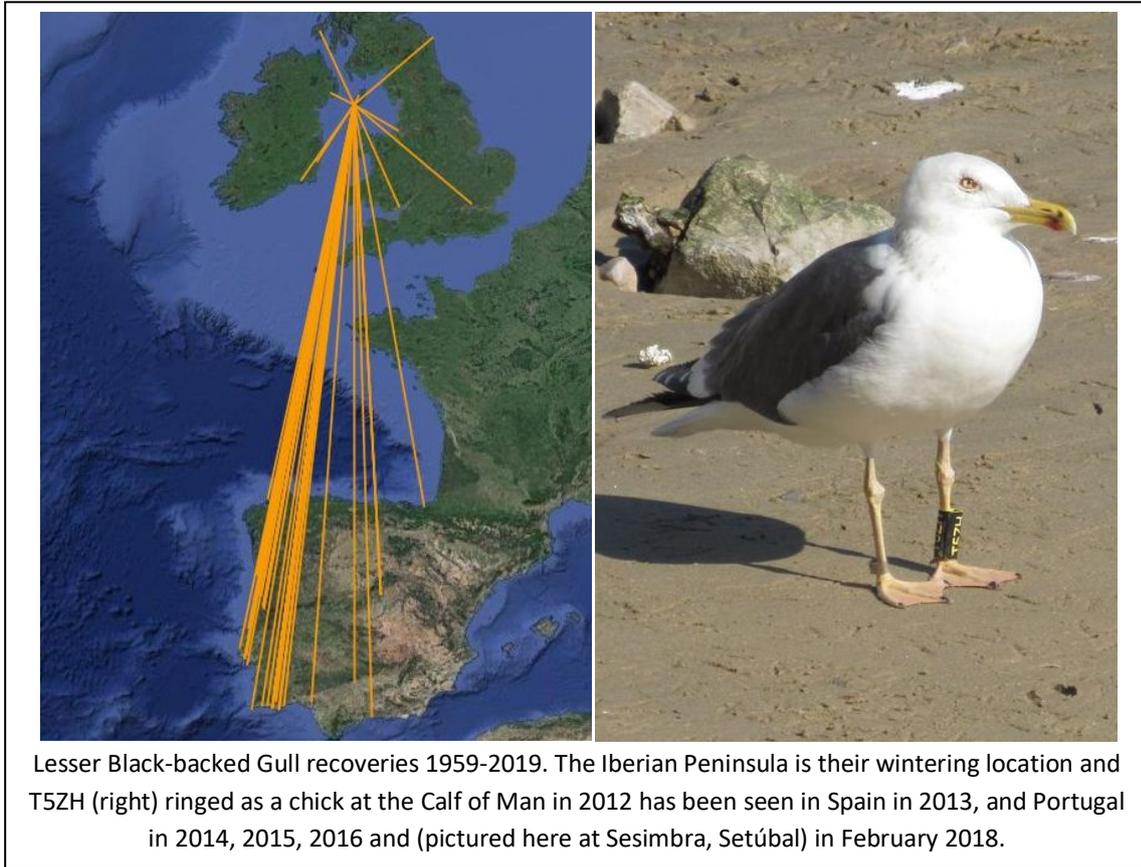
What does recovery data tell us?

Clearly, the better the data, then the better our understanding of bird behaviour, movements, and demographic changes over the past 60 years. At the Observatory we now have confidence that our data is accurate and enables us to undertake analysis and answer questions with conviction.

Some random observations from the data include the first bird ever found at the Calf of Man which was a Cormorant ringed on 31st May 1939 in Pembrokeshire, Wales, and found (presumably dead) 76 days later on Calf of Man. The first bird ringed on Calf of Man and found elsewhere was a Shag chick ringed in May 1938 that made it to Tarbert, Scotland 229 days later. In 1959 the Calf of Man was formally recognised as a Bird Observatory and the first recovery from that date was a Blackbird ringed on 19th April 1959 and found on 21st October 1959 at Rush, Co. Dublin, Eire. What a satisfactory day that must have been!

The furthest distance a Calf of Man bird has travelled is a Storm Petrel, going 9967 km from the Calf on 29th August 1978 to a location at sea, NW of Cape Town, South Africa on 21st January 1981. This just pips a speedy Manx Shearwater chick that moved 9756 km from the Calf on 4th Sept 2016 to Ilha do Cardoso, São Paulo, Brazil on 25th October 2016.

46 different bird species ringed at the Calf of Man have been recovered from 25 different countries and birds of 25 species have moved to the Calf from 15 different countries.

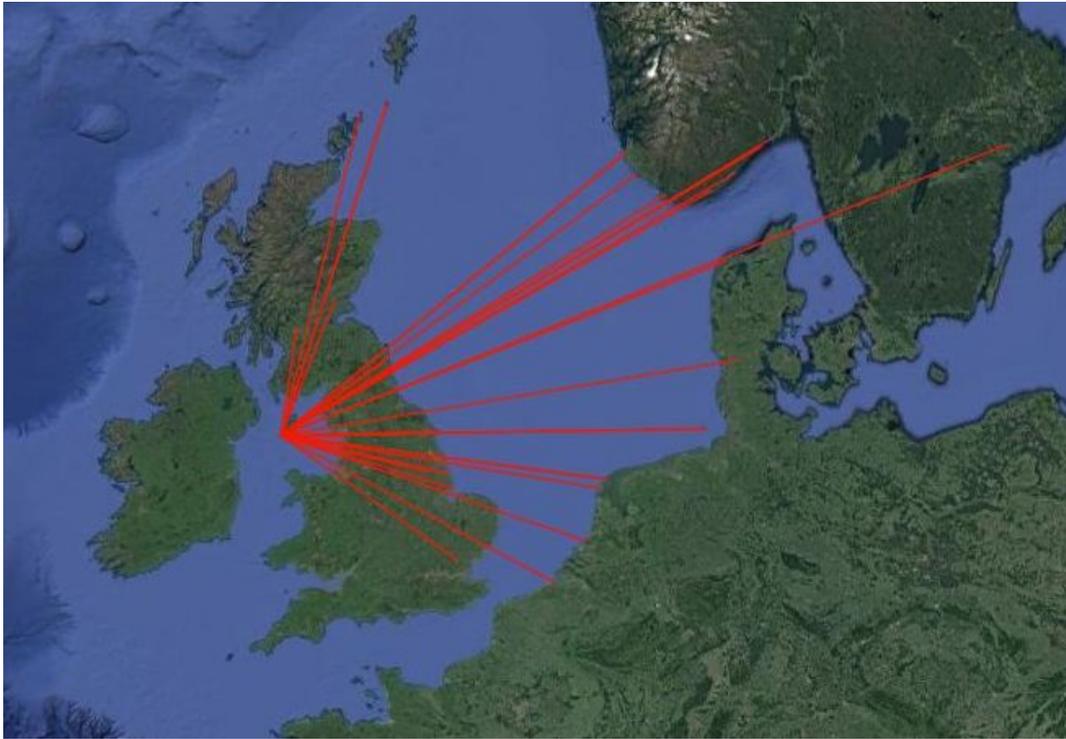


Storm Petrel is the most frequently encountered foreign ringed species (unsurprisingly most are from Eire) but Sedge Warbler comes in 2nd and most of those are from France. Colour rings (easier to observe in the field than metal rings) mean that Gull species dominate the species of Calf origin that have moved abroad. Of passerines, Blackbird with 84 foreign recoveries has the most, the majority of Blackbirds moving to Norway, Denmark and Sweden (although, actually this is where they originated from and returned to - having been caught at the Calf during autumn passage).

For total recoveries of Calf of Man ringed birds, Blackbird also makes the top 5 in the past 60 years

Top 5 Total Calf of Man Recoveries 1959-2019	
Storm Petrel	670
Herring Gull	650
Shag	594
Great Black-backed Gull	250
Blackbird	188

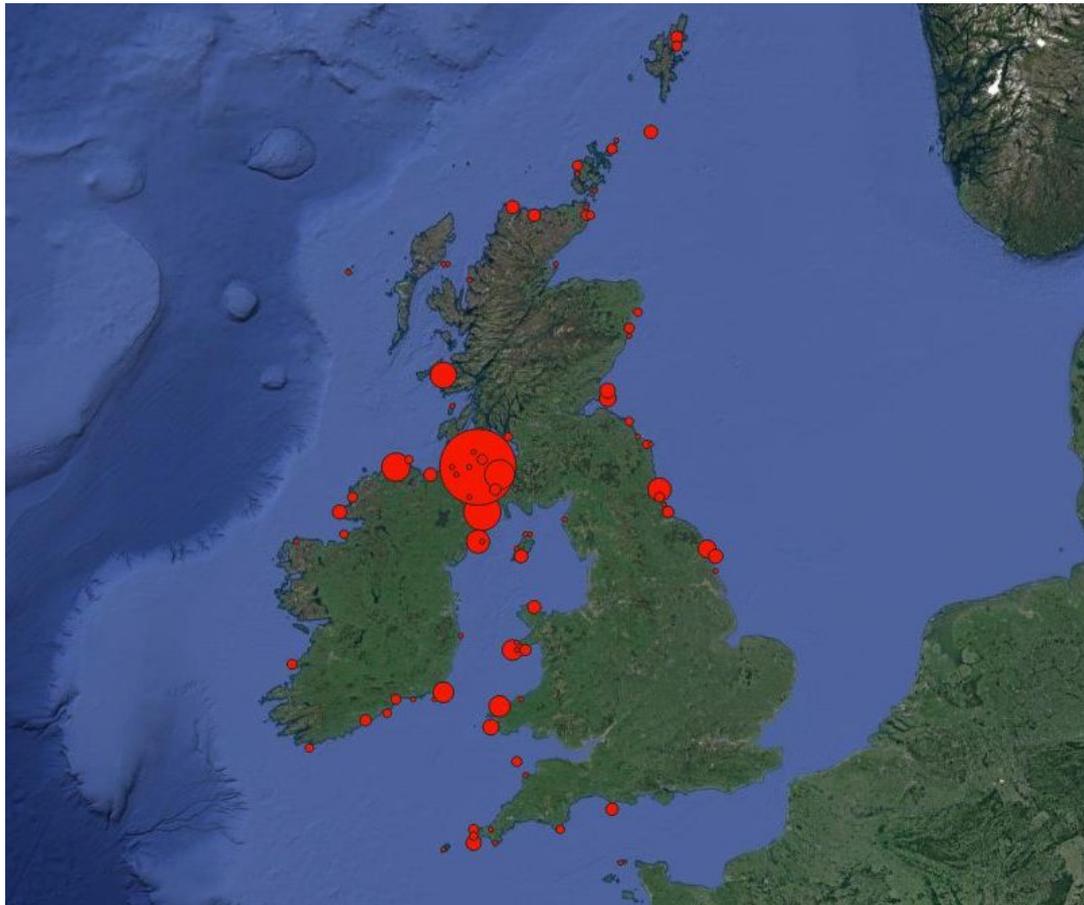
Top 5 Total Calf of Man Controls 1959-2019	
Storm Petrel	625
Willow Warbler	97
Manx Shearwater	63
Lesser Redpoll	55
Chiffchaff	52



Blackbird controls 1959-2019

Blackbirds visiting the Calf of Man in Autumn are from the north and east.

Storm Petrel is the most frequently encountered species from elsewhere. We do not catch a large number of Storm Petrel so the percentage of Storm Petrel's wearing rings must be relatively high.



Storm Petrel 1959-2019. The origin of birds found on Calf of Man which were ringed elsewhere.