

The ongoing work that is helping Lundy progress towards achieving Bird Observatory status has continued: more of the historic ringing records have been digitised, and the old, storm-damaged structure of the Heligoland trap on the Terrace was dismantled by LFS Conservation Break teams in October, who then made a good start on replacing it.

Thanks to them for their efforts, to all the visiting ringers for a productive year's ringing, and to Tim Frayling for organising a significant grant from Natural England, paying for 1,000 Manx Shearwater rings and 500 Storm Petrel rings. And a huge thank-you to Dean Jones, who has contributed so much to Lundy ringing during his time on the island.

RECOVERIES AND CONTROLS

Three Storm Petrels controlled at the North End breeding colony are discussed below, in the separate section on this species. Other interesting movements of birds in 2021 have included a young Swallow that reached the Channel Islands the day after being ringed on Lundy, a Blackcap ringed on Gibraltar, a Blackbird ringed on Lundy in autumn 2019, found in Germany in May, and two birds that made surprising journeys within Great Britain, both going north in late autumn: a Blackcap to Orkney and a Chiffchaff to Pembrokeshire.

Another two birds from elsewhere were more predictable. Probably on southward migration when originally caught in previous autumns, a Willow Warbler ringed in Worcestershire and a Reed Warbler ringed on the Isles of Scilly were controlled on Lundy on their way back north in spring, both on the same day. A Lundy-ringed Willow Warbler continued northward in spring, only to meet an unfortunate end in the Outer Hebrides.

Several seabirds colour-ringed at colonies elsewhere were seen on Lundy. Those fully identified included the Guillemot ringed as a chick on Skomer Island in 2013, which returned to Jenny's Cove for the third year; unfortunately it failed in its breeding attempt. Three other colour-ringed Guillemots were also seen, but full details of the engraved numbers could not be seen so their origins could not be determined, though it is certain that they were not ringed on Lundy.

A twelve-year-old Kittiwake that bred successfully in Jenny's Cove had been ringed as a chick at a colony in Brittany. Another colour-ringed Kittiwake was seen in Jenny's Cove on 19th July 2021, though not associated with a nest. Its colour combination could not be seen fully so information on the bird is less precise, but it also originated from Brittany and it hatched in 2013. A third Kittiwake, again with its colour-ring combination partially recorded, was loafing in Aztec Bay on 3rd June 2021. Like the others it had been ringed at Pointe du Raz, but further details could not be determined.

Previously caught on Lundy, two of the many ringed birds recaptured in 2021 were of particular interest. A Goldfinch caught in August 2019 was on the island in April 2021, presumably having settled down as a local breeder, though it was originally ringed on Cape Clear Island in southwest Ireland in April 2019. A Snipe ringed on Lundy on 27th October 2016 was recaptured over four years later, on 7th January 2021. This species does not breed on the island, but evidence from elsewhere shows they tend to establish winter territories and return to those same familiar areas in successive winters, as this bird seems to have done.

Full details of all ringing recoveries and controls are given on p.103.

MANX SHEARWATERS

As in the years 2016-19, shearwater ringing effort in 2021 involved monitoring occupied nestboxes throughout the breeding season, catching breeding adults and prospecting pre-breeders in June, and then targeting fledging chicks in autumn. In all, 297 birds were newly ringed. This is lower than in eight of the last nine years, but recapture data from the nestboxes and the night-time work carried out in June proved particularly valuable.



Manx Shearwater chick in a nestbox, West Side, 4th August (photo: Dean Jones).

The same seven nestboxes that were occupied in 2020 had pairs in them again in 2021. Twelve of the fourteen adults involved were the same individuals as before, and the five known established pairs all went on to raise a chick successfully.

A sixth pair was also successful, but as one of the 2020 pair was not encountered in the box that year, we cannot be certain both individuals were the same in both years. This is particularly unfortunate as in 2021 the second bird proved to be one ringed as a chick in 2016. One reason for installing the boxes was to discover more about the breeding biology of shearwaters in a newly-established, growing colony, for comparison with the long-established, stable colonies where previous research has been done. As happens in some other seabird species, such as Great Skua, the age of first breeding may be younger in new colonies. With this individual, we cannot be certain whether it first bred at four or five years of age.

The seventh pair, where a previous occupant of the box was joined by a new partner, did not lay an egg but spent plenty of time in the box together, establishing the strong pair-bond that is vital for success in a species that has a low reproduction rate but is very long-lived. Assuming they both survive to the 2022 season, they should lay then.

Since the boxes were installed, ringed birds occupying them have survived until the next breeding season on 25 out of the 26 possible opportunities. Though the sample size is not very large yet, this gives an impressive annual adult survival rate of 96%. Of eighteen eggs laid by these birds over the same period, fourteen (78%) have produced chicks that appear to have fledged successfully. Again this figure is encouragingly high, particularly bearing in mind that the birds involved are likely to be relatively young, inexperienced individuals in their first few years of breeding.

A total of 186 adult shearwaters were ringed during the year, mainly in early June when large numbers of pre-breeding birds were taking advantage of some very dark nights to come ashore looking for burrows and partners, while at the same time plenty of breeding adults were caught when entering or leaving their nest burrows. Another 76 birds ringed on Lundy in previous years were recaptured, providing valuable insights into their life histories.

All of these recaptures were in the main breeding colony between the Old Light and the Battery, where most of the ringing has been done in recent years. Among the 47 birds originally ringed as adults, there were recaptures from every year between 2011 and 2020, in numbers ranging

from two ringed in 2011 to eleven ringed in 2017. When allowance is made for the varying totals originally ringed at this site in each year, the proportions recaptured rise steadily from 2% of 2011 birds to 7% of 2020 birds, reflecting the number of intervening years for which they have survived and returned.

In many cases the 2021 data added to an already detailed history of the individual. As an example, one of the birds from 2011 was recaptured for the tenth time. However, at the other extreme, seven individuals were encountered for the first time since being ringed in 2012-15, emphasising that a lack of encounters does not necessarily mean a bird has died or moved away.

Another 29 recaptured birds were originally ringed as chicks or fledging young. This gives added significance to any data on them because their ages are known. One hatched in 2013, nine in 2016, three in 2017, 15 in 2018 and one in 2019. As noted above, a returning chick from 2016 is the first to have chosen to breed in a nestbox.

As with the adults, allowance needs to be made for the varying number of chicks ringed in the main colony in those years, to calculate the proportion of birds returning to their precise natal colony. This rises from 1% of those ringed in 2013 to 5% of the 2018 chicks, reflecting the fact that most young birds return to colonies at the age of three. This makes the one bird that hatched in 2019 and returned in 2021 unusual.

One week was spent catching chicks as they emerged from their burrows in early September. It became apparent that many had already fledged by then, and the number ringed was a modest 107, along with another four young birds that had made their first flight but not yet left the island. Comparatively few nights could be spent in the colony, and a late visit had been chosen to avoid the brightest phases of the moon, when chicks are reluctant to emerge from burrows. As a result, this was the lowest chick total since 2007, even though it was clear from visits earlier in the season that the population is thriving.

STORM PETRELS

With no visiting ringers on Lundy in the key month of August, there were only two opportunities to ring Storm Petrels at the usual site near North Light, both falling outside the period when peak numbers are expected. So the numbers caught did not match the success of 2020.

In early July, five new birds were ringed and four others recaptured. Two of these were originally ringed at the North End, one in August 2019 and one in August 2020. The first of these was caught without the use of a sound lure, and had a fully-developed brood-patch when it was ringed, so it is likely to be a Lundy breeder, but the status of the second was less clear. Remarkably, the other two birds were both ringed at Gwennap Head, near Land's End, just a week apart in August 2018.

Another visit to the North End in early September produced four new birds and two recaptures. One of these had originally been caught there in August 2019, without the use of a sound lure and with a fully-developed brood-patch, making it another probable Lundy breeder. The other, ringed on Skomer Island seven weeks earlier, could have been a wandering pre-breeder.

One further bird was caught (using a sound lure) and ringed in early September during a visit to the Manx Shearwater colony north of Old Light.

These records contribute to a growing understanding of the Storm Petrels visiting Lundy, which are a mix of breeding birds, prospecting pre-breeders, and perhaps some birds that are based elsewhere but simply investigate the Lundy colony as they pass by. Full details of the three controlled birds are given below.



Colour-ringed male Wheatear, Quarter Wall (photo: Dean Jones).

WHEATEARS

After a gap in 2020 because of Covid restrictions, ringing work for the long-term Retrapping Adults for Survival (RAS) study resumed in 2021. Inevitably after the enforced break there were comparatively few colour-ringed birds remaining in the breeding population, and two years' worth of unringed new recruits to trap and ring. The task was particularly challenging because weather conditions in spring and early summer disrupted some pairs' breeding seasons.

Early-arriving birds laid during a warm, settled spell, but then a deterioration in conditions resulted in other pairs delaying their start, and later storms appear to have led to some nest failures. These failed pairs were building replacement nests and re-laying at the same time as the first fledglings appeared. Wheatears are generally less visible and harder to catch during the laying, incubation and early chick stages, compared with those feeding large young, so significant numbers of adults remained unringed. In all, 27 females and 22 males were newly colour-ringed in 2021.

Nineteen birds ringed in previous seasons were re-sighted: fifteen females and just four males. The females were ringed in 2016 (3 birds), 2017 (3), 2018 (2) and 2019 (7), and the males in 2017 (1), 2018 (1) and 2019 (2). Past experience suggests that males can be less conspicuous than females at some stages of the breeding cycle, so in the long run their calculated survival rates are likely to be more similar than these numbers indicate, with some missed males being re-sighted in subsequent years.

The results show a mean of 43% adult survival per year over the two years between the 2019 and 2021 breeding seasons. This is lower than in the preceding five years, when the annual mean was 56% (range 46-63%), but it is a minimum figure, because of the disruption and uncertainties brought about by Covid in 2020 and difficult weather conditions in 2021.

The breeding population in the study area was estimated to be 48 pairs. With some colour-ringed birds known to be flying half a kilometre or more from their nest to find food, it is reasonable to assume that some of the unusually high proportion of unringed birds were doing the same. Without any means of individual identification, these could not be pinned down to a particular breeding territory. So there may have been situations where a presumed single territory was in fact occupied by two or more pairs, meaning that the population suggested above would be an underestimate.

If the 2022 season goes well, the reliability of the study's population estimates and survival rate calculations should be restored to the high levels achieved before Covid-19.

LUNDY RINGING TOTALS 2021

Manx Shearwater	(107)	297	Blackbird	26
Storm Petrel		10	Fieldfare	1
Water Rail		1	Song Thrush	17
Snipe		4	Redwing	114
Lesser Black-backed Gull		1	Spotted Flycatcher	16
Swift		1	Robin	52
Wryneck		1	Pied Flycatcher	8
Great Spotted Woodpecker		2	Redstart	3
Carrión Crow		1	Stonechat	20
Goldcrest		162	Wheatear	53
Firecrest		5	Dunnock	17
Skylark		1	House Sparrow	(195) 314
Sand Martin		2	Grey Wagtail	1
Swallow		186	Tree Pipit	1
House Martin		9	Meadow Pipit	187
Long-tailed Tit		1	Brambling	2
Yellow-browed Warbler		5	Chaffinch	77
Chiffchaff		241	Bullfinch	1
Willow Warbler		574	Common Rosefinch	2
Blackcap		1,148	Linnet	23
Garden Warbler		12	Goldfinch	80
Lesser Whitethroat		1	Siskin	470
Whitethroat		61		
Grasshopper Warbler		10	Total	4,446
Sedge Warbler		78	Number of species	50
Reed Warbler		7		
Wren		39		
Starling	(15)	101		

Numbers in brackets indicate pulli
(included in the main totals)

Correction: Ringing Totals 2020

Two ringing records that were not entered in the LFS ringing notebook or the BTO database came to light too late for inclusion in the 2020 LFS Annual Report. The total number of Starlings ringed should be 50 and the overall ringing total was 1,977.



RECOVERIES AND CONTROLS

Storm Petrel 2724001 – ringed as an adult on Skomer Island, Pembrokeshire, 20.7.21. Controlled on Lundy, 8.9.21 (**duration** 50 days; **distance** 74 km; **direction** SE, 145°).

Storm Petrel 2754512 – ringed as an adult at Gwennap Head, Porthgarra, Cornwall, 14.8.18. Controlled on Lundy, 7.7.21 (1,058 days; 148 km; NNE, 29°).

Storm Petrel 2754518 – ringed as an adult at Gwennap Head, Porthgarra, Cornwall, 21.8.18. Controlled on Lundy, 7.7.21 (1,051 days; 148 km; NNE, 29°).

Kittiwake Paris FX21721 (identified by colour rings) – ringed as a chick at Point du Raz, Plogof, Finistère, Brittany, FRANCE, in 2009. Seen at the Jenny's Cove breeding colony, Lundy, 18.7.21 to 10.8.21.

Lesser Black-backed Gull, with white colour-ring, engraved NA5M – found in poor condition at Malaga, SPAIN, 28.11.19. Rehabilitated, then ringed and released on 17.2.20. Seen on Lundy, 26.3.21 (403 days; 1606 km; N, 0°).

Guillemot N05511, with red colour-ring, engraved 0114 – ringed as a chick on Skomer Island, Pembrokeshire, 8.7.13, was present on Lundy during the breeding season in 2021, on the same ledge as in the previous two years.

Swallow ANL4439 – ringed as a first-year bird on Lundy, 20.9.21. Controlled at Longis Bay, Alderney, CHANNEL ISLANDS, 21.9.21 (1 day; 240 km; SE, 133°).

Willow Warbler NLN559 – ringed as an adult on Lundy, 22.4.21. Found freshly dead (hit glass) at South Glen Dale, South Uist, Western Isles, 4.5.21 (12 days; 683 km; NNW, 346°).

Willow Warbler NBC633 – ringed a first-year bird at Kingshill Farm, Leigh Sinton, Worcestershire, 27.8.20. Controlled on Lundy, 19.4.21 (235 days; 194 km; WSW, 236°).

Chiffchaff NLN918 – ringed as a first-year bird on Lundy, 9.10.21. Controlled at Kilpaison March, Rhoscrowther, Pembrokeshire, 14.11.21 (36 days; 62 km; NNW, 335°).

Reed Warbler AVF4022 – ringed as a juvenile at Porth Hellick, St Mary's, Isles of Scilly, 6.7.19. Controlled on Lundy, 19.4.21 (653 days; 180 km; NE, 40°).

Blackcap APN2214 – ringed as a first-year female at Middle Hill, GIBRALTAR, 29.9.20. Controlled on Lundy, 16 and 17.4.21 (199 and 200 days; 1670 km; N, 2°).

Blackcap ANL4786 – ringed as a first-year female on Lundy, 11.10.21. Controlled at Denwick, Deerness, Orkney, 31.10.21 (20 days; 874 km; N, 9°).

Blackbird LE36666 – ringed as an adult female on Lundy, 23.10.19. Found freshly dead at Salzkotten, Brockenslee, Detmold, GERMANY, 21.5.21 (576 days; 926 km; E, 87°).

Goldfinch AVA4847 – ringed as an adult male on Cape Clear Island, Cork, IRELAND, 22.4.19. Recaptured on Lundy, 18.4.21 (727 days; 338 km; E, 96°). This bird was previously controlled on Lundy, 24.8.19.

Far left: Blackcap, 24th March (photo: Rob Duncan) and Wryneck, 29th August (photo: Dean Jones), both caught and ringed in Millcombe.