STORM PETREL: FIRST CONFIRMED BREEDING RECORD FOR LUNDY AND DEVON

by

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Storm Petrels are very small seabirds, about the same length as a House Sparrow though with a much greater wingspan. They usually stay well clear of land, feeding on plankton and other small items picked from the sea surface. Their small size makes them very vulnerable to predation, by mammals and larger birds, when they come ashore to breed. So they nest in colonies on offshore islands, using rock crevices or burrows that they only enter or leave at night. Their plumage is mainly sooty black, perhaps as camouflage when they are ashore, but they have a white rump that probably helps the birds to follow each other during courtship flights at colonies.

Storm Petrels on Lundy

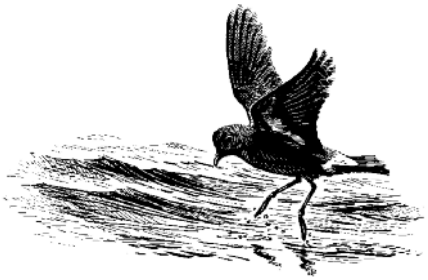
During summer and autumn, Storm Petrels are sometimes seen from boats crossing to and from Lundy, and during prolonged, severe gales they can occasionally be picked out from Lundy itself, sheltering in the lee of the island. In both cases, searching with binoculars greatly increases one's chances.

It has long been thought that Storm Petrels might be at least attempting to breed on Lundy, but there has been no hard evidence. There are old reports of the birds' characteristic musky smell being detected at crevices, including in three sections of wall on the East Side and near the Castle in 1958; but targeted night searches at the time were unsuccessful. More recently they have been caught on the island during night-time ringing studies by playing recordings of their song to attract them in. This method works well almost anywhere round the British mainland coast, drawing in any passing birds, including birds with brood-patches, which can be retrapped away from their known colonies. Thus, if one is trying to investigate breeding possibilities, the use of recordings removes any real value from such captures. More encouraging has been the incidental catching of several birds during the mist-netting of Manx shearwaters on Lundy, since the petrels involved were clearly flying low over the sidelands of their own accord.

Other hints have come from birds flying over the main Manx Shearwater colony (reported by Tim Guilford and Robin Freeman of Oxford University Zoological Department) when the area was observed through a night-vision device in early August 2009; from the recapture of a bird in June 2010, near Benjamin's Chair, which had been ringed on the Terrace in June 2009; and from a bird with a brood-patch caught in late May 2013 and which was retrapped at the same site four nights later. Had the two recaptured birds been passing Lundy by chance on two separate occasions and been lured in each time, or had they formed a specific attachment to the island?

Searches for breeding evidence

Typical breeding sites in established colonies are in areas of scree or boulders, where there are suitably sized crevices between the rocks. However, petrels will also use other holes, such as in drystone walls that are thick enough not to be draughty, or burrows in soil. The sites need to be steeply sloping or surrounded by short turf, so that the birds have clear flight-lines to and from the entrances.



How can good evidence of breeding be found? The most practical method, used for censusing populations at known colonies elsewhere, is to play recordings of their song outside burrows during the day. If a bird responds from inside, it is almost certainly on an egg or brooding a small chick. To arrive at a population estimate, a correction factor is then applied, because only about a third of the adults in burrows respond. When nest holes are located, many are too narrow and winding to allow direct inspection, but endoscopes can be used in some circumstances to check the contents directly.

The task on Lundy has seemed daunting. It has been clear that if petrels are breeding, their numbers are currently quite low. In addition, much of the most suitable-looking breeding habitat is inaccessible scree on the cliffs. So, on such a large island, looking in the right place is a huge challenge.

Andrew Webb in 1991 (for JNCC) and David and Elisabeth Price in 2002 surveyed likely sites that were accessible but found no evidence of breeding. In 2004, Dr Mark Bolton (RSPB) made a further assessment of the possibilities, listing various accessible sites that might be suitable. He also concluded that the previous capture and ringing of birds early in the breeding season suggested they were potential breeders, since young prospecting birds do not usually arrive at colonies till later.

With rats eradicated from the island in 2004, the chances of petrels breeding successfully and increasing in numbers were transformed. So, in 2010, Helen Booker and Chris Townend of the RSPB carried out an extensive daytime survey, playing song recordings in suitable areas, and also visited potential sites at night. They found no evidence of Storm Petrels.

Having caught over a hundred petrels on Lundy between 1975 and 2013, I had developed a strong interest in the species' breeding status. The majority of the birds I had ringed were lured in using recordings, but enough were caught incidentally during shearwater ringing to give a strong impression that they were very interested in the island. However, given that three dedicated surveys had failed to find any breeding evidence, I thought any breeders were probably in inaccessible areas and that searching was very much a needle-in-a-haystack affair. So, while I lived in hope, my expectations were low.

Confirmation at last

The Lundy Manx Shearwater ringing studies in August and September 2014 had shown that their breeding season had run significantly later than normal, with many chicks still being fed in their burrows at what would normally be fledging time. So when I returned to the island at the beginning of October to ring migrant birds, I decided to check for any late shearwater chicks as well. Conditions were not good because there was a bright moon that week, and shearwaters tend only to emerge when it is almost totally dark. Even so, Tony John, Luke Phillips and I went to the main shearwater colony north of Old Light on the evening of 5 October to search it.

We started working along the bottom of the slope, then shifted uphill a little and swapped direction whenever we ran out of space. Quite soon, as we approached the lip of an inlet, Luke noticed a movement close to the edge and went quickly to investigate. He picked up what turned out to be a Storm Petrel chick. Superficially it looked full-grown, but its belly was still covered in down and its plumage was clearly juvenile, showing no signs of wear and having pale edges to some wing feathers.

We ringed, measured and photographed the bird (see colour plate 8). Its weight, at 32.9 g, was a little higher than a typical adult but much lower than the heaviest chicks, suggesting that it had not been fed for several days and was close to fledging, having lost most of its excess fat.

Its behaviour on release was interesting. Luke opened his hand at ground level, at the spot where he had caught it. Initially it sat still but moved its head around, apparently getting its bearings. Then it craned its neck forwards, moving its head about again, and shuffled down a small burrow. The entrance had been hidden in grass and it looked from the bird's movements as if it had located it by smell. Having seen the burrow's position, Luke reckoned that the bird had probably been heading back there when he had caught it.

In most colonies, Storm Petrels need to nest among rocks to avoid being disturbed by larger burrowing seabirds or by rabbits, so this bird's location was unexpected; but on Lundy, attempts to inspect shearwater nests using endoscopes show that the burrows weave between stones and cannot be followed far. So the apparently grassy sidelands are in effect scree with a covering of vegetation, and once petrels get below ground they can presumably find narrow spaces between the rocks where larger burrowers cannot disturb them. This burrow's location has implications for any future survey work: suitable areas are much more extensive than previously thought.

From a personal viewpoint, seeing a Manx Shearwater chick on Lundy for the first time in 2005, after so many years of studying the species intensively, had been a very special moment. To that point, it was definitely the highlight for me in over 30 years of bird work on the island. However it was not unexpected, as shearwater chicks had already been found by others the previous year. In contrast, the Storm Petrel chick was not the focus of our search in 2014 and came as a complete surprise because of the needle-in-a-haystack nature of the discovery. Hence, given my strong interest in this enigmatic and charming species, this was an even more special occasion. We managed to reach the Tavern just in time for 'last orders'!

This was the first confirmed record of successful breeding by Storm Petrels for Lundy and Devon. Lundy becomes only the second known breeding site in England, the other being the Isles of Scilly. The nearest colonies to Lundy are on the Pembrokeshire islands, with other important colonies off north and west Scotland and the west of Ireland. The majority of the world population breeds in the British Isles.

For any species that is largely confined to a handful of big colonies, the establishment of a new one is of major conservation value: the future of the species is securer because a problem such as disease or environmental disaster at one colony will affect a smaller percentage of the total population. It is already clear that, thanks to rat eradication, Lundy is fast developing into a very significant Manx Shearwater colony from this point of view. Now that we know Storm Petrels have made a start, there seems no reason why they should not follow a similar trajectory and establish a colony of equal significance.