The Birds of Lundy

Tony Taylor

Introduction

51°10' N, 4°40' W:– Lundy's position is the key to its significance for birds. Three snapshots will give a glimpse of its ornithological value.

On a fine morning early in May, with a breath of wind from the south, a walk over the southern part of the island reveals several new arrivals: a bright male redstart and a couple of whitethroats, perhaps, and twenty willow warblers. The willow warblers are not just in their expected woodland habitat in Millcombe, where several are singing, but also on stone walls and flitting among tussocks of sedge out in the fields. Then, near the battlements at the head of St John's Valley, one flies across from the south and into the gorse. A minute later it has moved on but a second arrives, to be replaced in turn by a third. Then closer observation of the birds out on the field walls shows them working their way gradually north. It becomes clearer as the morning progresses that any repeat of the walk would still produce twenty willow warblers but a different twenty every time. Ringing shows the same story: fifty willow warblers have been caught in the day with never more than five at one time in the netting area.

Late June, again sunny, but with a westerly breeze. Seen from the long slope next to the Devil's Chimney, Jenny's Cove is alive with birds. Serpentine lines of guillemots and razorbills litter the sea surface. Other busier, noisier guillemots jostle on their cliff ledges, with continual confrontations between experienced breeders guarding chicks and immature birds prospecting in preparation for next year. More circle over the water, sometimes rising to inspect an area of cliff more closely or to land there. A loud call from a breeding guillemot heralds its mate's arrival a few seconds later with a fish for their chick (how on earth can the pair recognise each other individually, in flight at fifty metres, among so many?). Much smaller numbers of puffins and shags, together with herring, lesser black-backed and great black–backed gulls, fulmars and the screeching kittiwakes in Deep Zawn, complete the picture.

Now to a more precise snapshot: 27th October 1989. Again there is a breeze but this time it is cold and there are just occasional bouts of hazy sunshine as a strong westerly brings clouds streaming across the island. Migration is more immediately apparent than in May, with a succession of tightly–bunched flocks of starlings flying purposefully south along the island. Suddenly, a bird is seen leaving the clump of willows near Quarry Pond and flying into the rhododendrons below. Tantalising glimpses between the leaves reveal one of the small North American cuckoo species, but not enough to tell which. After a few

minutes of excited but frustrating eye-strain, its watchers finally see it clearly as it emerges to feed among the dead bracken – a yellow-billed cuckoo obligingly showing all its diagnostic characteristics. Others are called to admire it, hurrying from the North Quarry where they have been watching Lundy's first olive-backed pipit, discovered three days earlier. Two rarities are within a couple of hundred metres of each other, one looking understandably tired after having survived a transatlantic crossing, the other remarkably active and healthy considering that it had just strayed four thousand kilometres west from the species' nearest breeding area in Russia.

Lundy receives large numbers of migrants because birds working their way north or south across the Bristol Channel will prefer to make the flight in two stages rather than one. They will leave the mainland coasts from several points in South Wales or North Devon and Cornwall, scattered along a broad front, but then be focused in on the island to produce high concentrations there. The same strategic positioning leads to Lundy's high quotas of rare, vagrant species from Europe and Asia.

The great majority of migrants swept from the eastern seaboard of North America in autumn gales undoubtedly die at sea. The next land that the few survivors see and struggle towards may be the Scilly Isles or southwest Ireland but there is plenty of sea-space in between and for birds in this corridor, Lundy will frequently be the first visible target.

For seabirds, Lundy provides a breeding site completely surrounded by rich feeding areas and safe from many potential predators.

The Society's ornithological work

The main objectives in the Lundy Field Society's work on birds have been to monitor the population sizes of the island's breeding species, particularly with a view to detecting any significant changes resulting from pollution, climatic and oceanographic changes, overfishing or other influences; to record the species and numbers of birds migrating via Lundy, the timing of these movements and any significant changes in numbers; to investigate, through ringing, the migration routes, longevity, causes of mortality and other aspects of the biology of Lundy's breeding and migrant birds; and to encourage field studies into all other aspects of Lundy's birds such as their breeding biology, behaviour or ecology.

The society's fifty years of bird work can be divided into two halves. For much of the period up to 1973, Lundy was classed as a national Bird Observatory and had resident ornithological wardens to carry out the objectives listed above, with valuable assistance from visitors and islanders such as the Gade family. Since then the wardens' tasks have not been primarily ornithological, though some important bird work such as seabird population monitoring has been carried out

by them at times. Furthermore, none has had a ringing licence, so all of the ringing and much of the other bird work has been done by visitors and by other islanders, from Mick Rogers in the 1970s to Andrew Jewels in the 1990s, in their spare time.

Other changes have been evident. The ornithological wardens ringed large numbers of breeding seabirds and relatively few migrants, dependent as they were on Heligoland traps for the latter. From the 1970s, mist-nets have revolutionised the catching of passerines and so migrants have become the main target species. As illustrations of this change, the number of guillemots ringed up to 1973 was 2700, while only one has been ringed since then; equivalent numbers for willow warblers are 2859 and 6474. Early studies tended to concentrate on establishing the basic facts and figures of Lundy's birds: species, numbers, detailed descriptions of rarities (now adequately covered in modern bird identification guides, though still vital for the validation of records), and specific studies such as the ectoparasites on birds and the growth rate of shag chicks. Monitoring work remains vital, but detailed studies in the last twenty-five years have focused more on behaviour, including display flights of lapwing, the calls and mate selection strategy of kittiwakes and territoriality in skylarks.

Two of Lundy's bird wardens wrote important books on the status of the island's birds. "A List of the Birds of Lundy" by Peter Davis was published by the Society in 1954. By the time Nick Dymond wrote "The Birds of Lundy", published in 1980, he had a wealth of numerical data accumulated by him and his predecessors, so he was able to draw up detailed graphs and histograms showing how populations of breeding birds had fluctuated year by year and how the numbers of each regular migrant species varied through the seasons.

Breeding birds

The fortunes of Lundy's seabirds have been mixed. Fulmars have been the success story (Fig. 1), as elsewhere in the British Isles. They appear to have achieved this by exploiting the left-overs from human fishing activities. The only complete loss over the same period has been cormorants, with about ten or twelve pairs breeding in 1946 but none since 1959. Shags' numbers have fluctuated considerably but from consistently over a hundred pairs in the late 1950s they were reduced to twenty-two in 1992. The tendency, at least in the 1970s, for pairs in the Shutter Rock area to use sticks of cordite from the wreck of HMS *Montagu* in their nests is not, however, thought to have caused any fatalities.

Among the gulls, lesser black-backed appear to have increased significantly in recent years while herring and great black-backed have decreased. The fourth species, kittiwake, has perhaps shown the most worrying decline, from 2000 pairs in 1951 to 400 in 1992 (Fig. 2).

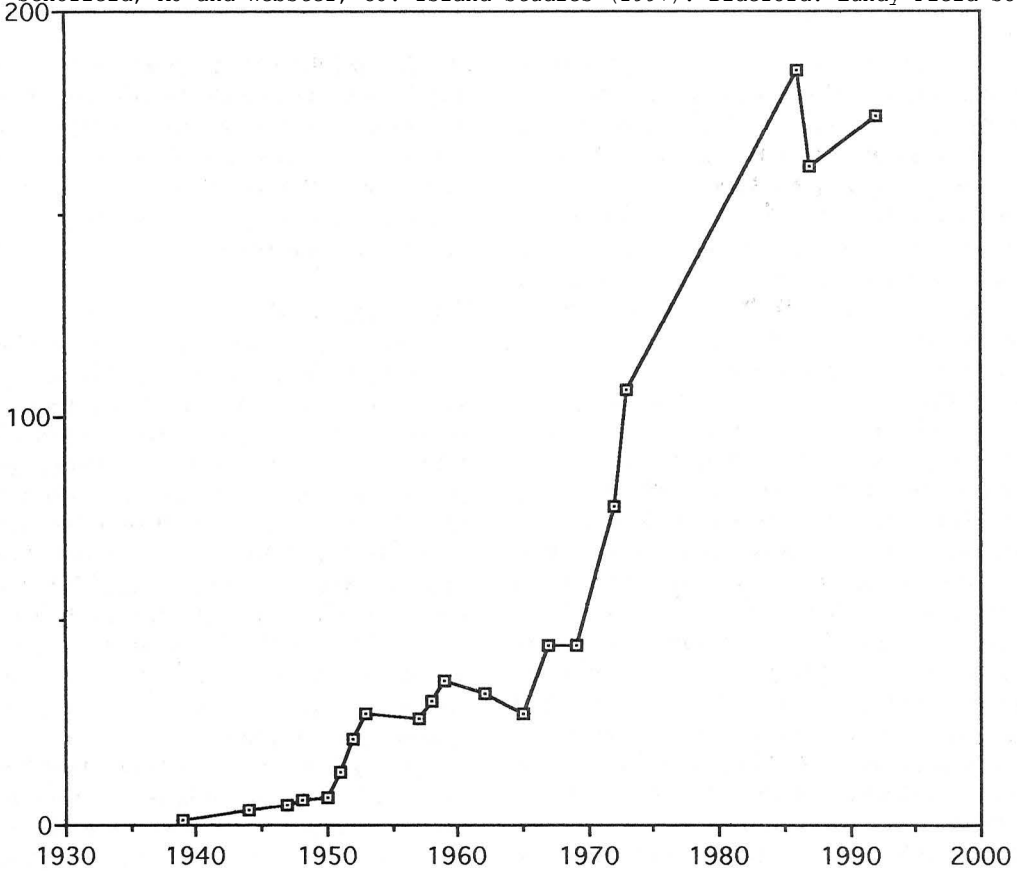


Fig. 1 Fulmar numbers (number of occupied sites)

The auks are difficult to census accurately but the evidence, from complete counts for the island and from the more detailed monitoring of selected sites, points to declines in all three breeding species until the mid-1970s. Since then guillemots have recovered significantly, razorbills continued to decline for another ten years but then stabilised, while puffins (Plate 8) have declined to a point where there has been no firm evidence of breeding for a number of years, though birds still visit the island: thirty-seven seen during the 1992 census work, for instance. As the species most closely associated with Lundy in people's minds, the downward trend in puffins is particularly sad.

Ringing on Lundy has contributed to an understanding of some of these changes, mainly by adding to the mass of data accumulated from ringing in Britain as a whole. Some of Lundy's seabirds have been found dead in fishing nets and others oiled. These factors are undoubtedly relevant to the declines, though others such as lack of food will not be so evident from ringing recoveries. Differences between species could be related to their wintering ranges, some going to higher-risk areas than others. As examples, shags from Lundy have been found frequently in southwest England and northwest France but rarely in the Irish Sea, while razorbills and particularly guillemots reach North Wales much more regularly. These two species also range further south than shags, with razorbill recoveries from as far as the western Mediterranean and guillemots in Portugal.

The colour-ringing of lesser black-backed gull chicks in 1995 brought quick results, with several sightings in the winter in Portugal.

In the 1970s, concern at the decline of auks on Lundy led to attempts to reduce predation by gulls, cutting down their reproductive rate by pricking eggs. However, detailed studies of a breeding group of guillemots in Jenny's Cove over four seasons showed that the problem was not that straightforward. In one year, a pair of herring gulls nested close to the guillemots. One of them specialised in taking guillemot eggs and chicks (Plate 9), causing considerable loss, but it also drove away other potential predators such as carrion crows and ravens (ironically the gull chicks died when small, almost certainly because they could not swallow the guillemot chicks brought to them). Another year, herring gulls nesting in the same area did not attempt predation and were highly beneficial in driving off other predators. In the third year, great black-backed gulls had an effect similar to the first herring gulls. In the fourth year, no gulls defended the area and the losses were greatest of all, because of the lack of protection. The same study showed an important indirect influence of humans, via gulls: when gull colonies on the slopes above guillemot breeding ledges were disturbed, the gulls' alarm calls prompted some guillemots to fly off, leaving their eggs or young vulnerable. Even greater losses were caused in a similar way when an osprey flew past on 18th July 1974. All the gulls in the area left their nests and mobbed it, calling loudly.

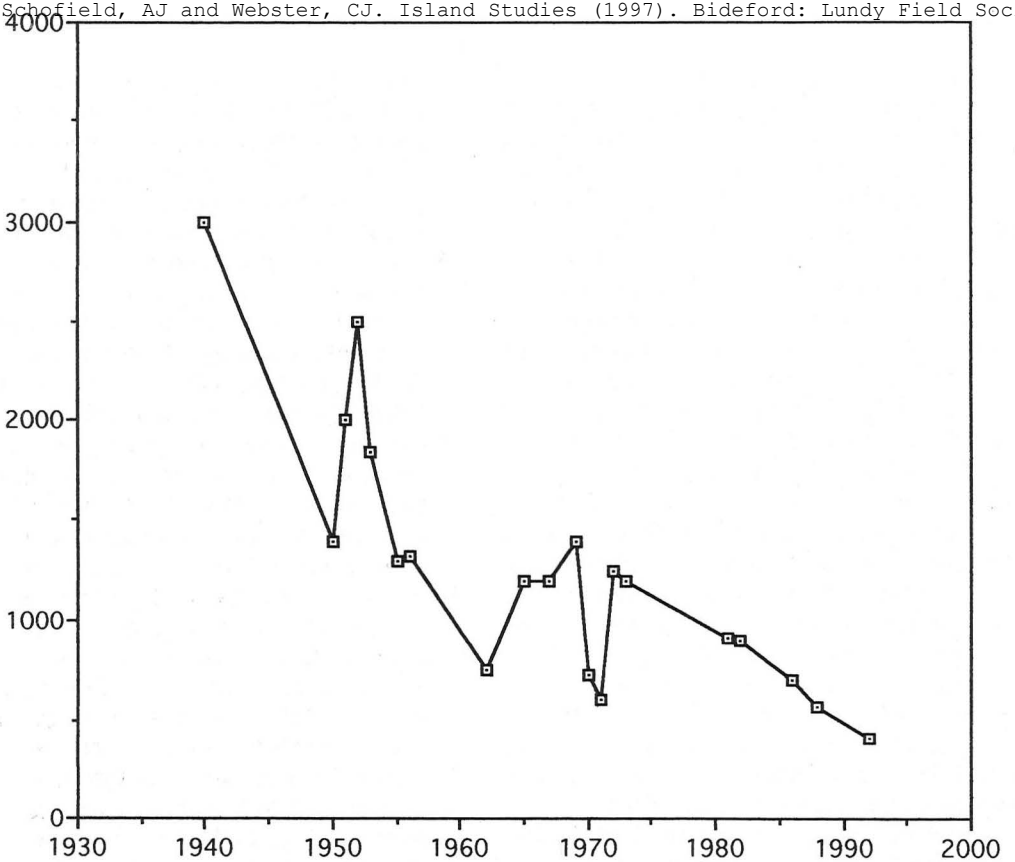


Fig. 2 Kittiwake numbers (counts of breeding pairs)

Many guillemots left in response, even though the osprey, like the humans, was definitely not visible to them.

Among the land and wading birds, the two most obvious losses in the last fifty years have been buzzard (at the same time that myxomatosis affected the mainland buzzard populations, even though the disease did not reach Lundy then) and curlew. A number of other species have come and gone, always having bred on a sporadic basis only: examples include moorhen, house martin and song thrush. Regular breeders with apparently stable populations include common passerines such as wren, dunnock and blackbird, moor and grassland birds like meadow pipit and skylark, and – probably the most important species in terms of their scarcity in Britain – ravens. Lundy's peregrines, like buzzards, have reflected changes on the mainland, not breeding between the mid-1950s and late 1970s, the time when pesticide residues decimated the British population.

Migrants

Information on migrant birds travelling via Lundy is particularly significant when taken in conjunction with that of Britain's other Observatories and ringing stations. Together they provide a detailed picture of each species' strategy: their main routes, eventual destinations, timing and speed of movement, their survival rates and the particular hazards they face. The ways that weather conditions influence all these factors are also becoming better understood.

Spring migration on Lundy follows patterns that are familiar almost anywhere in Britain. For instance, among the earliest arrivals are wheatears; sand martins usually arrive before swallows, then house martins and finally swifts; chiffchaffs are generally earlier than willow warblers. In autumn, swifts, willow warblers and spotted flycatchers are among the earlier departures and blackcaps among the latest, at the same time that winter visitors such as redwings and fieldfares are beginning to move through.

In spring there is generally little direct evidence of migration in the form of birds visibly flying north. The main exceptions are swallows, martins and swifts and occasional larger species such as waders or birds of prey. Most passerines either work their way inconspicuously along the island, feeding as they go, or arrive overnight. Occasionally, when conditions are just right, hundreds or even thousands of new arrivals are found scattered across the island at first light. In late autumn, movements are much more conspicuous, with flock after flock of thrushes such as redwing, finches (mainly chaffinch) and starlings flying south, often without pausing on the island. Their combined daily totals can be in the thousands or tens of thousands.

Some migrants such as pied flycatchers, chaffinches and bramblings are seen in far greater numbers in autumn than spring, while a few, including turtle doves, are largely confined to spring.

Another group of species, most noticeably siskins and goldcrests, appear in highly variable numbers, with hundreds or thousands recorded one year and almost none the next. These variations reflect the severity of weather conditions the previous winter and the success of the breeding season, which together lead to large fluctuations in population size. On average, both goldcrest and siskin have increased markedly over the last fifty years on Lundy, probably as a result of the planting of conifer forests and warmer weather conditions in Britain. Perhaps the most spectacular success story reflected in the Society's records has been that of collared doves – though they are not showing migration so much as general dispersal of the species. Not seen on the island until 1961, records of twenty or more together are now commonplace. Some of the most obvious declines have been in trans–Saharan migrants such as whitethroats, apparently resulting from droughts, from the late 1960s onwards, in the African sahel regions where they winter.

Migrants ringed on Lundy have shown some spectacular movements; for example the woodcock found 2839 km away in Russia, one sedge warbler from Morocco and another to Senegal, a chiffchaff from Senegal, one pied flycatcher reaching Lundy from the Baltic island of Bornholm in twelve days and another travelling to Portugal, and redstarts found in Norway and Morocco. Other impressively quick movers include two goldcrests reaching Lundy a day after leaving the Scilly Isles and Great Saltee, Ireland, respectively and a chiffchaff doing so from Guernsey in two days. All of these are interesting, but without large numbers of ringing recoveries of the species it is not possible to know whether these are exceptional or the norm. Thus such data gain value enormously when they have been pooled with all other British ringing information and analysed centrally. Nevertheless for some species there is sufficient evidence from Lundy alone to draw some conclusions. An example that surprises many people is the extent to which blackbirds migrate. Our own familiar garden blackbirds are mainly residents but Britain receives many extra from abroad in autumn, when they move out of countries with more severe winters, as shown by a number of Lundy ringing recoveries to or from France, the Netherlands, Germany, Denmark and Norway.

Another species that has produced a good deal of information is willow warbler. Their British movements to or from Lundy are shown in Fig. 3. In those cases where the dates suggest they had reached their summer destinations, the great majority were to the north and northwest of Lundy, though one spring bird had presumably overshot its intended target because it returned south to spend the summer in Devon. Foreign records for this species include one from Denmark, one from Capri, Italy, and one to Morocco. Their speed of movement is indicated by the times of various journeys such as from Capri in seventeen days, and to Bardsey, North Wales, in three.

Rarities

There are several British islands and headlands with seabird colonies and migrants to match Lundy's but only the Scilly Isles and Fair Isle have better records for producing species never seen in Britain before. Lundy's list includes seven between 1952 and 1966: american robin, yellowthroat, rufous-sided towhee and northern oriole from North America; bimaculated lark from Asia and sardinian warbler and spanish sparrow from southern Europe. These have been followed by two more North American birds: eastern phoebe in 1987 and ancient murrelet in 1990, the murrelet being particularly remarkable because the species is normally confined to the Pacific coast.

Many other rare species have been seen on Lundy, ranging from veery (Plate 10) and ruppell's, bonelli's and yellow-rumped warblers, all making their second British appearances, to others like woodchat shrike which are seen in Britain annually.

It could be argued that finding rarities is the least important aspect of ornithological work on Lundy: exciting but not much more. However, it does have some scientific value because it is difficult to predict which species might be of significance in the future. Some, such as little egret and scarlet rosefinch, were regarded as rare vagrants until quite recently, but their numbers have now built up to a point where little egrets seem to be on the verge of establishing themselves as regular British breeders and scarlet rosefinches have already bred on several occasions. Collared doves were once rarities too. Without a reliable recording system, their spread, which has been reflected in their increasing frequency on Lundy, would not have been documented properly. Rarities also encourage careful, accurate observation by birdwatchers, highlighting identification problems and their solutions. Michael Jones, Lundy warden in 1962, and his assistant Richard Carden, were thorough and objective enough in their description of a bird they thought was a calandra lark – itself a major rarity – for it to be clear in retrospect that it was in fact a bimaculated lark, very similar but at the time totally unknown to British birdwatchers.

If the prospect of finding a rarity encourages birdwatchers to stay on Lundy, their daily input in recording commoner species is valuable even if their hopes of icing on the cake are sometimes unfulfilled.

Future work

The monitoring of Lundy's bird populations, whether breeding species, regular migrants or vagrants, needs to be continued into the future because of the importance of noting any changes, for conservation reasons. Species can only be protected effectively if people are alerted, through firm evidence rather than impressions, when numbers start declining seriously. The more detailed our understanding of their biology, the more likely it is that causes can be pinpointed and

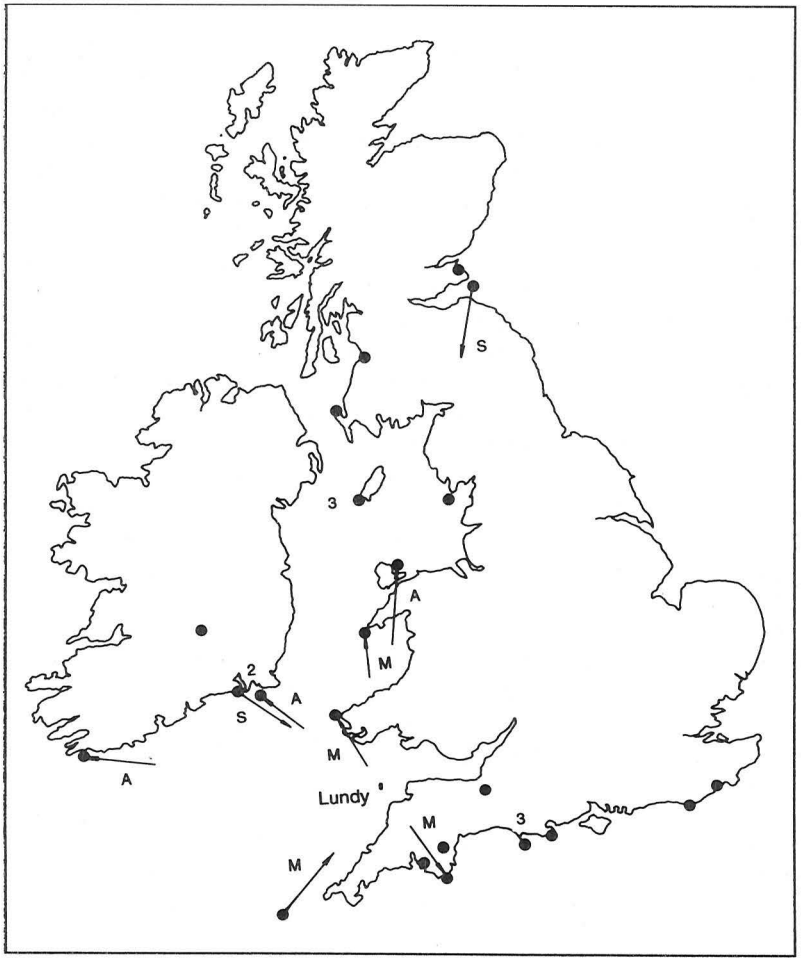
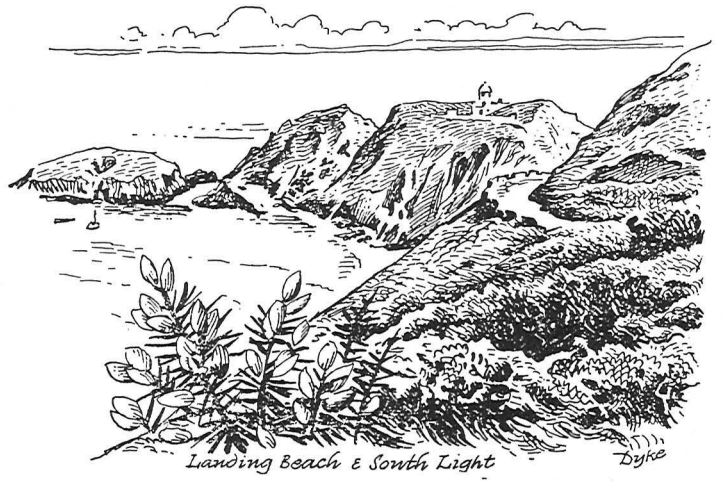


Fig 3 Movements of willow warblers to and from Lundy from within the British Isles. Numbers indicate how many ringed birds have moved between Lundy and a given site. Arrows show direction of movement and letters show the month (A=April, M=May, S=September), when recapture was less than 2 weeks after ringing.

effective action taken to solve the problems. Ringing provides an important means of obtaining this understanding.

There are still gaps in our knowledge of Lundy's birds, such as the breeding status of manx shearwaters (Plate 11) which are difficult to study because they nest down burrows and only enter or leave them at night. There is evidence for at least attempted breeding, in addition to extensive visiting at night by immatures. Ringing studies suggest that these non-breeders may originate from the large Pembrokeshire colonies on Skomer and Skokholm rather than from Lundy. Estimates of how many pairs lay eggs on Lundy vary enormously. There is evidence that when they do lay, the great majority of chicks do not survive to the fledging stage, since none are found in autumn. Rats have been suggested as a reason for this, but while it has been demonstrated that they are unlikely to be significant predators of eggs, the more important question of whether they take unguarded chicks remains unanswered. So Lundy's significance as a shearwater breeding colony is poorly understood in several respects.

There are plenty of opportunities on Lundy for other, specialised studies of birds, whether into their behaviour, ecology, population dynamics or other aspects of their biology. The birds themselves, the undisturbed conditions and the magnificent surroundings on the island could scarcely be bettered for fieldwork.



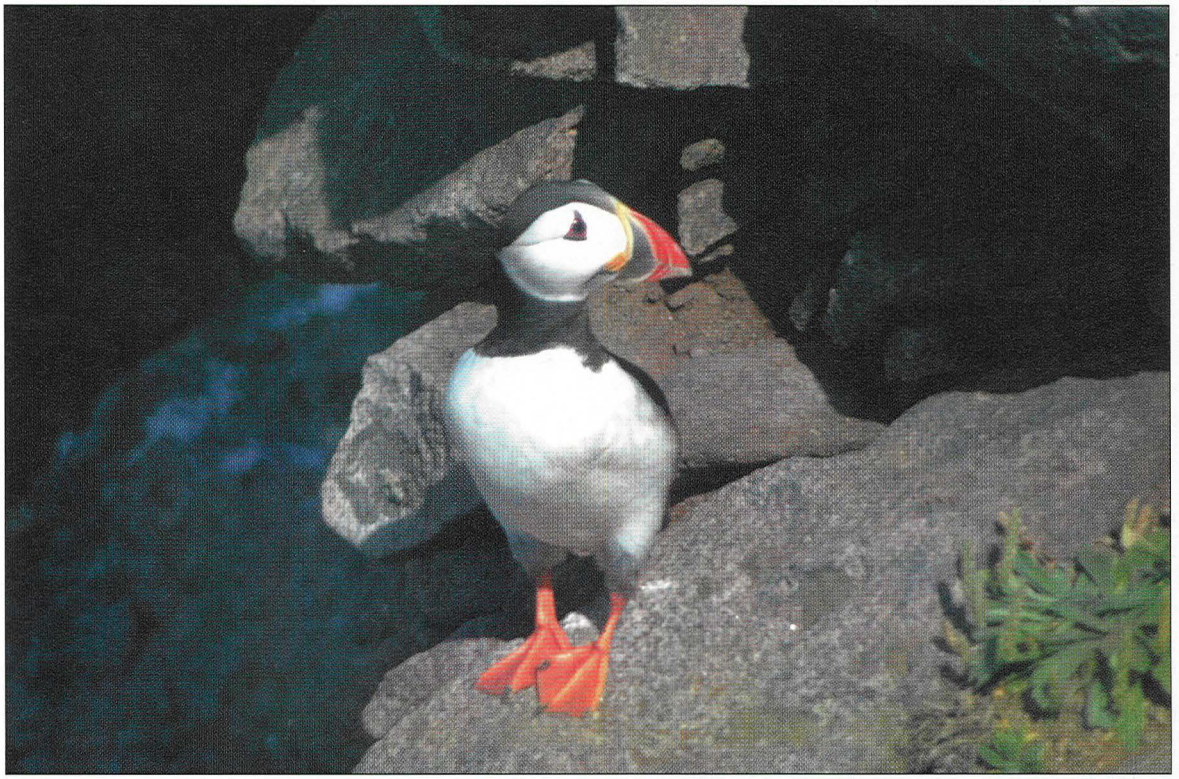


Plate 8 Puffin in Jenny's Cove

THE BIRDS OF LUNDY — TONY TAYLOR

Plate 9 Three breeding guillimots, one defending its chick against predation by a herring gull.

THE BIRDS OF LUNDY — TONY TAYLOR

Plate 10 Whitethroat

THE BIRDS OF LUNDY — TONY TAYLOR

Plate 11

Veery: a North American species, ringed on Lundy in 1987.

THE BIRDS OF LUNDY — TONY TAYLOR

Plate 12 Manx shearwater.

THE BIRDS OF LUNDY — A M TAYLOR