

DENSITIES AND DISTRIBUTIONS OF FIFTEEN BIRD SPECIES ON LUNDY IN JUNE 2000

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ABSTRACT

A survey of the breeding densities and distributions of fifteen species of passerine (perching birds) on Lundy, during June 2000, was carried out using the Global Positioning System. The data was entered into D-map and maps of the commonest four species are reproduced. Comments on the results, including comparisons with historical records, are given.

Keywords: *Lundy, Birds, Densities*

INTRODUCTION AND METHOD

Between 10th and 17th June, 2000, I attempted to locate as many of the breeding passerines as possible. This was performed using a hand-held Global Positioning System (GPS) receiver and a compass. Until recently, the use of GPS has been subject to small errors deliberately built into the system, the correction of which necessitated the use of special equipment. In the spring of 2000, however, these errors were removed making the system reliable to within ten metres. To confirm this, a number of duplicate readings were taken at fixed points on Lundy, on different dates, with satisfactory duplication.

The eight-figure Ordnance Survey grid references obtained for each territory were entered onto a map of Lundy produced in D-Map, and the resulting maps for the four commonest of these species are reproduced here. For those species with only a small number of territories on the island, the results are listed. Nine additional bird species were examined but the results were incomplete or were doubtfully accurate for various reasons and these are not listed here.

The whole of the island was covered, once, and this was repeated over approximately the southern two-thirds of the island (which was as much as I could achieve in the time available). In June, this should give a reasonably accurate picture of the situation although with common species such as Meadow Pipit and Skylark, the results should be considered as approximate only. Although a number of double registrations are certain to have occurred, it is likely also that a number of territories were not located at all. Nevertheless, the results should be usable for future comparisons on a similar basis.

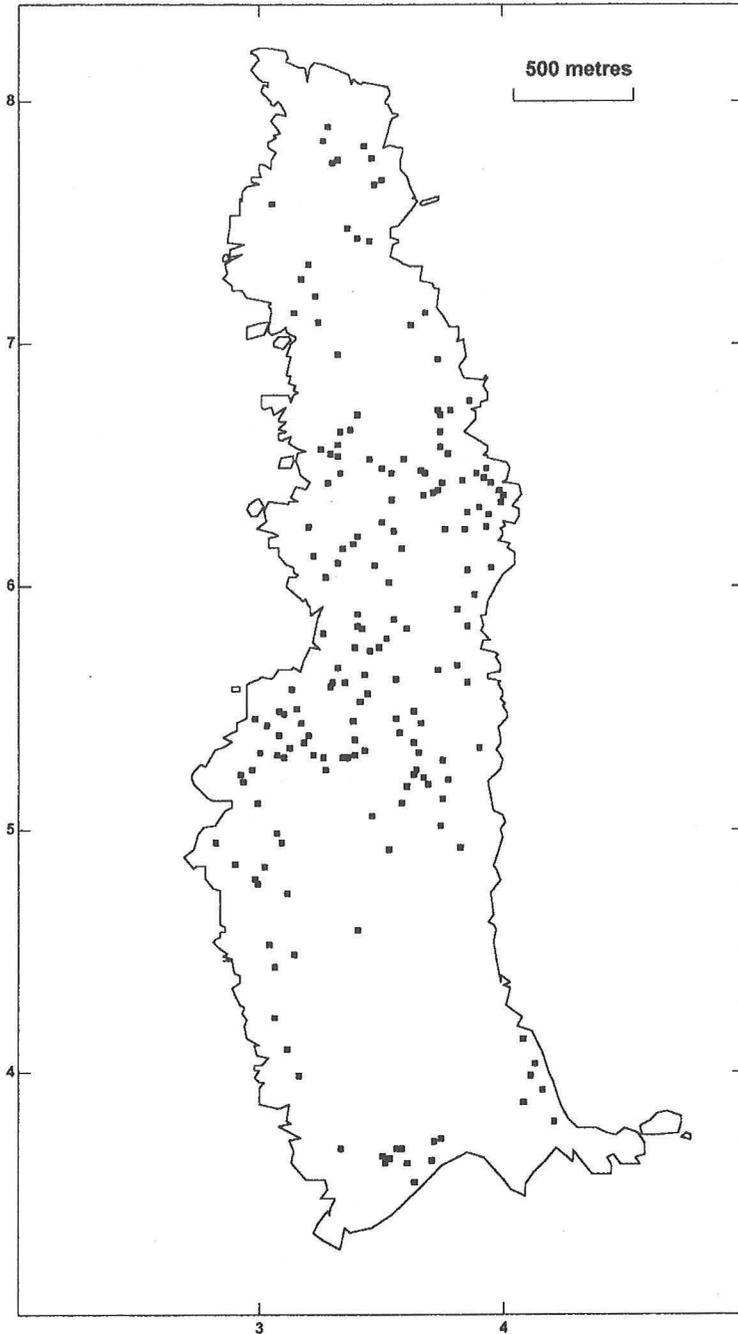


Figure 1: The distribution of Meadow Pipit territories on Lundy in June 2000. Produced in D-map from GPS registrations.

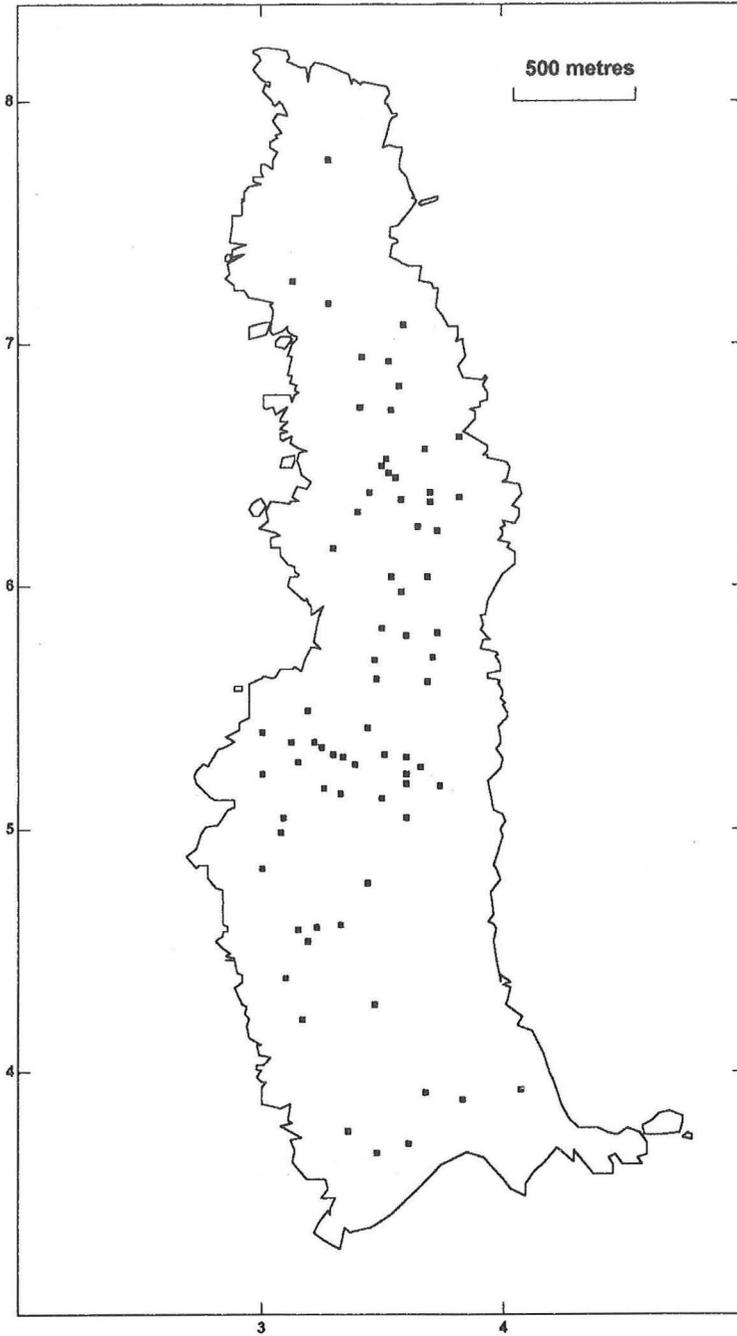


Figure 2: The distribution of Skylark territories on Lundy in June 2000. Produced in D-map from GPS registrations.

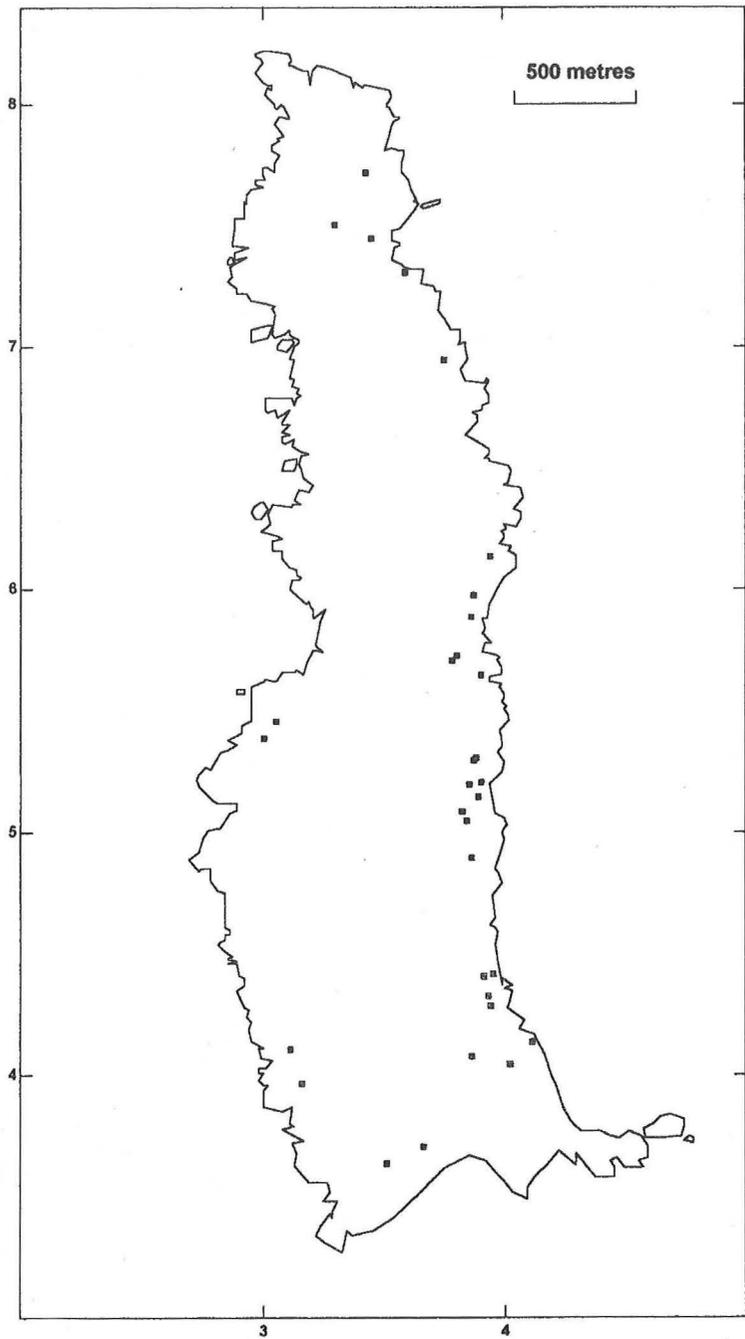


Figure 3: The distribution of Wren territories on Lundy in June 2000. Produced in D-map from GPS registrations.

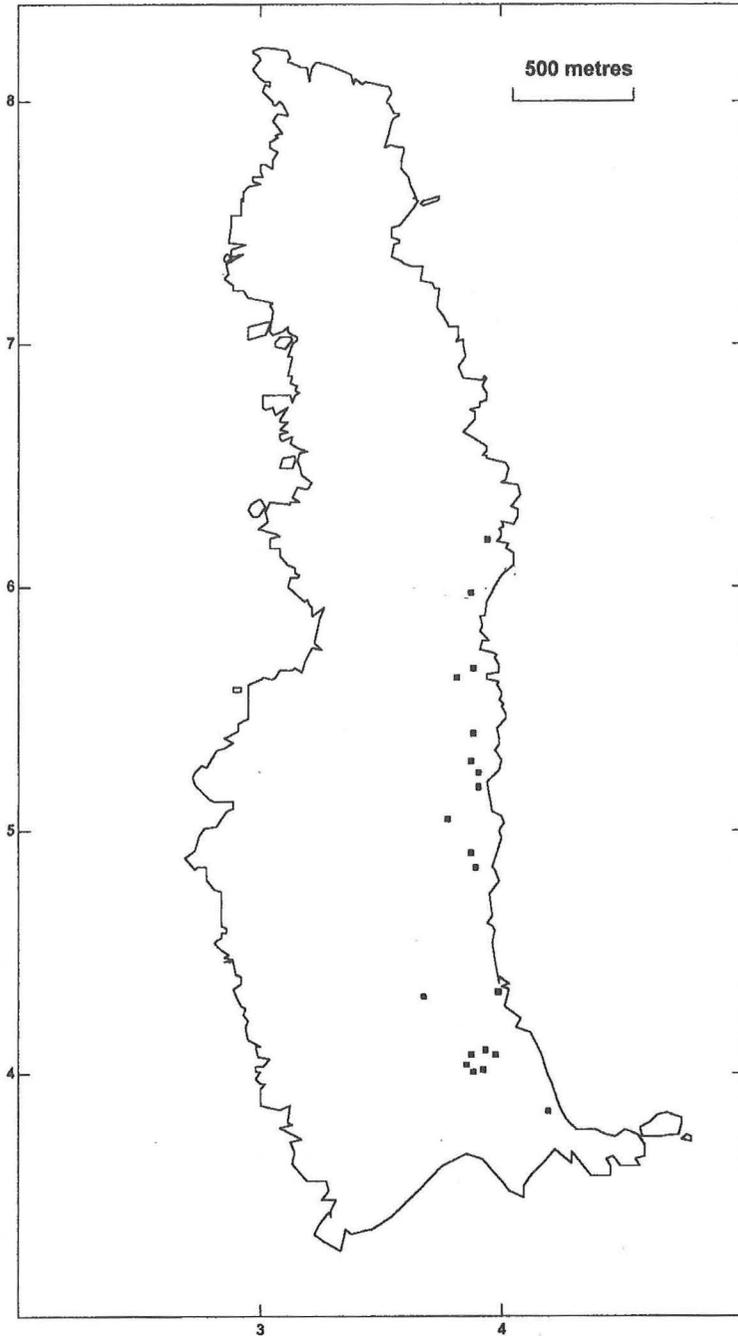


Figure 1: The distribution of Blackbird territories on Lundy in June 2000. Produced in D-map from GPS registrations.

RESULTS

Meadow Pipit. By far the commonest passerine on Lundy. 179 territories were located of which 81% fell within the northern 60% of the island. Virtually all territories were associated with young bracken (25 to 50 cms tall). There are several interesting features of the results. There were estimated to be about 275 pairs in 1930 (Harrison and Wynne-Edwards, 1932) and about 200 pairs in 1939 (Perry, 1940), but only about 50 pairs in 1962 (Dymond, 1980). It seems likely that the latter figure may have been an underestimate although general impressions in the 1970's were that populations were not particularly high. However, there actually do appear to be more birds present now in the northern two-thirds of the island (*i.e.* those areas which have received least attention to improve them agriculturally). The association here with young bracken was particularly noticeable and, as in most parts of Britain, bracken has increased in quantity in recent years. This may be a factor in an apparent recent recovery in the population of the Meadow Pipit on the island. In 1979, the average density of the species on Dartmoor was given as 43.7 pairs per km² (Mudge *et al*, 1981). The overall density for Lundy in the present survey is 40.2 pairs per km².

Skylark. A common species with 72 territories having been located. In contrast to the Meadow Pipit, virtually all territories were in, or immediately adjacent to, unimproved grassland. Although sometimes associated with scattered low bracken (< 25 cms tall), or with heather, rushes or other plants, grasses were dominant in all cases. 72% of the population occurred in only two km² (north of the Quarter Wall and south of the level of St John's Stone) which reflects the agricultural improvement of the southern part of the island and the barren ground of much of the North End. Dymond (1980) gives the lowest estimate of population as 15 pairs in 1955 and the highest as about 50 pairs in 1962. In 1979, the average density of the species on Dartmoor was given as 32.8 pairs per km² (Mudge *et al*, 1981). The species has declined dramatically in Britain in the past twenty years and the results of the present survey, of 16.2 pairs per km², although only half of the Dartmoor figure, nevertheless suggest an important population on the island.

Wren. 32 territories were located. 81% of these were on the eastern side of the island, usually quite close to the coast. Only 18% of the territories were in the northern third of the island. Dymond (1980) reported that 28 pairs were present in 1975 - a high which was reached from a low of just one pair in 1963, following a very severe winter. The overall density on the island in the present survey, of 7.2 pairs per km², is much lower than the average for the Common Birds Census index of 13.4 pairs per km² for British farmland in 1982. Nevertheless, Lundy is a far from ideal habitat for the species and the present population must be considered to be unusually high - undoubtedly a reflection of recent mild winters.

Blackbird. This was the next commonest passerine with 20 territories. This would seem to be an about-average figure. A high of 34 pairs in 1930 (Harrison and Wynne

Edwards, 1932) was followed by at least 25 pairs in 1962 and 1972. In 1939 (Perry, 1940) and in 1948 there were only 12 pairs and only 6+ pairs in 1963 following the severe previous winter. All territories were on the east side (although occasional pairs certainly have bred on the west side in the past) with six around Millcombe, one in the village, and the rest close to the coast to as far north as Tibbett's Point.

The remainder of the species which were examined in this survey, with lower populations, are merely listed with appropriate notes. Copies of the maps for these species are in the Society's files as are the details of the incompletely surveyed species.

Dunnock. Somewhat surprisingly, only eight territories were located, all on the east side, between Millcombe and the Terrace, exactly the same distribution as recorded by Dymond (1980). High points for this species in the past have been 23 pairs in 1930 (Harrisson and Wynne-Edwards, 1932) and 15 to 20 pairs in 1931 (F.W.Gade, unpubl.). It is very likely that the result obtained in 2000 is abnormally low. On Steep Holm, where the Dunnock is normally the commonest passerine, the population crashed in 2000, with very few young reared (although the Wren population, augmented by late broods in July, was normal). I believe that it is possible that a similar phenomenon affected the Dunnock population on Lundy - the cause appears to have been climatic.

Wheatear. Eight territories were located, one being near the Castle, one in the south-west, three on the west side in the area of the Battery, and three on the west side at the North End. In June, three of these had recently fledged young, one was feeding young in the nest and four were based on singing males (in two cases with females and hence possibly with young in the nest). Dymond (1980) gives nought to ten pairs in previous years of the 20th Century, so eight pairs is a very respectable showing.

Chaffinch. Four territories were located in Millcombe, in the rhododendrons (the female carrying a ring), by St Helen's Copse and in Quarterwall Copse. The population in the past has fluctuated between three and twelve pairs (Dymond, 1980).

Pied Wagtail. Four territories were located by St John's Well, east of St Helen's Copse, by Benjamin's Chair (two fledged juveniles) and by Quarterwall Copse. One to six pairs bred in most years between the 1920's and the 1950's (Davis, 1954) and the species has bred in many years since.

Chiffchaff. Three territories were located - in Millcombe, in St Helen's Copse and at the south end of the Terrace, based on singing males which were present at the same sites all week. Dymond (1980) stated that breeding had been recorded on only three occasions, but breeding has certainly occurred on a fairly regular basis since the 1980's. It is very probable that tree-planting since the 1980's has benefitted the species.

Willow Warbler. Three territories (on the same basis as for Chiffchaff) were located - just north of Millcombe, in St Helen's Copse and in Quarterwall Copse. Breeding

has been sporadic in the past with one or two pairs in some years but with four in 1930 (Harrison and Wynne-Edwards, 1932).

Song Thrush. Two pairs were located, one immediately south of St Helen's Copse and one (feeding young) in Millcombe. A sporadic breeder with nought to nine pairs per year since the 1920's.

Whitethroat. A male was singing regularly in cut rhododendrons just to the north of St Helen's Copse, and exhibited agitation and alarm when approached. The species bred frequently prior to 1968, when a national population crash occurred. Since then, it has bred occasionally, with up to three pairs in one year.

Sedge Warbler. A male was singing regularly at Pondsburry but was almost certainly an unmated bird. F.W.Gade recorded that one pair bred in 1934 and 1935 (Dymond, 1980).

Golderest. One territory in Millcombe. A second singing male, present on two occasions nearby, was almost certainly an unmated bird. Single pairs have bred on a number of occasions since the 1920's.

Robin. One pair with fledged young in Millcombe. In most years, nought to ten pairs have been recorded but, in 1975, the population was recorded as a remarkable 30 pairs. One pair is certainly a low level for recent years.

CONCLUSIONS

In view of recent declines in the national populations of Meadow Pipits and Skylarks, Lundy still holds important breeding populations of these two species. The distribution maps emphasise the importance of the central area of the island where agricultural intensification has been minimal. The populations of Robin and Dunnock are considered to be lower than average and that of Wren to be somewhat higher than average.

ACKNOWLEDGEMENT

Alan Morton's excellent D-map software proved invaluable and is gratefully acknowledged.

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