LUNDY FIELD SOCIETY

SEVENTH ANNUAL REPORT

1953



LUNDY FIELD SOCIETY SEVENTH ANNUAL REPORT

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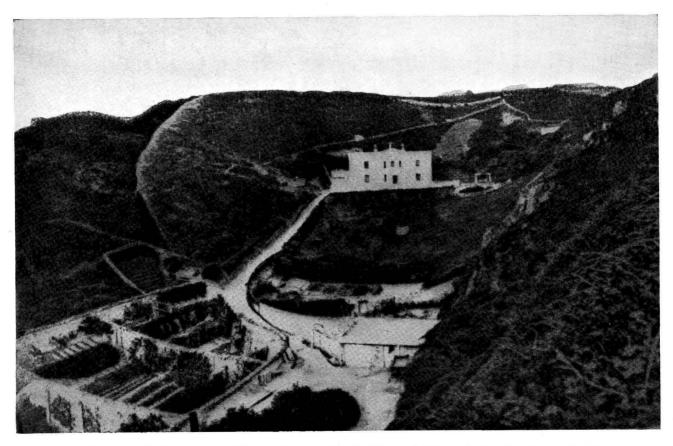
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The 'Manse', Lundy. In the 1870's. From a photograph in the Ilfracombe Museum. Given by Mervyn G. Palmer.

[This old Photograph was evidently printed in reverse.—Ed.]

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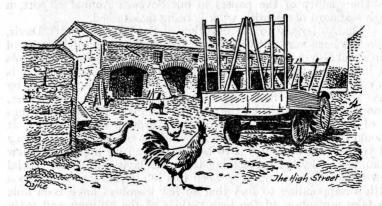
The year which has just passed may perhaps best be described as one of consolidation. Members will recollect that at our last general meeting the financial position of the Society was causing anxiety, and consideration was given to possible means of improving this. The outcome of the debate was agreement on proposals to increase the minimum annual subscription—a charge which has only now, in 1954, come into effect—and to modify the charges for accommodation at the Old Light, the new charges being instituted during the 1953 season. At the same time your Officers and Committee were actively exploring other possible means of raising support for our work. It is too soon to know what benefits will accrue from the higher subscription, but, as the Treasurer's Report will show, the new charges at the Old Light have improved the balance on the year's working, and there seem to be good prospects that in future years we may begin to expect a small profit. In the meantime, it is with great pleasure that we are able to report that our anxieties of last year have been in large measure allayed thanks to the decision of the Council of the University College of the South-West to renew its support. A grant of £150 has been made during the current session, and there is every prospect that this will be renewed in succeeding years. The thanks of the Committee have already been conveyed to the College, but we are sure that members will wish this public appreciation of their action to be given, together with the assurance that, as is evidenced by the quality of the papers in our Seventh Annual Report, a high standard of scientific work is being maintained.

Thanks largely to the devotion of the Warden, Peter Davis, who has been very active, both in the observation and capture of birds and also in devising improvements to the traps and in methods of handling trapped birds, the ornithological list for the year is as comprehensive as ever. Although not this year high-lighted by new records, nevertheless it is studded by unusual occurrences, among which in particular the very large influx of Lapland Buntings is of sufficient interest to merit the Warden's special report. It should be noted, however, that more help is needed if a sufficiency of young gulls and auks is to be ringed, and we hope that a few volunteers may be forthcoming to assist Davis during the crucial few weeks of June and July when this job is pressing. It is also a little disappointing to find that so few members have been able to take advantage of the long periods of the autumn and early

spring which are now available to them. The station is closed for little more than one month of the year, from early December until mid-January. Visitors, however, normally withdraw by early October and do not appear again until March. As a result some of the most interesting of the winter movements of birds through the island are missed.

The non-avian fauna and the flora of Lundy have received much attention during the season, but the work has comprised for the most part contributions towards long-term surveys which are not yet complete enough for report. Readers of the report will, however, find two papers, the one by M. J. Delany summarising two seasons' observations on the bristle-tails—those primitive, wingless insects which are so often to be seen crawling on the rock faces, and hopping distractedly away when disturbed—the other by A. L. Galliford, who for two seasons has been examining samples from as many as possible of the freshwater localities, and is now reporting on the minute waterfleas, wheel animalcules and the like. We have also acceded, gladly, to our Owner's request, expressed in his 'Letter' of last year, and have included a short summary report on the domesticated and semi-domesticated stock which adorn the island.

In conclusion it is fitting to record the thanks of the Society to all who have helped during the year; to John Dyke who once again contributes the tail-pieces which decorate the report; to Dudley Iles and John Cudworth for their help with the ornithological work during September; to Barbara Bizzell who cooked so nobly and palatably throughout many months of the season; to the authorities of the Royal Albert Memorial Museum for permitting us the use of their rooms; and to our President, Martin Coles Harman, and Mr and Mrs Gade for their continued co-operation and sympathy with the interests of the Society.



LUNDY FIELD SOCIETY

INCOME AND EXPENDITURE ACCOUNTS FOR THE YEAR ENDED 31st DECEMBER 1953

INCOME	£	s.	d.	Expenditure	£	s.	d.
By Balances at 31st December 1952, brought down	144 346		6	" Warden's pay and Insurances " Cost of 1952 Report	4	10	9 0 0 0
South West of England	150 150			,, Expenses of Hon. Officers including postage, etc, Sundries	5	0 12	0
$oldsymbol{\ell}$	857	5	11		857	5	11

BANK DEPOSIT ACCOUNT.—The balance as at 31st December 1953, including interest credited during 1953, £1 15s. 9d., and allowing for the withdrawal of £150 was £61 7s. 8d.

S. F. Ball, Hon. Treasurer.

I have examined the above Accounts which agree with the Bank Statements, Vouchers and Receipts. 20th January 1952

G. A. Hebditch, Hon. Auditor.

BIRDS RECORDED IN 1953

One hundred and twenty-one species were seen during the year, and two others probably occurred. Thirty-five species bred.

Colymbus stellatus. Red-throated Diver.

One February 24th and March 11th; two March 13th.

Hydrobates pelagicus. Storm-Petrel.

None were seen from the island, but R. M. Lockley saw several hundreds to the north whilst crossing from Lundy to Tenby, July 5th.

Procellaria puffinus. Manx Shearwater.

Extreme dates, March 20th and October 7th. The breeding population seemed much smaller this year.

Fulmarus glacialis. Fulmar Petrel.

Fifteen sites were occupied at Jenny's Cove, and twelve at Gannets' Rock. Five chicks were probably reared. The 'blue' bird was again present.

Sula bassana. Gannet.

Seen fairly frequently between March 27th and November 6th. The largest numbers were in August and September (c. seventy August 16th).

Phalacrocorax carbo. Cormorant.

Three pairs nested at Gannets' Rock. No records before March 5th or after October 14th. Some passage in March and April (eight March 16th), and in September—early October (ten September 11th and 26th).

Phalacrocorax aristotelis. Shag.

Seventy-two pairs bred. Seen throughout the year, but very few after September.

Ardea cinerea. Heron.

One April 17th; July 28th; August 7th; six September 6th; one 8th and 24th.

Anas crecca. Teal.

Two March 13th, 20th, and 23rd to 27th; two September 7th, one 23rd; one December 8th.

Anas penelope. Wigeon.

Two were present in January (J. Ogilvie); one March 13th to 15th; one September 15th to 22nd; two November 12th and 13th, one remaining until 16th; one December 8th.

Anser albifrons. White-fronted Goose.

An adult of the race albifrons (pink bill) was with the tame geese from January 13th to March 19th. It may have been the survivor of a party of five near Barnstaple in December, four of which were shot.

Branta bernicla. Brent Goose.

A bird of the Dark-breasted race bernicla at Pondsbury on November 25th. There are only two previous dated records, January to March 1933, and April 1940 (F. W. Gade).

Buteo buteo. Buzzard.

Only one pair bred, at Halfway Bay, where two young were reared. At least two non-breeding birds were present in the spring.

Accipiter nisus. Sparrowhawk.

Single birds April 1st, 24th; May 4th to 6th, and 16th. In autumn single birds were seen on sixteen days between September 19th and October 21st, with two September 29th.

Falco peregrinus. Peregrine Falcon.

A pair bred at the Gannets' Combe eyrie, rearing two young. A juvenile with much darker upper parts than the Lundy birds was seen on October 1st and 2nd, and probably on the 4th, and was suspected of being a North American Peregrine F.p. anatum. It occurred during the invasion of Lapland Buntings from Greenland. Falco columbarius. Merlin.

Single birds April 5th, 23rd, and 25th; on nine days between September 11th and 30th; on October 14th and 26th; November 6th, 7th, and 18th to 29th.

Falco tinnunculus. Kestrel.

Two pairs bred, above the Needle and near the Sugar Loaf. Only one or two birds present before late March and after October. Some passage in April (six 22nd) and August (ten 11th, twelve 16th). Coturnix coturnix. Quail.

A female newly-dead in the Tillage Field, May 27th. First recorded since 1048.

Phasianus colchicus. Pheasant.

At least four broods seen during the summer. Largest number of adults seen was twelve, on several occasions during the autumn.

Rallus aquaticus. Water-Rail.

Small numbers seen fairly regularly before March 17th. One August 3rd; one September 8th, and up to four on most days after September 26th. The wintering population at both ends of the year was four or five birds.

Crex crex. Corncrake.

Records were all of single birds: April 23rd, 26th and 30th; May 18th, 31st; June 1st, 25th and 26th; August 22nd, 27th, 30th, and September 9th.

Haematopus ostralegus. Oyster-catcher.

No noticeable change in breeding population. Numbers generally small after September.

Vanellus vanellus. Lapwing.

Ten or eleven pairs bred. Seen almost daily throughout the year, but frequent fluctuations in population outside the breeding

season. Maxima recorded: c. sixty February 19th; March 7th; and on several dates in late October and November; c. one hundred November 18th.

Charadrius hiaticula. Ringed Plover.

Single birds May 8th and 18th; August 2nd, 9th to 12th, 22nd, 26th and 28th; September 3rd, 5th, 6th and 10th, with three September 4th.

Charadrius squatarola. Grey Plover.

Singly September 3rd and October 5th and 6th. First records since 1939.

Charadrius apricarius. Golden Plover.

Seen frequently until May 5th. Single birds June 5th and 10th; August 10th and 21st; and species present on many days between September 4th and end of season. Over twenty were seen on twelve days in March (c. forty-five 23rd and 31st) and from April 29th to May 3rd (forty-three 1st). In autumn numbers were generally smaller, maxima twenty-two October 3rd and eight 30th. The birds of the big influx in late April—early May and the one seen June 5th were of the northern race apricarius.

Arenaria interpres. Turnstone.

Four April 29th. Seen on eleven days between September 2nd and 17th, most six 10th.

Capella gallinago. Snipe.

Seen fairly regularly until May 1st and after August 8th. Some passage in August (fourteen 9th) and a distinct increase in mid-November.

Lymnocryptes minimus. Jack Snipe.

Two December 9th.

Scolopax rusticola. Woodcock.

Single birds seen occasionally before the season opened (J.O.), and on February 15th; March 3rd, 30th, and April 16th. In autumn one or two seen infrequently from October 25th.

Numenius arquata. Curlew.

One pair nested west of Pondsbury. Birds usually present from beginning of season to October 20th, but none subsequently. Light passage February to May and from late June onwards, but never more than c. thirty (June 25th).

Numenius phaeopus. Whimbrel.

Spring records on fourteen days between May 2nd and 24th, c. twenty-five 10th the most. In autumn frequent from July 25th to September 7th, numbers not exceeding c. five August 2nd.

Tringa ochropus. Green Sandpiper.

One June 23rd; two August 1st, one 9th, 14th, 15th, 19th, 26th; two September 4th and one 7th.

Tringa glareola. Wood Sandpiper.
One August 11th and 12th.

Tringa hypoleucos. Common Sandpiper.

Two April 16th, then seen on eight days to May 4th. Four April 28th the most; two May 25th; one July 6th, two 22nd, three 30th and 31st. Single birds August 30th; September 7th and 16th.

Tringa totanus. Redshank.

One March 11th to 16th; two April 23rd and one 29th. Singly on July 28th, 31st; August 8th; and September 6th, with six September 15th.

Calidris alpina. Dunlin.

One March 10th and 11th; one April 18th, and up to five seen on seven days to the 30th; five May 12th, two 13th, and one 14th; one July 18th, and up to three on fourteen days between August 2nd and September 5th; one October 3rd and 4th.

Stercorarius parasiticus. Arctic Skua.

Two dark-phase birds seen off-shore September 15th (H. H. Davis), and one off Rat Island on the following day.

Larus marinus. Great Black-backed Gull.

Breeding population about thirty pairs. Few present in October, and seen only intermittently in November and December.

Larus fuscus. Lesser Black-backed Gull.

No estimate of breeding population. One seen February 14th, then none until March 12th, and full population not present until April. Most had departed by mid-August, but a few were seen on seven days in September, with single stragglers October 6th and 25th.

Larus argentatus. Herring Gull.

Breeding birds probably rather fewer than in 1952. As usual the numbers gradually decreased in September and October, but were never as low as in the previous two autumns.

Larus canus. Common Gull.

A first winter bird March 16th.

Larus ridibundus. Black-headed Gull.

Two March 16th, one 22nd and 26th, two 30th, 31st, and one April 1st. Single birds May 11th; June 16th and up to six on eight days between June 27th and July 9th. Singly July 27th; September 15th, seven 28th; one October 16th, 29th and two November 22nd. Rissa tridactyla. Kittiwake.

A considerable decrease in numbers (see report of sea bird censuses). First seen February 23rd (some on the cliffs); chicks seen on June 8th. Colonies deserted by mid-August, but birds seen off-shore until October 1st, and c. three hundred off the east

coast on December 11th.

Sterna hirundo or macrura. Common or Arctic Tern.

About fifteen September 8th, one 17th.

Sterna sandvicensis. Sandwich Tern.

One September 7th. Only the second record for Lundy.

Alca torda. Razorbill.

Some decline in the breeding population of this and the next two species. Off-shore on February 16th, on the cliffs 27th. First egg May 2nd, first chick June 5th. The only birds seen after July 29th were oiled.

Uria aalge. Guillemot.

Already coming ashore at beginning of season. First egg May 14th. Breeding birds had departed by the end of July, and later records were mainly of oiled birds.

Fratercula arctica. Puffin.

First seen March 24th, and present until July 23rd. One off-shore October 25th.

Columba oenas. Stock Dove.

Single birds March 23rd; April 2nd, 9th, 17th (singing), 20th, and May 3rd. One October 10th to 14th.

Columba palumbus. Wood Pigeon.

Two pairs probably bred, though only one nest found. Seen regularly until October 23rd. No satisfactory evidence of spring passage, but some movement in September (maxima: twenty 17th, twenty-two 22nd). One or two seen on nine days between November 18th and December 6th.

Streptopelia turtur. Turtle Dove.

One April 22nd. Seen on most days May 6th to June 11th, most c. fifteen May 11th. One July 5th. Two September 24th the only autumn record.

Cuculus canorus. Cuckoo.

First seen April 19th, and up to three frequently until the last week of July. One August 17th.

Asio flammeus. Short-eared Owl.

Single birds March 13th, 14th, 20th, 21st; April 4th and 5th. In autumn one October 13th, 21st, two 28th; one November 21st, 30th; December 2nd, 6th.

Apus apus. Swift.

Frequently recorded between April 26th and August 9th; c. twenty May 2nd and 4th; c. thirty-five July 29th; c. sixty August 1st, c. seventy 3rd and c. one hundred and fifty 7th, the largest numbers recorded. Single birds September 11th, 15th 16th and 18th.

Alcedo atthis. Kingfisher.

One March 21st. Although reported by a non-ornithologist it was seen at close quarters and accurately described. This is the first dated spring record.

Upupa epops. Hoopoe.

A bird very probably of this species seen in flight by John Ogilvie, March 23rd.

Lullula arborea. Wood Lark.

One in song near Jenny's Cove, April 11th.

Alauda arvensis. Skylark.

No evidence of spring passage; the breeding population had returned by the beginning of the season. Autumn passage from September 24th to late November, maxima, c. one hundred and twenty October 17th, c. one hundred 18th and November 6th. Very few in December.

Hirundo rustica. Swallow.

First seen March 25th, and on most days to July 8th. Over one hundred seen April 12th to 15th (two hundred 14th); May 1st, 4th (two hundred and fifty), 5th, 9th, 11th, 14th and 17th. Autumn passage from August 2nd, and almost daily from 26th to October 29th; maxima, three hundred August 27th and September 9th, six hundred 18th, one thousand 24th, two thousand 25th and three hundred October 3rd. One November 10th.

Delichon urbica. House Martin.

Spring passage April 8th to June 24th, greatest numbers c. twenty-five May 4th, 14th, c. thirty 17th, 24th; and c. forty June 5th. Autumn movements: July 18th, 23rd, on four days in August, on most days September 3rd to 28th, and on nine days in October to the 23rd, with maxima, one hundred August 7th and September 24th, one hundred and fifty 25th.

Riparia riparia. Sand Martin.

Spring movements March 20th to June 11th. The greatest daily total was only eighty (April 11st, 12th and 15th), but twenty or more were seen on twenty-one days in April and May. Autumn passage began July 18th, with two hundred and fifty 19th, and continued until October 3rd. There were over one hundred August 1st, 3rd and 28th, and over two hundred 26th and 27th.

Oriolus oriolus. Golden Oriole.

A male May 23rd, seen with a female on the 24th. The female remained until June 5th.

Corvus corax. Raven.

Only one pair bred, rearing three young at Long Ruse. A second pair started a nest in the Devil's Limekiln, but did not complete it, and two other non-breeding birds were present in the early part of the year.

Corvus cornix. Hooded Crow.

One in the Tillage Field, March 16th.

Corvus corone. Carrion Crow.

About eight pairs bred; the non-breeding flock numbered about ten. About sixty were seen in September and October, but

half of these had gone by early November. The movements of this species are extremely difficult to detect, for birds scattered about the island may suddenly aggregate into a single large flock, and as quickly split up again. Some movements recorded in earlier reports have certainly been misinterpretations of this behaviour. Corvus frugilegus. Rook.

Single birds March 7th and 9th; three April 7th, twelve 8th,

and up to three on seven days later in April; one May 1st.

Corvus monedula. Jackdaw.

One March 12th, two 16th. Single birds April 5th, 7th, 21st, 24th; three May 1st, two 5th, one 6th, 11th; June 1st and July 10th. Pica pica. Magpie.

One reported by a visitor, July 2nd. The statement in last year's report that only three records existed was incorrect. This

bird is the seventh recorded.

Parus major. Great Tit.

One seen at infrequent intervals from beginning of season to April 12th. Almost certainly one of those present at the end of the previous season, and the first known to have wintered successfully on Lundy.

Troglodytes troglodytes. Wren.

As usual a widespread and abundant breeder. There is some evidence of a tendency to concentrate in the south-east in the autumn, and this may have given an erroneous impression of immigration in previous years.

Turdus viscivorus. Mistle Thrush.

Three September 25th; two October 4th, one 5th and 29th.

Turdus pilaris. Fieldfare.

Seen almost daily until April 2nd (maxima: two hundred and fifty February 19th, one hundred and fifty 22nd and 23rd), and on four days later in April. One May 10th to 12th. Autumn records from October 6th, but numbers unusually small; c. forty October 17th and November 5th; c. fifty November 17th to 19th, the most.

Turdus ericetorum. Song Thrush.

Spring passage in February and March (to 27th) and one or two on most days between April 14th and 28th. Peak numbers were c. seventy February 19th, c. fifty 22nd and 23rd; one July 2nd, two 8th, one 26th, then none until August 28th. Small numbers seen almost daily in September and species usually present until end of season. Autumn maxima, c. thirty November 5th, c. twenty-five 17th, were well below the usual figures.

Turdus musicus. Redwing.

Intermittently until April 12th; c. thirty February 19th, c. fifty 22nd and 23rd the largest totals. Autumn movements from October 5th, numbers above the average. Main peaks, one hundred and thirty October 6th, four hundred 15th, one hundred and ten 21st, one hundred November 5th, two hundred 18th.

Turdus torquatus. Ring-Ousel.

Single birds April 10th, 12th, 14th, 15th, three 19th and 20th, one 22nd to 24th. One September 12th and 13th, two 23rd, seven 24th and one or two on eleven days to October 24th, with four 16th. One November 6th was the latest recorded on Lundy.

Turdus merula. Blackbird.

Breeding population about fifteen pairs. Some passage in February (c. forty 19th) and from October 12th to late November, maxima, c. ninety October 29th; c. two hundred November 17th.

Oenanthe oenanthe. Wheatear.

About six pairs bred. Spring passage from March 17th to the third week of May, with c. sixty April 20th; c. fifty May 5th. Autumn movements detected from August 3rd, and birds seen on most days to October 17th. Maxima, c. seventy-five August 10th; c. sixty September 7th, c. fifty 15th. One October 31st, the latest yet recorded. Greater Wheatears leucorrhoa seemed to predominate in May and September-October, and the four birds trapped (May 20th; September 16th; October 6th and 7th) were all of this race by measurement.

Saxicola torquata. Stonechat.

One pair bred near Brazen Ward. One or two were seen in all months to September, but at infrequent intervals. Autumn passage began about September 23rd, and birds were seen almost daily until November 19th, maxima, seven October 5th and 10th, eight 24th.

Saxicola rubetra. Whinchat.

One April 6th, unusually early. Next arrivals c. five May 5th, two 6th, one 7th and 17th. Autumn records: two August 19th, one 20th, 28th and 30th and birds on sixteen days in September to the 24th (most c. twenty 7th). One October 4th.

Phoenicurus phoenicurus. Redstart.

One April 9th and small numbers on eight days to May 11th (four April 22nd the most). One August 10th and 30th, and up to three (September 24th) on ten days to October 13th.

Phoenicurus ochrurus. Black Redstart.

No spring records. One October 9th, c. twelve 24th, nine 25th, and one or two on ten days to November 20th.

Erithacus rubecula. Robin.

About ten pairs bred. The presence of resident birds makes small passage movements very difficult to detect, but one was killed at the North Light, during the night of September 9th to 10th.

Locustella naevia. Grasshopper Warbler.

Small numbers seen on most days April 20th to May 11th, four April 24th the most; two July 22nd, one 23rd; two August 1st, then none until September 5th. Seen on six days later in September (c. fifteen 7th), with single birds October 6th and 9th.

Acrocephalus scirpaceus. Reed Warbler.

One April 29th and 30th the only record.

Acrocephalus schoenobaenus. Sedge Warbler.

First recorded April 22nd, and seen on most days to May 12th (maxima, c. sixty May 6th, c. fifty 8th). Single birds May 17th, 19th, 31st; June 5th and 6th. On autumn passage seen frequently from July 28th to August 19th, and from August 30th to September 23rd, c. twenty August 1st and c. twenty-five 10th the largest numbers recorded. One exceptionally late bird October 13th. Sylvia atricapilla. Blackcap.

One or two seen almost daily April 19th to May 4th. One June 4th. None in autumn before October 4th (two) and only single birds seen on seven days to the 25th. Single (different) birds

November 6th and 12th.

Sylvia borin. Garden Warbler.

One or two on seven days between May 5th and 17th; three September 9th and one on five days in the rest of the month; two October 1st, three 3rd, and two 4th.

Sylvia communis. Whitethroat.

Three pairs bred. Spring passage from April 19th to early June, maxima, c. fifty April 22nd to 24th; four hundred plus May 5th, c. two hundred and fifty 6th. Autumn movements from August 3rd to September 24th, main peaks c. forty August 10th and 19th; c. eighty September 7th, c. thirty 23rd; one October 3rd. Sylvia curruca. Lesser Whitethroat.

A bird almost certainly of this species glimpsed at Pondsbury,

October 23rd.

Phylloscopus trochilus. Willow Warbler.

First identified April 5th, and seen daily until May 9th, with stragglers to June 10th. The largest influxes were April 8th, 14th, 16th, 17th, 22nd, and May 5th. Autumn passage from July 22nd to September 16th (possibly later), with peaks of c. one hundred and fifty August 1st, 3rd and 6th, one hundred 10th and 13th and fair numbers in the first big September arrival of phylloscopids, September 7th.

Phylloscopus collybita. Chiffchaff.

One March 13th, and identified regularly until the end of April, with odd birds until May 12th. Main arrivals March 23rd, April 8th. Autumn records on most days August 30th to October 17th, quite numerous September 7th, 11th, 13th, 16th, 23rd and October 3rd. A single bird present October 27th to November 5th.

Phylloscopus sibilatrix. Wood Warbler.

One May 3rd and 4th.

Regulus regulus. Goldcrest.

Single birds March 13th, 14th and on three days later in the month. Up to three daily April 1st to 11th. In autumn always

present from September 8th to end of season, maxima, c. ten September 11th and 15th, eight 30th; October 13th and 15th.

Muscicapa striata. Spotted Flycatcher.

First seen May 2nd, and on most days to June 11th, maxima, c. fifteen May 5th, c. twelve 17th to 19th, c. twenty 24th and c. ten June 4th. Autumn passage from August 1st to October 9th, with c. fifteen August 10th, c. ten 30th; c. twelve September 4th and c. seventy 7th.

Muscicapa hypoleuca. Pied Flycatcher.

Single birds April 22nd to 25th; May 6th, 10th and 11th. Autumn records September 4th to October 16th, with one large influx, c. forty September 6th.

Prunella modularis. Hedge Sparrow.

Breeding-population again about six pairs.

Anthus pratensis. Meadow Pipit.

Rather fewer breeders than in 1952. Spring passage and return of summer residents in February and March, particularly February 23rd, March 7th and 16th. Autumn movements not noticed until September 23rd, and last observed November 19th. The peaks were five hundred plus September 24th, three hundred and fifty plus October 3rd and 4th, c. one hundred and fifty 8th, and c. sixty 14th and 17th. As usual very few were present towards the end of the season.

Anthus trivialis. Tree Pipit.

Small numbers on seven days between April 20th and May 6th, c. five 5th the most. Autumn passage August 26th to September 25th, but never more than five (August 27th and September 11th).

Anthus spinoletta. Rock Pipit.

The population seems fairly steady at thirty-five to forty pairs, roughly one pair to each four hundred yards of the coast.

Motacilla alba. Pied and White Wagtails.

One pair bred, the first definite breeding record since the war. Spring passage February 24th to mid-May, c. ten April 21st, c. twelve 22nd the most. Autumn movements from August 25th (perhaps earlier) and birds seen almost every day until October 28th, main influxes c. twelve September 7th, 17th; October 3rd, and c. twenty 7th and 9th. Single birds November 6th and 19th. White Wagtails M.a. alba were identified March 25th; April 18th, 21st, 24th; May 4th and 14th, and suspected on other dates during the same period, as also in September and early October.

Motacilla cinerea. Grey Wagtail.

Single birds on nine days between February 26th and March 29th. Two July 15th, one 20th, and seen frequently between September 3rd and 26th (c. twelve 17th), and one or two on five days in early October. One present October 30th to November 5th.

Motacilla flava. Yellow Wagtail.

Spring passage April 18th to May 21st, numbers not exceeding four (April 20th). Autumn movements August 26th to September 27th, with maxima, nine August 27th and 28th; c. twelve September 1st, seven 7th and 15th.

Lanius senator. Woodchat Shrike.

A female May 14th and 15th, a probable male June 8th, and a male September 5th to 10th. There are three previous records for the island.

Lanius collurio. Red-backed Shrike.

A juvenile in Gannets' Combe, September 7th.

Sturnus vulgaris. Starling.

Considerable numbers were seen daily throughout February and March, with passage movements frequent from late February. Smaller numbers recorded on all except two days in April, and on six days in May to the 20th. The first party of juveniles was seen June 23rd and 24th, and a few occurred on seventeen days between July 2nd and August 12th. Autumn movements began September 26th and continued until the end of the season. Over a thousand were seen October 29th, November 5th, 6th, over ten thousand 17th.

Coccothraustes coccothraustes. Hawfinch.

One November 17th.

Chloris chloris. Greenfinch.

Three were present at the beginning of the season, and one or two seen regularly until February 25th. Single birds March 23rd, 27th, 28th and up to four on most days April 14th to 25th. Very few in autumn; first appeared October 15th, and seen intermittently to end of season, maxima, c. fifteen October 29th; c. eight November 16th.

Carduelis carduelis. Goldfinch.

Single birds February 1st and 2nd (J. Ogilvie) and on seven days between February 19th and March 5th. One April 3rd, 8th, 15th, and species seen on most days 18th to May 5th, with c. ten April 22nd, one May 24th, two 26th, one June 4th. Autumn records at intervals October 1st to November 29th; c. ten October 29th; eight November 6th and 10th the most.

Carduelis spinus. Siskin.

A first winter bird on the Terrace November 13th, and one (probably the same) in Millcombe on the 18th.

Carduelis cannabina. Linnet.

About twenty pairs bred. First appeared March 27th, and full population present by mid-April. Probably some passage in April (c. fifty 16th and 17th) and considerable arrivals in September, (with two hundred plus 11th to 15th, c. one hundred and fifty

23rd), and smaller movements in October (c. one hundred and ten 2nd, c. sixty 14th, 17th and 18th). Irregular after October 21st, but stragglers to November 19th.

Carduelis flavirostris. Twite.

One February 12th and 13th (E. Rowe). There are only two previous dated records, spring 1937 and October 1952.

Carduelis flammea. Redpoll.

One, apparently cabaret, April 24th.

Loxia curvirostra. Crossbill.

Fifteen, including two red males, June 28th to 30th; five July 14th and 15th; at least four August 3rd, one 20th, five 27th, eleven 28th; one September 2nd, two 8th, and one present to the 16th. Three October 8th. There are only six previous records. Crossbills were widespread in Britain and Western Europe in 1953, as a result of an irruption from the Asiatic breeding range.

Fringilla cælebs. Chaffinch.

About six pairs bred. Some passage late February to April 8th (c. seventy February 19th, at least one hundred 27th). First noticeable autumn movement October 12th, passage continuing until November 25th. The largest movements were October 12th, 28th, 29th (over three thousand five hundred), November 5th, 6th and 10th. Winter flock of about thirty at end of year. Males apparently F.c. coelebs were caught in November.

Fringilla montifringilla. Brambling.

One or two seen frequently from beginning of season to April 12th, with three March 25th. In autumn numbers occurred with all the big Chaffinch movements from October 12th, and one or two were seen often until the end of the season. Peak numbers (probably underestimates as based on birds calling from passing flocks of finches) were c. forty October 29th; c. twenty November 5th. The proportion of Bramblings to Chaffinches seems to vary greatly, and may be indicative of the origin of the flocks.

Emberiza citrinella. Yellowhammer.

One January 16th (J. Ogilvie); one or two on eight days in March, on nine days in April (five 18th), on six days in May to the 14th. One June 4th, 5th, and 29th. Single birds August 3rd; September 2nd, 3rd; November 14th, 16th, 19th, 20th; December 7th, 8th, 12th, and 14th.

Emberiza bruniceps. Red-headed Bunting.

An adult male June 4th. Fifth record for Lundy, and first in spring.

Emberiza hortulana. Ortolan Bunting.

Three first-winter birds September 6th to 9th.

Emberiza schoeniclus. Reed Bunting.

One February 1st to 3rd (J. Ogilvie); one November 17th.

Calcarius lapponicus. Lapland Bunting.

The largest incursion of this species into the British Isles yet recorded occurred this autumn. On Lundy the first appeared September 3rd, and birds were seen almost daily until October 18th. The peak numbers were seventeen plus September 5th, twenty-three plus 10th, thirty-three plus 15th, eleven 27th. Single birds November 6th, 8th, two 16th and one 17th.

Plectrophenax nivalis. Snow Bunting.

Single birds January 25th; February 2nd (J. Ogilvie) and 15th to 24th; April 4th and 21st. In autumn, one October 19th, one 25th to 28th, three 30th and one November 4th.

Passer domesticus. House Sparrow.

A female March 29th, a male April 22nd, 23rd and May 9th.

RINGING IN 1953

One thousand, six hundred and ninety-eight birds of fifty-three species were ringed this year. Only six hundred and nine sea birds were ringed, a poor total due mainly to the foul weather in July and to the absence of helpers during the season. Forty-six of the sea-birds taken were adults.

A small Heligoland trap was constructed over the Quarterwall in April, and caught seventy-five birds. It should do much better if the wings can be extended in the coming season. The Garden Trap, which had to be almost rebuilt after the winter gales, took 222 birds, whilst the Terrace Trap caught 616. This last total is a gratifying one, considering the poverty of the autumn migration, and amply justifies the roof-extensions made in November 1952, and the demolition of the great rocky buttress which used to project into the mouth of the trap. This prodigious task was undertaken by the Seale Hayne party, who also helped with the building of the Quarterwall Trap, in the third week of April.

'Other methods' accounted for 121 captures, and fifty-five

wader and land-bird nestlings were also marked.

M. J. Daniel and the Warden built a ringing-hut on the Terrace in May, and it was completed in time for the autumn movements. The purchase of a new balance in September made it possible to extend facilities for weighing migrants to our most successful trap.

A number of balsam poplar cuttings provided by Mr Harman were planted in the Garden and Terrace traps by Jim Prouse, and most of them have taken well. This American tree is said to grow very rapidly. The tree mallows in the Garden Trap have now completed their allotted span, but it is pleasing to note that several seedlings appeared this autumn. Less pleasing was the destruction of many of the bramble clumps in the Stonycroft gardens, which has been partly responsible for the reduced catch of the Garden Trap.

LIST	OF	SPECIES	RINGED	IN	1953
------	----	---------	--------	----	------

			Trapped	Nestlings	Tota
Fulmar	and the	F.L. 28	202 44 301	4 4 4	4
Cormorant	0 (10)		ago in clud	6	6
Shag	••••			65	65
Buzzard	Shakin Skills	*****	A SERVICE STREET	2	2
Peregrine Falco	1	13 T S	dro- <u>su</u> ares	2	2
77		dans.		dinas lig ul an	1
*** . ** .*	4.1		A The second	Track	I
Otownstakes		1000		2	2
Lapwing	2007/02/03	995 4	A 93 <u>0</u> 402	14	14
Turnstone	THE MOVE	g Dicker	2	ell and bos	2
Calas			1		T. West
Curlew		i sunor		himair 4 cóul	4
Dunlin	CONTRACTOR	137	1	Maria Land Maria	I
Great Black-back	ked Gu	11	SEGMENTAL STREET	8	8
Lesser Black-ba			A LONG BY	6 1	6
			SACE BY	182	182
0		*****	- 11/1/	164	175
Kittiwake		*****	11	68	100
Razorbill		*****	9		77 86
			26	60	
	5.5			2 H-01	2 2
Cuckoo		ver view	2	Mark the leavest and	
Skylark			2	1	3
Swallow	3.61		2	A A THE CO.	2
Raven			-	3	3
Wren		*****	11		11
Fieldfare			2		2
Song Thrush			40		40
Redwing			20		20
Ring-Ousel			2		2
Blackbird			103	6	109
Wheatear			4		4
Stonechat		1	13		13
Whinchat			2	Ala -	2
Redstart		·	3	de camin Si	3
Black Redstart	1111		E 2 1 1 1 2 2	M salph Te	1
Robin	4.0	41.0	16	Victor 4	20
Grasshopper-W	arbler	N.	11	V. ZALOS C.	11
Sedge-Warbler		3/27	58	Washington	58
Blackcap	3 11	27.50	4	A FINE X	4
Garden-Warble			2	A North March	2
Whitethroat	100		314		314
Willow-Warble	1123		203	11 auto 20	203
	200	1.1.1	203	and the second	48
Chiffchaff		# X 17	48	The sales of	. 40
Goldcrest	hor		18	OF SEAL ST	18
Spotted Flycate		*****		A COVER	11
Pied Flycatcher			11		11
Hedge-Sparrow			I	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	
Meadow-Pipit			11	11	22
Pied Wagtail			W. A. S. C. C.	4	. 4
Starling	*****		95	Q1401 f	95
Linnet		*****	10		10
Chaffinch			8	a mercha	8
Lapland Buntin	ng	*****	2	-	2

In the 1952 list, the total of Kittiwakes (Details lost) should have been 76, and the Grand Total 2282.

RECOVERIES OF RINGED BIRDS

Several sea birds ringed as nesting adults in previous years were caught at the same sites in 1953: two Fulmars ringed in 1952; a Kittiwake ringed in 1947, and one ringed in 1951; two Guillemots of 1951 and one of 1952. The 1947 Kittiwake must have been at least eight years old. Numerous other auks and Kittiwakes bearing rings were seen, but could not be caught.

Nine 1953 Shag nestlings had been recovered by the end of the year, one in Pembrokeshire, two N. Cornwall, three S. Cornwall, one S. Devon and one Finistère. Recoveries from earlier years are

listed below.

A Whitethroat ringed on Jersey 17th August 1952, was caught in the Terrace Trap 6th May 1953.

Some of	her recov	erie	s :—		
	· F	linge	d Date	Date	
Species	Ring No.		Ringed	Recovered	Place Recovered
Shearwater	AT 6193	A	27/6/50	7/5/53	Baie d'Audierne, Finistère
Cormorant	510400	N	26/6/53	7/9/53	Ste. Marie du Mont, Manche
Shag	508933	N	8/7/52	-/3/53	Braunton, N. Devon
Shag	508934	N	8/7/53	-/11/53	Salcombe, S. Devon
Shag	505059	N	13/7/48	4/10/53	Falmouth, Cornwall
(Ringed by I		ing)			
Woodcock	239107	A	31/10/51	11/10/53	Nr Aalesund, Norway
Gt Black-back		N	9/6/52	15/2/53	Bude, Cornwall
Herring-Gull	AF 7256	N	30/6/53	end/8/53	Ilfracombe, N. Devon
Herring-Gull	AF 1437	N	24/6/53	15/9/53	Swansea
Kittiwake	365007	_	-/7/52	20/6/53	Abererch, Nr Pwllheli
Kittiwake	362580	N	26/7/51	16/8/53	Portland Bill, Dorset
Kittiwake	364688	N	8/7/52	end/11/53	On ship, 30 m.S. of Cork
Razorbill	AX 8237	N	19/7/51	3/3/53	Genoa, Italy
Razorbill	AT 10459	N	8/7/52	27/2/53	Genoa, Italy
Razorbill	AT 10762	N	24/6/53	18/8/53	Braunton, N. Devon
Razorbill	AT 10764	N	24/6/53	6/11/53	Faro, Algarve, Portugal
Guillemot	AT 10445	N	8/7/52	6/1/53	Marseilles, France
Guillemot	AT 10443 AT 10552		-/7/52	22/11/53	Nr Rye, Sussex
Guillemot	AX 8067	A	18/7/51	25/11/52	Douarnenez, Finistère
Guillemot	AX 7827	A		22/2/53	Treyarnon Bay, N.
			5/7/51		Cornwall
Guillemot	AX 7880	N	15/7/51	4/12/53	Whitsand Bay, S. Cornwall
Guillemot	AX 7849	N	15/7/51	12/3/53	Winsford, Somerset
Guillemot	AX 8076	N	18/7/51	2/4/53	Rame Head, Cornwall
Guillemot	AT 6121	A	13/7/47	-/5/53	Castle Martin, Pembroke
Guillemot	AT 6220	A	14/7/50	23/5/53	Freshwater East, Pembroke
Guillemot	AT 10929	N	4/7/53	16/8/53	Chesil Beach, Dorset
Raven	407780	N	17/4/51	10/6/53	Winsford, Somerset
Blackbird	R 8708 1st		15/11/52	10/2/53	St Just in Roseland, Cornwall
Meadow Pipit	IV 836	N	3/6/53	27/12/53	Aviero, Portugal
Spotted Flycatcher	B 27099	Ĵ	15/9/53	mid/10/53	Nr Rabat, Morocco
Starling	R 8586	A	22/10/52	-/6/53	Delfstrahuizen, Holland
Starling	X 38481	A	15/2/53	28/10/53	Nr Nieuport, Belgium
Starling	X 38563	Ā	24/2/53	mid/12/53	Delabole, Cornwall
~	30303		-4/~/33		2 July Cold Hall

WORK ON NESTING SEA-BIRDS

(I) THE SOUTH-WEST SAMPLE AREA CENSUS

This census was taken in the same way as in 1952. The auk figures are the maxima of several counts of adults, and occupied nests were counted in the other cases. The total of nests was doubled to obtain the population figures in the table.

NUMBER OF INDIVIDUALS PRESENT

	1953	1952	1951	1950	1949	1948	1942	1939
Shag	100	108	26	30	50	32	43	72
Oystercatcher	2	4	2	2	4	2	2	4
Great Black-backed	16	18	13	27	27	20	16	26
Lesser Black-backed	8	6	12	12	21	14	I	2
Herring Gull	446	490	478	332	348	171	464	1000
Kittiwake	98	84	54	32	0	0	84	80
Razorbill	128	228	211	408	415	290	364	1390
Guillemot	51	83	72	68	137	116	265	1010
Puffin	I	1	0	0	5	0	0	0

(2) THE CENSUS OF SHAGS

Seventy-two nests were counted this year, fourteen fewer than in 1952. The decrease was most noticeable at the small colonies on the east coast, the population there falling from twenty-one to only nine pairs

Twenty-five of the 1952 sites were abandoned, and nine new ones occupied. Some of the latter had been used in earlier years.

(3) THE CENSUS OF KITTIWAKES

A complete count of occupied nests was made in early June by Michael Huxtable and the Warden. There were 1,858 such nests, compared with 2,026 at the last completed census in 1951, and an estimated total of over 2,500 in 1952.

General discussion.—The 1953 season was a poor one for the Lundy sea-bird colonies. The Kittiwakes and auks in particular suffered a severe set-back, though the decline of the Razorbill and Guillemot populations was certainly not as steep as the sample-area figures suggest. The decrease appears to have been expressed, rather, in a tendency to desert the smaller outlying colonies such as those within the sample area, whilst the larger and presumably more successful colonies from Jenny's Cove northwards remained relatively stable.

It is of interest to note that the isolated Kittiwake colony in the South-West, re-established only four years ago, has continued to increase in a season of general decline.

There was no significant change in the numbers of the large gulls. No counts of Puffins were attempted, but the impression given by casual observations was one of a further small decrease in numbers.

The breeding-season was early for most species in 1953, and weather conditions were generally good until early July. At this

time, with the chicks at a vulnerable age, the fine weather was succeeded by a fortnight of high winds and low temperatures, which played havoc in the colonies. Another factor contributing to the poor success in breeding was the mysterious disappearance of a considerable number of Razorbill eggs from the north and northwest coasts. As far as is known, no chicks at all were reared by Razorbills, in accessible sites on the north coast. Whether rats or men played the major part in this disaster was not established.

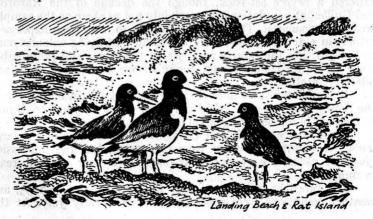
Oiling, particularly of auks and Gannets, is a steadily increasing menace in the Bristol Channel. More oiled birds were seen in August than in the whole of the previous two years, including nearly fifty Guillemots in a single week. In my opinion, this is by far the greatest single threat to our colonies. This view is supported by our census results, for the auks have decreased far more steeply than the surface-feeding and scavenging birds, which are less likely to come into contact with the floating sludge.

It is depressing to realize, that if Perry's 1939 census figures and the Field Society's estimates are even approximately accurate, the auk population of Lundy has declined by over seventy per cent in fifteen seasons. The Puffin, greatly troubled by rats as well as by oil, has perhaps decreased by over eighty-five per cent.

The population of gulls, on the other hand, is at roughly sixty per cent of the pre-war figures, and may depend to a considerable extent on the number of eggs and young of the auks available as food.

There is at last some prospect of legislation to reduce pollution of the sea. When this comes about, our census work on Lundy should provide a valuable check on its effects and its efficacy.

(4) In addition to the census taking, some preliminary work was done towards a study of the life-history of the Shag. This is a long term project, and no useful purpose can be served by reporting on it at present.



THE LAPLAND BUNTING 'INVASION' OF 1953

I. THE MOVEMENTS

The influx of Lapland Buntings (Calcarius lapponicus) into the British Isles this autumn seems to have been the largest ever recorded. The Greenland population of this species migrates southwestwards into the United States, but each autumn a few are drifted south-eastwards to Britain (Williamson, Scottish Naturalist, 65: 65-94, 1953). Those which have reached Lundy in previous autumns have, perhaps, been derived from this source. Williamson (loc. cit.) suggests that the species is peculiarly affected by certain types of weather-system forming in the North Atlantic during the migration season.

Probably the birds susceptible to drift are those following the eastern coasts of Greenland, and making sea crossings over the larger indentations, or from Greenland to Labrador. Such birds might well be drifted out to sea by westerly winds, and continue to move downwind across the ocean-a good illustration of Williamson's (Scottish Naturalist, 64: 1-18, 1952) concept of

migrational drift.

Conditions favourable to such a movement come with two main types of weather-system. The first is when a high pressure area covers the North Atlantic, the winds running clockwise round its northern and eastern sides, between Greenland and Britain. The second is when a large depression is dominating the eastern half of the ocean, with winds anti-clockwise around its western and southern flanks. Williamson has given drift movements in these two kinds of system, the designations of 'anti-cylonic approach' and 'cyclonic approach' respectively. The two may in certain conditions be complementary. The cyclonic approach would normally involve a longer sea-crossing than the anti-cyclonic, which is more likely to carry migrants by way of Iceland and the Faeroes to northern Britain.

Both types of approach were admirably illustrated by the main arrivals recorded on Lundy in 1953. The first arrival, which covered the period September 3rd to 5th (seventeen plus on the 5th), was cyclonic. On the 2nd and 3rd, when these birds would be leaving Greenland, a depression was moving across the British Isles to Scandinavia, and winds were between north and west on the fifteen hundred mile route probably followed. This arrival did not affect Fair Isle, which was near the centre of the depression at that time.

The second arrival, which was anti-cyclonic, affected both Fair Isle and Lundy. From the 8th to 11th, with a great 'high' dominating the North Atlantic, winds were north-westerly across Iceland, the Faeroes, and Britain. Numbers peaked at Lundy on the 10th (twenty-three plus).

By the 14th this anti-cyclone had been displaced by a shallow depression moving in from the west, and centred south-west of Iceland. Winds were already north-westerly on the western side of this trough, from South Greenland across much of the ocean, and early on the 15th the westerly winds reached Lundy, bringing the largest influx of Lapland Buntings we have recorded (thirty-three plus). This influx, like the first, does not seem to have reached northern Britain.

A few birds remained on the Island during the following days, but there was another apparent increase on the 26th and 27th (eleven), when conditions were rather similar to those of the 15th. This time the depression was deeper and the winds much stronger. The sea-crossing would probably be rather longer, but covered more rapidly.

The numbers recorded dropped away to a single bird, September 29th to October 1st, but there were six on the 2nd and seven on the 3rd. If these were newcomers they had made the crossing in the complementary airstream between a depression centred northeast of Iceland and an intensifying anti-cyclone centred about

500 miles west of Ireland.

One or two birds were about until the 9th, then none were seen until the 15th. On that day there were three, and these remained until the 17th, with one on the 18th. These birds are most unlikely to have made the crossing from Greenland during the preceding few days, for winds were southerly or easterly over the intervening sea. They may even have been European birds, since there was a big arrival of continental species on the same day, but it is perhaps more likely that they had arrived in Britain earlier and were just moving on.

The November records were also more probably of birds which had been in the British area for some time. One turned up on the 6th, and one, probably, the same, was seen on the 8th. On the 16th

there were two, with one still present on the next day.

II. FIELD NOTES

The birds which frequented the island for some time generally lived up to their reputation for being 'wild'; there were remarkably few opportunities for watching them at leisure. Their camouflage was astonishingly efficient even in short grass, and often the first sign of their presence was the low 'tututucc' call as the bird or flock took wing from almost beneath one's feet. Sometimes they merely ran ahead, with considerable speed, and taking advantage of every scrap of cover available. Once in the air they rose to a fair height and flew for some distance, often circling widely and later returning to the area they had left. They called frequently, usually following the rippling call by a sweet descending whistle, 'teuu', but often giving the two calls quite separately.

They habitually frequented areas of rough grass such as abound on the airfield and in the south-west field, but some were seen on the muddy margins of small pools, and even on close-cropped sward. They seemed to have no particular liking for the expanses of heather, but were occasionally seen among it both near Pondsbury and north of Threequarter Wall. On two or three occasions birds were seen to perch for a while on stone walls. This

was only when they had been disturbed.

It had been noticed that single birds tended to be more confiding than parties (which always had a particularly nervous bird to alarm the rest!), but it was not until October 2nd, that I located one in a damp part of the south-west field, tame enough to make an attempt to capture it worthwhile. John Cudworth, Martin Pitt and I hastily improvised a row of small portable traps connected by guide-walls, and placed them strategically in the bird's area. The bird remained a few yards away, feeding busily on the seed-heads of Holcus grass. A party of five buntings flew up from a marshy patch nearby, and called overhead. Our bird replied with a muchsubdued version of the familiar whistle, but did not fly. We walked very slowly behind it, making it run towards the traps, and after several unsuccessful attempts (which involved repeating the procedure all over again) it entered one of them and was caught. When eventually it was released at the Hotel, it returned at once to the place, and was hardly less confiding than before. This was a first winter female.

We then turned our attention to the small party, which had alighted not far away. We came very close to them by crawling through the bog, and found that two were males, easily picked out by the broader, cream superciliarly stripes and the rich chestnut on the wing-coverts. One was brighter than the other, and was taken

to be an adult. The five may have been a family party.

They were nervous and flew willingly, but seemed to like the place, so the traps were moved, and several hours were passed in trying to catch them. We had no success until the following day, when four were brought into line with the traps, and quietly and slowly worked towards the barrier. The birds ran in short, rapid bursts along narrow sheep-tracks, then sometimes remained motionless or feeding for several minutes. They seemed most unwilling to cross the wider open spaces among the long grass. Often all four were out of our sight as we snaked forward, but at the least disturbance their heads rose above the grass for a survey, frequently prolonged. The noise of an aircraft low overhead, or of a crofter loudly abjuring his horse, half a mile away, caused the deepest consternation to birds and bird-watchers alike! We were, however, fortunate enough to catch the young male, a most attractive bird.

The female weighed 25.1 gms, the male 28.1. If ever a series of 'normal' weights becomes available, it may be possible to decide

whether or not they were recent arrivals at the time of their capture, for the long crossing from Greenland must involve a considerable

loss of body weight.

All who watched these birds (and I should mention Dudley Iles, who played a big part in the strenuous daily counts in September) were delighted to have this opportunity to become familiar with a rare and intriguing species.

ECTOPARASITES

By Gordon B. Thompson

A considerable amount of material was collected from eighteen host species during 1953. Representatives of four groups of ectoparasites are contained in the collection and there is much of interest but this report must necessarily be brief. Peter Davis is to be congratulated for having made such an excellent job of collecting these ectoparasites.

	SIPHONAPTERA (Fleas)	
COMPANY OF A STANFACTOR		

Host	Dasypsyllus g. gallinulae (Dale)	Date
	Nos and Sex	
Garden Warbler—ad	r female	9/5/53
Willow Warbler—ad	r female	2/5/53
Grasshopper Warbler—a	ad r male	6/5/53
Grasshopper Warbler-	ad 4 males	24/4/53
Grasshopper Warbler—a	ad i female	21/4/53
Grasshopper Warbler-	ad 1 male	6/5/53
Sedge Warbler—ad	r male	23/4/53
Sedge Warbler—ad	ı female	9/5/53
Sedge Warbler—ad	ı male	24/4/53
Whitethroat—ad male	r female	3/5/53
Whitethroat—ad female	r male	3/5/53
Wren—ad	ı male	24/4/53

All the fleas listed above were collected from the birds' bodies by the chloroform-bath method and were obtained from spring migrants with the exception of the one specimen from a resident Wren. Unfortunately, an exact record of the number of birds examined by the chloroform-bath method was not kept until July, but Peter Davis estimates that approximately 220 birds were examined in all and these were mostly small passerines. Since July eighty-six were examined but no fleas were found. On the basis of the approximate total, fleas were obtained from 8.95 per cent of the birds prior to July and the fifteen fleas were all collected during the period April 21st to May 9th. It is not known whether

these fleas were brought to the island by the birds. If the fleas were acquired by the birds during their brief stay on the island it would appear that there is a period of great activity for D.g. gallinulae during April and May. This flea has been found parasitising about fifty-nine species of bird hosts and occurs more often on the bodies of birds than other species. As far as I am aware the flea has not been previously recorded from Lundy.

HIPPOBOSCIDAE (Bird Flies)

	Ornithomyia						
	fringillina	avicularia					
Host			Date				
Meadow Pipit—juv Meadow Pipit—juv		1 female	16/8/53				
Meadow Pipit—juv	2 females (1 gravid)	-	12/8/53				
Meadow Pipit—juv	2 females (1 gravid) 1 male	_	10/8/53				
Linnet—ad	2 females (1 gravid)	-	12/8/53				

An additional specimen which avoided capture was seen on a juvenile Chaffinch (bred on the island), about July 15th. It is interesting to note that so few specimens of Hippoboscidae were taken. It appears that the migrants are peculiarly free from these parasites since all the specimens collected were from resident birds. Peter Davis tells me (in litt.) that very few of the birds bred on Lundy are caught in the traps and is of the opinion that bird flies would not prove particularly scarce if more breeding birds could be examined.

The single female of *O. avicularia* taken on a Meadow Pipit had a specimen of *Brüelia* sp. (Mallophaga) attached to the posterior margin on the abdomen. Mites (Epidermoptidae) were noted on the wings of the specimens collected from the Linnet and the Meadow Pipit taken on August 12th.

MALLOPHAGA (Bird Lice)

A number of specimens were collected from the smaller passerines which are not at present identifiable. These specimens are none the less valuable. The following species have been determined.

Host	Parasite
Blackbird	Menacanthus sp. Brüelia sp.
Kestrel Shag Guillemot	Laemobothrion tinnunculi (Linn.) Pectinopygus (P.) brevicornis (Denny) Quadraceps obliquus (Mjöberg)

IXODOIDEA (Ticks)

A total of forty-one birds, representing eight host species, were found to have ticks attached about the eyes and gape. The total number of birds examined for ticks on the head was 1,034. The percentage of infested birds is therefore, 3.96 per cent.

Host	Date	Species of Tick	The Paris
Meadow Pipit	19/4/53	Dermacentor reticulatus (Fabr.	2N+
., ,,	31/5/53	Ixodes reduvius (L.)	2N
Whitethroat	22/4/53	,,	IN
	6/8/53		2L+
	13/8/53		3L
	19/8/53	The state of the s	2L
	19/8/53	nin salapa	3L
,,	26/8/53	n (1481) n (16	īL
Blackcap	12/11/53		4L
Willow Warbler	1/8/53	,, ,,	2L
	1/8/53	and a substitute of the substitute of	2L
,, ,,	3/8/53	e de la companya de l	ıL
	3/8/53	Carlon and Arthur and	ıL
,, ,,	3/8/53	n blanca	ıL
,, ,,	3/8/53		ıL
,, ,,	3/8/53		ıL
	4/8/53		2L
	5/8/53		īL
	6/8/53		īL
	6/8/53		īL
a ar alara ata	6/8/53	Paraga, with the shales entitle	2L
meur du labander	6/8/53	narionale weight of the state of the	īL
person resident many	13/8/53	evis, ad Klassick, between the conseq.	īL
	16/8/53		ıL
	30/8/53		ıL
bend should not i	30/8/53	TOTAL PROPERTY SELECTION OF SALE	2L
Blackbird "	30/0/33	A STATE OF THE PARTY OF THE PARTY OF	ıN3L
Diackonu	18/8/53		2N8L
	27/8/53	may the own, attended a load. Man	
· · · · · · · · · · · · · · · · · · ·	4/9/53		1N34I
	5/10/53		2N12I
Salara and the	5/10/53		
	7/10/53	n n	IN
.,	11/10/53	T 2" . T. 15	3N1L
A White Court	11/10/53	I. frontalis (Panzer)	ıN
~ "m	25/10/53	I. reduvius (L.)	ıN
Song Thrush	12/10/53	••	ıN
**	18/10/53	T 7, 3	ıN
. " . "	19/10/53	Ixodes sp?	1 male
Robin	6/8/53	I. reduvius (L.)	2L
o"	18/8/53	,,	5L
Quail	27/5/53	77	ıN

These records probably represent the largest single collection of ticks from birds and are of considerable interest. All the specimens collected were nymphs and/or larvae and the dates of collection fall within two periods—May 19th to 22nd, June 27th to 31st, and August 1st to 30th, September 4th, October 5th to 25th and November 12th—these periods correspond roughly with the seasonal activity of the immature stages of *I. reduvius*. From small samples

of I. reduvius collected on the island, from cow, cat and dog, which serve as hosts for the adult stages, it is evident that there is a source of infestation on the island but when it is remembered that the greater number of the hosts are spring and autumn migrants and that they only spend periods ranging from hours to a few days on the island all the ticks cannot be acquired by the birds while on the island. The approximate period of time spent by nymphs and larvae in feeding on these bird hosts is between four and six days. It seems, therefore, very probable that some ticks are acquired at the breeding grounds and brought to the island whereas others are acquired by the birds during their brief sojourn on the island. A more detailed account of this tick collection will be published at a later date. In order to complete the story of the ticks it will be necessary to know the movements of the various bird hosts involved and to collect considerably more material on the island from domestic animals, deer, etc.

The above remarks refer to *I. reduvius*. The record of *I. frontalis* from a Blackbird lends support to the possibility that this bird is a breeding host of this tick. The record of *D. reticulatus* is interesting because it is only known from Devon, Somerset and the Aberystwyth district of Wales. In the adult stages it is parasitic

on domestic animals and it is common in Europe.

Note.—Four females of Ixodes were obtained from the cat. One female is I. reduvius, the other three females are thought to represent an undescribed species. If this proves to be true it will be a most interesting discovery and will be dealt with in a separate paper by my friend Dr Don R. Arthur, to whom I am indebted for considerable help with the determination of the ticks.

Correction.—In the last sentence on p. 35 of last year's report the word 'not' should be deleted.

WILD AND FERAL MAMMALS

Sorex minutus. Pygmy Shrew.

A number were trapped by I. J. Linn in March-April and by Prof. Harvey in August. We hope to publish an account of Mr Linn's work on these specimens in a later report. The species was seen or heard on the Terraces, in Millcombe, St John's Valley, the Hotel garden, and the Lighthouse Field.

Bat sn?

A small bat was seen over the airfield one evening in May.

Oryctolagus cuniculus. Rabbit.

Abundant. According to Jim Prouse, about three per cent of the rabbits he traps are black.

Rattus rattus. Black Rat.

Seen only in Millcombe. There was a nest in one of the outhouses in the early part of the year. Four were caught on the Ugly slopes in early December.

Rattus norvegicus. Brown Rat.

Abundant, and found in most parts of the island.

Halichoerus grypus. Grey Seal.

Present in all months. The greatest number seen together was forty-four (in June). Calves were reported as early as the last week in June.

Dama dama. Fallow Deer.

The single surviving doe was seen frequently throughout the year. When not alone she usually runs with the Red Deer.

Sika nippon. Japanese Deer.

The greatest number seen together was sixty-four, in June. I am convinced that the population is not greatly in excess of this figure. About ten were killed in September.

Cervus elaphus. Red Deer.

Eleven were frequently seen together in the spring, but no more than nine in autumn. This is probably the total population.

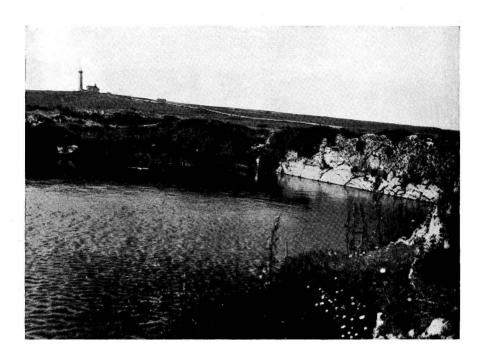
Capra hircus. Feral Goat.

The population was about forty at the end of the year.

Soay Sheep.

There were between seventy and eighty this autumn, though the breeding season was not as successful as in 1952.







Above:—Rocket Pond (No. 1).

Below:—Lighthouse Field Pond (No. 3).





Above:—Old Quarry Pond, Eastern Sidings (No. 8). Below:—Pondsbury (No. 9).

NOTES ON THE FRESHWATER ORGANISMS OF LUNDY WITH ESPECIAL REFERENCE TO THE CRUSTACEA AND ROTIFERA

By A. L. GALLIFORD

The ponds of Lundy seem to be divisible into two main groups from an ecological standpoint. All, or nearly all, are wholly or partly artificial and result either from the flooding of old quarries and lesser excavations in the rock or from dammed-up springs; but the Rocket, Aclands Moor and Quarterwall Ponds (nos. 1, 4 and 5) exhibit characteristics markedly different from the rest characteristics indeed which one would not normally associate with granite rock covered by peat. In these three ponds the density of microscopic organisms is such that the water is more or less opaque and consequently the usual floating and submerged plants are absent. The principal organism colouring the water in the Rocket Pond is *Microcystis*, one of the Myxophyceae (Blue-green algae); but the algae Arthrodesmus and Pediastrum are also very abundant here and seem to be the principal algae in the other two ponds. The Cladoceran, Bosmina longirostris, and the Rotifer, Keratella quadrata, were quite abundant in the Rocket Pond (especially the former species), yet were found nowhere else on the island. Other organisms associated mainly with the three ponds referred to above are the species of Brachionus and Filinia.

In most of the remaining ponds the water is clear and *Potamogeton*, *Ranunculus* and other pondweeds are well developed. In some (such as the Hotel Reservoir Pond and the Lighthouse Field Pond, nos. 3 and 14) filamentous algae and duckweed choke the surface at times. Pondsbury, surrounded by *Sphagnum* bog and containing much *Sphagnum* and other mosses, produced the greatest number of species, including some which were found

nowhere else on the island.

The pH of the water was determined colorimetrically by means of the B.D.H. Universal Indicator. The figures are probably not very accurate and no doubt there is in some cases considerable diurnal and seasonal variation in this factor. However, in general it may be said that the Rocket, Quarterwall and Aclands Moor ponds are alkaline and the remainder more or less acid. As might be expected the bog-pools, Pondsbury and the Widows Tenement Pond (nos. 9 and 12), seemed to be the most acid.

LIST OF PONDS EXAMINED

(The figures for the number of species recorded refers only to the Cladocera and Rotifera as other species were not fully identified for each pond.)

(1) Rocket Pond. A fairly deep tank excavated in the rock near South-West Point, containing Golden Carp and other fish.

Very green with Myxophyceae, especially in summer. pH (of filtered water) 7.0 to 7.5. No submerged or floating vegetation. No. of species 12.

(2) Golden Well. Tank with cement sides near Castle Hill,

containing many leeches. pH 6.5. No. of species 3.

(3) Pond in Lighthouse Field. Many pond weeds including Potamogeton, Duckweed and blanket (filamentous) algae. pH 6.5. No. of species 12.

(4) Pond, Aclands Moor. Pool in old excavation about quarter of a mile north of Old Light. Water very green with algae (mainly Scenedesmus and Pediastrum), bottom muddy. Evidently much used by cattle, etc. pH 7.5. No. of species 10.

(5) Quarterwall Pond. Another excavation in the rock. Water

yellow-brown, turbid. pH 7.5. No. of species 14.

(5a) Small Quarterwall Pond. Weedy pond with fairly clear

water. pH 6.o. No. of species 12.

(6) Pool in dammed stream in combe, Western Sidings near telegraph pole no. 69. Vegetation-duckweed, crowfoot, and filamentous algae. Water peaty-coloured. pH 5.5. No. of species 6.

(7) Pool in dammed stream, west side of Middle Park, near

telegraph pole no. 54. pH about 7.0. No. of species 7.
(8) Old Quarry Pond, Eastern Sidings, just north of Quarterwall. Partially surrounded by trees and bushes. Water clear but dark in appearance owing to overshadowing by rock walls and trees. Not much aquatic vegetation except Fontinalis (Willow Moss). pH 6.5. No. of species 10.

(9) Pondsbury. Pool in Sphagnum bog in the centre of the island. Probably natural but increased in size and depth by damming. Water peaty, fairly deep in parts. Much floating Sphagnum and other mosses, and filamentous algae. pH 5.5. No. of species 32.

(10) Temporary pools near the North End. No. of species 1.

(II) Temporary pool near Rocket Pond. Vegetation— Potamogeton pectinatus (or similar form), pH 6.0. No. of species 11.

(12) Widow's Tenement Pond. In boggy area due east of

telegraph pole no. 66. pH 5.0. No. of species 6.

(13) Spring in Friar's Garden Field, due south of Old Light. Fauna mainly Annelids, Asellus, Copepods and Protozoa (including compound Vorticellids). No. of species 1.

(14) Pond adjacent to Hotel Reservoir. Choked with vegetation -Potamogeton and other pond weeds and filamentous algae. pH

6.o. No. of species 11.

(15) Pool in dammed spring above Battery Reservoir. pH.

6.o. No. of species 2.

(16) Battery Reservoir. Much duckweed and a small clover-

leaved Crowfoot. pH 6.o. No. of species 7.

(17) Stream down combe between telegraph poles 41 and 42. Fontinalis on stones, Sphagnum and Crowfoot in pools. No. of species 11.

(18) Small pond 25 yards east of telegraph pole no. 62, near

Threequarter Wall. No. of species 2.

(19) Small pond near sheep dip, east side of Home Park. Shallow and muddy with many leeches. pH 6.0. No. of species 1.

LIST OF SPECIES

(The figures refer to the ponds as listed above.)

ARACHNIDA

Argyroneta aquatica Linn. Water Spider. 9 (May 1953). Quite abundant among the vegetation.

INSECTA

Chaoborus sp. ('Phantom larvae'). 8 (July 1952.)

CRUSTACEA—ISOPODA

Asellus meridianus Rac. 2 and 9 (July 1952).

Asellus sp. 2 (March 1953).

Asellus spp. (Water or Hog Slaters) are probably present in all the ponds, especially those with *Potamogeton* and other higher vegetation.

CRUSTACEA—COPEPODA

Cyclopoida

Cyclops agilis s.str.Koch. 3 and 7 (July 1952).

C. fimbriatus s.str. Fischer. 3 (July 1952).

C. prasinus Fischer, Schmeil. 1, 6 and 7 (July 1952). C. vernalis s.str. Fischer. 3, 4, 5 and 9 (July 1952).

Cyclops spp. (not determined). 8 (July 1952); 6 and 7 (May 1953); 12 and 16 (August 1953).

Harpacticoida

Canthocamptus crassus Sars. 9 (July 1952).

C. pygmaeus (Sars). 3 (July 1952). C. staphylinus (Jurine). 3 (July 1952).

No records were obtained of any Calanoid Copepods (e.g. Diaptomus spp. which are common on the mainland in ponds, bog-pools and lakes, especially in the winter months). All the Copepods were identified by Mr G. Fryer, B.Sc., to whom I wish to express my thanks. Unfortunately, owing to his appointment to a fisheries post in East Africa, he was unable to study the later

samples.

CRUSTACEA—CLADOCERA

Daphnia obtusa Kurz. I (November 1953); 3 (July 1952; March, August and November 1953); 4 (March, May and November 1953); 5 (March, May, August and November 1953); 5a (November 1953); 6, 7, 8 and 9 (July 1952); II (March, May and November 1953); 14 (May 1953).

Males were observed in 3 (July 1952) and in 11 (March 1953). Simocephalus vetulus (O.F.M.). 3 (August 1953); 4 (May 1953); 5a (May and August 1953); 9 (November 1953); 11 (March, May

and November 1953). Males observed in 11 (March 1953).

Bosmina longirostris (O.F.M.). I (July 1952; March, May, August and November 1953).

Alona rectangula Sars. 1 (July 1952; August 1953). A. rustica T. Scott. 8 (March 1953); 9 (May 1953).

Alonella nana (Baird). I (March 1953); 3 (July 1952; August and November 1953); 5 (May 1953); 7 (March 1953); 8 (July 1952; March, August and November 1953); 9 (July 1952; May and November 1953); 14 (August 1953); 16 (May and Aug. 1953);

17 (August 1953); 19 (May 1953).

Chydorus sphaericus (O.F.M.). I (May and August 1953); 2 (March 1953); 3 (July 1952; March, August and November 1953); 4 (March and May 1953); 5a (August and November 1953); 6 (July 1952; May and November 1953); 7 (July 1952; May 1953); 8 (July 1952; March, May, August and November 1953); 10 (March and November 1953); 11 (May and November 1953); 12 (March, May and August 1953); 14 (May and August 1953); 15 and 16 (May 1953); 17 (August 1953); 18 (May 1953).

On Lundy as on the mainland, probably the commonest of

the Cladocera.

ROTIFERA

? Proales gigantea (Glasscott). 3 (August 1953).

Proales sp. 8 (July 1952); II (March 1953); undetermined, not necessarily the same species in each case.

Notommata pachyura (Gosse). 6 (July 1952); 9 (July 1952;

May and November 1953); 12 (May 1953).

Notommata sp. 5a (August 1953).

Cephalodella auriculata (Müller). 8 (July 1952).

Cephalodella sp. 1 (July 1952); 9 and 14 (May 1953).

Monommata sp. 8 (July 1952).

Itura aurita (Ehr.). 15 and 17 (May 1953).

Synchaeta tremula (Müller). 8 (July 1952; May and November 1953); 9 (May and August 1953).

Polyarthra dolichoptera Idelson. 5 (March 1953). Gastropus hyptopus (Ehr.). 9 (March 1953).

Trichocerca bicristata (Gosse). 9 (July 1952; March and May 1953).

T. dixon-nuttalli (Jennings). I (March, August and November 1953); 4 (July 1952); 5 (July 1952; March, May and November 1953).

T. elongata (Gosse). 9 (May 1953); 16 and 17 (August 1953).

T. longiseta (Schrank). 5 (May 1953); 5a (November 1953); 6 (July 1952); 7 and 8 (May 1953); 9 (August 1953); 16 (May 1953); 17 (May and August 1953).

? T. rattus (Müller). 9 (July 1952).

Brachionus angularis Gosse. I (March, May and November 1953); 4 (May 1953); 5 (July 1952; March, May and November 1953); II (November 1953).

B. rubens Ehr. 1 (July 1952; May, August and November 1953); 4 (July 1952; March, May and August 1953); 5 (July 1952;

May, August and November 1953).

This species is frequently found in company with *Daphnia* obtusa on which it is epizoic or commensal (but not parasitic in the true sense).

B. urceolaris Müller. 4 (August 1953).

Keratella quadrata (Müller). 1 (March, May, August and

November 1953).

K. serrulata (Ehr.). 3 (July 1952); 4 (May 1953); 5 (May and August 1953); 6 (July 1952; May 1953); 8 (July 1952; March, May, August and November 1953); 9 (July 1952; March, May and August 1953); 11 (March 1953); 12 (March, May, August, November 1953); 18 (May 1953). This species is common in Sphagnum bogs and other acid waters, but rare elsewhere.

K. valga (Ehr.). 3 (November 1953); 4 (July 1952; March, May, August and November 1953); 5 (July 1952; March, May, August and November 1953); 8 (March, August and November

1953); 9 (May 1953); 11 (March, November 1953).

Very variable in form. One of the commonest rotifers on Lundy but rather local in distribution on the mainland. In contrast the species *Keratella cochlearis* (Gosse), which is common in lakes and ponds on the mainland, is apparently absent from Lundy.

Euchlanis dilatata Ehr. 5a (May, November 1953); 6 and 8

(November 1953).

E. proxima Myers. 17 (May 1953).

E. triquetra Ehr. (=E. pellucida Harring, not E. triquetra Hudson and Gosse). 6 (November 1953); 9 (July 1952; May and August 1953); 17 (May and August 1953).

Dipleuchlanis propatula (Gosse). 9 (July 1952; May and August

1953). Rare on the mainland (see later remarks).

Lecane ploenensis (Voigt). 8 (August 1953); 9 (July 1952;

March, May and August 1953).

L. flexilis (Gosse). 3 (July 1952); 8 and 9 (May 1953); 12 (November 1953).

L. intrasinuata (Olofsson). 12 (March and November 1953). Lecane (Monostyla) closterocerca (Schmarda). 3 (July 1952); 9 (May 1953); 14 (August 1953).

L. (M.) lunaris (Ehr.). 5 (May 1953); 9 (July 1952; March,

May and August 1953); 16 (May 1953); 17 (August 1953).

Lepadella acuminata (Ehr.). 8 (July 1952); 9 (May 1953).

L. ovalis (Müller). 3 (July 1952); 9 (May 1953).

L. patella (Müller). 14 (May 1953).

Squatinella longispinata (Tatem). 9 (May 1953).

Trichotria tetractis (Ehr.). 8 (July 1952; August and November 1953); 9 (July 1952; March, May and August 1953); 11 (March and May 1953); 14 (May 1953); 17 (May and August 1953).

Filinia longiseta (Ehr.). 1 (March, May, August and November 1953); 4 (July 1952; May, August and November 1953); 5 (July

1952; March, May and August 1953); 9 (May 1953).

Testudinella patina (Hermann). 1, 3 and 5 (March 1953); 5a (May 1953); 8 (November 1953); 11 (March and November 1953); 14 (May and August 1953); 16 (May 1953).

T. caeca (Parsons). 2 and 5 (March 1953); 5a (May, August and November 1953); 7 (May and November 1953); 9 (July 1952; March and May 1953); 13 (May 1953); 14 (August 1953).

Commensal or epizoic on Asellus spp.

Ptygura brachiata (Hudson). 9 (May 1953).

Collotheca sp. 9 (May 1953). An unidentifiable specimen in preserved material.

Rotaria magna-calcarata (Parsons). 9 (July 1952).

R. rotatoria (Pallas). 17 (August 1953).

R. socialis (Kellicott). 3 and 5 (March 1953); 5a (May and August 1953); 9 (May 1953); 14 (August 1953).

Commensal or epizoic on Asellus spp.

Dissotrocha sp. 9 (May 1953).

Bdelloids (unidentified). 2 (May 1953); 5a (August 1953); 7 (March 1953); 8 (August 1953); 12 (November 1953); 14 (May 1953); 16 (August 1953); 17 (May 1953).

Bdelloids are common in *Sphagnum* and other mosses but, apart from the more striking forms, are difficult to identify when

alive and can seldom be identified in preserved material.

GASTROTRICHA

Chaetonatus sp. 9 (July 1952).

Tardigrades (Water-bears) were seen in no. 2 pond but were not studied. They are likely to occur in other parts of the island, especially among mosses.

DISCUSSION

The writer was informed by Peter Davis that fish were introduced into several ponds before the war. These (or their off-spring) are still to be found in the Rocket Pond but have apparently disappeared from the other ponds. As the fish must

have been brought over to Lundy in water, that water is certain to have contained some microscopic organisms. It is therefore, impossible to decide now which organisms reached the Island by natural means of dispersal and which were introduced, however unwittingly, with the fish. This alone may be the cause of the peculiar characteristics of the Rocket, Quarterwall and Aclands Moor ponds, but other factors must also be considered. As Davis pointed out, all three ponds are at a high level and will, therefore, receive little or no surface drainage. Perhaps, a more important factor, however, is the lack of any outlet. Thus any nourishment received in the shape of decaying plant or animal life, animal droppings, etc. will not be washed out but will tend to build up to an ever increasing amount as each new generation of organisms dies and decays. In contrast all the other ponds seem to have continuous through drainage (except perhaps in abnormally dry weather), and much of the fertilizing products of decay will be lost.

The rotifer Dipleuchlanis propatula was found only in Pondsbury and is evidently rare even there (only some half-dozen specimens were found in all the samples from this pool). It appears to be rare also elsewhere in the British Isles and in Europe generally, but is stated to be common in North America. One is tempted, therefore, to conclude that it is more likely to have reached Lundy from the west than from the east; but, as has already been remarked, one cannot now be certain that any species has reached the island by natural means of dispersal. What those means of dispersal might be is also a matter of conjecture. Some species of Rotifera and Crustacea are known to be capable of survival in the form of resting eggs or even as encysted adults in dried mud and may thus be transported by birds, etc., from pond to pond; but the number of species that have actually been revived artificially from dried mud is very small and, as regards the Rotifera, is limited to a comparatively few species of the Bdelloida. No doubt also some forms may survive in moisture among the feathers of swimming or wading birds, but this has not been confirmed and, in the present state of our knowledge, one cannot therefore presume that more than a few species have reached the island in this way. On the other hand, the fact that there are few (if any) endemic species or even varieties postulates fairly frequent renewal of stock from the mainland. The abundance of Keratella valga, a species which is infrequent on the mainland, may be due to the absence of natural enemies; it is significant, for example, that species of Asplanchna -probably the only rotifers capable of swallowing such spiky morsels—appear to be absent from Lundy.

In concluding, I would like to express my thanks to Mr Harman for permission to visit Lundy and to Peter Davis for general assistance and encouragement during my all too brief visits. To Peter and to Professor Harvey I am also indebted for the material

collected in March, August and November 1953.

THE HABITATS OF THE BRISTLE-TAIL PETROBIUS MARITIMUS (INSECTA, THYSANURA) ON LUNDY

By M. J. DELANY

Petrobius maritimus (Leach) is a Thysanuran or bristle-tail of widespread occurrence in coastal areas around the British Isles and particularly amongst the rocks above high water mark. It is one of the two indigenous British species, and up to the present is the only one that has been observed on Lundy. Previous work on this genus has been almost exclusively taxonomic; the only notable exception being a brief account by Willem (1924) on the habitats of P. maritimus in the area of Cap Gris-Nez, France. The abundance of this insect and the absence from Lundy of the other species were sufficiently favourable conditions to stimulate further study on the island.

The data have been accumulated in the course of three visits to Lundy, totalling approximately five weeks, in 1951 and 1952. The preliminary surveys were made in March 1951 and this work was developed and extended in September 1951 and August 1952. Throughout this period the study aimed at determining the extent and pattern of distribution of *P. maritimus* as well as the geological and biological constitution of the habitats in which it occurred. A brief note on this insect in the 1948 Annual Report of the L.F.S. (p. 39) stated that it was a frequent inhabitant of slate and granite rubble up to 150 feet above sea level. The initial survey in March 1951 attempted to confirm and supplement these findings by making collections, mostly on the east coast, from a variety of habitat

types from the lowest to highest elevations.

Of the two beach areas investigated, the Landing Beach and Ouarry Beach (see map for these and other localities mentioned in the text), Petrobius was common beneath the stones some distance above the Pelvetia zone. Further inland, the isolated areas of granite rubble on the east coast between the Quarter and Halfway Walls all supported populations of the insect but examination of the surrounding Pteridium did not bring any to light. Whilst it was quite common amongst granite rubble and outcrops of granite and slate provided with crevices into which the insect could retire, its absence was particularly apparent from solitary boulders not possessing these facilities. On the flat upper surface of the island Petrobius was taken along the lengths of the Quarter, Halfway and Threequarter Walls as well as the inside walls of outbuildings from as far north as the North Light to as far south as Marisco Castle. Hand searching of the vegetation, particularly the Calluna and Festuca, has not shown the insect to be present.

In view of this marked petrophilous habit of *Petrobius*, further investigation was focused upon determining its abundance and the nature of its associated faunas in three types of rock habitat, finally leading to an assessment of the extent of isolation and the selection

of microhabitats within a confined area of granite outcrops intermixed with various vegetation types. Estimates of the population density of *Petrobius* in the first two habitats examined were obtained by making direct counts. Providing this was accomplished fairly rapidly, the probability of including the same animal twice was small.

I. THE ROCKS IMMEDIATELY ABOVE HIGH WATER MARK

An area 28×32 feet situated below the Quay to the south-east of the island was mapped to display the arrangement of the larger boulders and smaller stones. The latter tended to occur in localized piles between the former and so provided a number of partially isolated groups. As *Petrobius* restricted itself to the smaller stones several compact, workable units were made available for population estimates. The results of surveys made in March and September 1951 are shown in Table I.

		TABLE I		
Station	Distance of station beyond uppermost Pelvetia zone (feet)	Surface Area (sq. ft.)	1951 March	Populations Sept.
A	16	4	2	20
В	21	I	1	50
C	21	2	10	27
D	21	2	25	30
\mathbf{E}	22	1.5	11	74
\mathbf{F}	24	6	50	86
G	12	14	1	160
H	19	0.3	3	17
I	16	T. Carrier	0	20
J	13	1	0	20
K	16	I	0	22
L	II	I	0	69
N	16	0.3	3	14
0	17	I	0	65

With the exception of station F, which was 6 feet higher than any of the other stations and which was being encroached upon laterally by Lapsana communis, Festuca rubra, Beta maritima, Dactylis glomerata and Armeria maritima, these stations represent habitats with slate substrates and composed entirely of stones washed up from the sea or dislodged from the underlying rock. Soil was absent. The area lay just beyond the spray zone and was covered by the sea only at periods of exceptionally high tides.

The associated faunas included the following:-

Station J (March 1951	:)	Station F (September 1	951)
Crustacea		Crustacea	
Ligia oceanica	(5)	Oniscus asellus	(1)
Orchestia gammarella	(5)	Orchestia gammarella	(5)
Myriapoda		Hymenoptera	
Scoloplanes maritimus	(1)	Formica rufa	(4)
	No.	Myriapoda	
Station F (March 195)	I)	Lithobius melanops	(4)
Myriapoda		Araneida	
Glomeris emarginata	(1)	Drassodes pullosus	(15)
		Erigone sp.	(15) (2)
		Mollusca	121-121-12
		Goniodiscus rotundatus	(1)
		Clausilia rugosa	(1)
		Vitrina pellucida	(2)

(Figures in parentheses represent the number of specimens observed)

Even within this small area a distinct trend from the marine to terrestrial habitat is becoming apparent with *Ligia* and *Orchestia*, so typical of the high littoral fauna, accompanying *Petrobius* at its lower levels and tending to be displaced by the more typically terrestrial species at station E. The population increase of *Petrobius* between March and September is not insignificant whilst its dominance of the habitats as far as actual numbers are concerned, is particularly noteworthy.

II. THE INTERMEDIATE ROCK-SOIL HABITAT

The situation selected for this series of collections was an artificial habitat composed of a soil substrate covered by a mixed vegetation and scattered piles of slates. Located between 15 feet and 20 feet above the Landing Beach, the area originally constituted the floor of a hut but it must have been some time since it possessed a roof and intact walls, as only vestiges of the latter now remain. The interior was mapped (fig. 1) and arbitrarily subdivided into a number of smaller areas. The latter provided units on which to base assessments of the *Petrobius* and its associated populations. Apart from the distinct patches of Armeria maritima the vegetation appeared as a heterogenous assemblage composed of Crithmum maritimum, Daucus carota, Matricaria inodora var. maritima, Leontodon pinnatifida, Plantago coronopus, Sonchus sp., and Rumex aquatica dominated by Festuca rubra. Within this small area succession was evident. To the centre of the hut vegetation was well established whilst peripherally, although the ground was covered by soil, the assumption of a plant cover had still to be accomplished. Here then, was a Petrobius habitat of slate piles being encroached upon laterally and basally by the components of a vegetational complex. The March and September 1951 populations are given in Table II.

Station	Surface area	1951	Populations
Station	(sq. ft)	March	Sept.
HA	15	1	4
HB	16	12	7
HC	II	1	í
HD	17	7	9
HE	5	4	9
· HF	. 6	ó	100

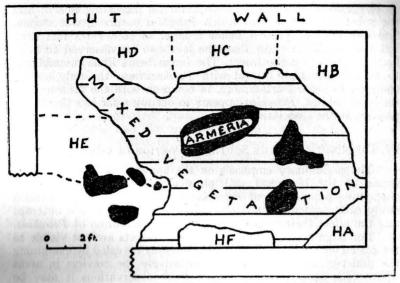
Petrobius can never be considered restricted to any one of these stations as interconnection is always guaranteed by the surrounding hut walls. The most striking feature in the above data is the comparatively low population of Petrobius in this habitat as compared to the previous one investigated. On the other hand the associated mesobiotic species are both richer in species and numbers as the following lists show:—

Station HB (March 1951)		Station HB (September 1951)		
Crustacea		Crustacea		
Armadillidium vulgare	(1)	Armadillidium vulgare	(1)	
Oniscus asellus	(3)	Oniscus asellus	(7)	
Orchestia gammarella	(7)	Orchestia gammarella	(3)	
Mollusca	.,,	Philoscia conchii	(2)	
Goniodiscus rotundatus	(1)	Collembola	. ,	
Ambient does not a comment		Pogonognathellus longicornis	(1)	
Station HA (Sept. 19	51)	Hemiptera	· /	
Crustacea	,	Philaenus spumarius	(2)	
Oniscus asellus	(I)	Myriapoda	` '	
Araneida	. ,	Lithobius melanops	(I)	
Ciniflo sp.	(3)	L. variegatus	(3)	
Segestria senoculata	(3) (1)	Araneida	(3)	
Mollusca		Leptyphantes sp.	(2)	
Goniodiscus rotundatus	(2)	Theridion sp.	(2) (1)	
STANDARD GOOD AND WASHINGTON BY	ALCOHOL: 12	Mollusca	(-)	
		Goniodiscus rotundatus	(9)	
entering a very rate of the		Lacinaria biplicata	(4)	
		Trichia hispida	17	

The animals beneath the stones can probably best be regarded as representing a synthesis of two faunal types, composed of those individuals normally resident beneath the stones and those visiting them from the adjoining vegetation. P. maritimus was confined to the former group. Although only as little as 15-20 feet above high water mark the fauna here has far greater affinities with one of an inland association than one of littoral origin. The remnants of the latter remain in the presence of Orchestia gammarella.

III. THE INLAND ROCK HABITAT

Along the east coast terraces just below the disused quarries a number of piles of granite stones and chippings, 150-200 feet above sea level, are stretched in isolated groups from north of the



Plan of hut interior to show disposition of vegetation and sampling stations.

Quarterwall Cottages to south of Halfway Wall Bay. As these assemblages of rock were too large and uniform to permit subdivision into groups small enough for making population assessments an alternative, relative estimate had to be applied. This was accomplished by collecting all mesobiotic species, including Petrobius, from beneath the stones thereby obtaining a picture of the relative abundance of Petrobius in this locality. Two such piles of stones were examined in September 1951 and their faunas listed below:—

Granite Rubble—(i)		Granite Rubble—(ii)		
Crustacea		Crustacea		
Oniscus asellus	(43)	Oniscus asellus	(2)	
Thysanura		Thysanura		
Petrobius maritimus	(2)	Petrobius maritimus	(4)	
Dermaptera	Mary Mary States	Hymenoptera		
Forficula auricularia	(1)	Formica rufa	(2)	
Coleoptera	The state of the state of	Myriapoda		
Otiorrhynchus sulcatus	(I)	Lithobius lapidicola	(1)	
Hymenoptera		Araneida	311	
Formica rufa	(2)	Ciniflo similis	(2)	
Araneida		Drassodes pullosus	(1)	
Drassodes pullosus	(3)	Lycosa sp.	(r)	
Opilionida	, , , ,	Segestria senoculata	(2)	
Opilio pratensis	(2)	Mollusca		
And the will be a second		Goniodiscus rotundatus	(I)	

Vegetation was absent, except for an incrusting lichen, and the substrate at depths at which *Petrobius* occurred, was stoney. Soil was possibly present below a layer of stones 1-2 feet deep but this would be lower than the levels so far observed to have been inhabited by the insect. The fauna bears little resemblance to that of the high littoral with *P. maritimus* the only species common to both. Furthermore, in common with the intermediate rock-soil habitat, *Petrobius* appears to occupy a far less significant position in the association.

IV. DISTRIBUTION IN THE SOUTHERN PORTION OF GANNETS' COMBE

The preliminary emphasis on the assessment in fairly broad terms of the biological and physical constitution of habitats supporting populations of *Petrobius* now leads to a more detailed study of the microhabitats of an inland area of granite outcrops and the effect their structure has on the distribution of *Petrobius*.

For large portions of the year these insects are not visible to the casual observer and their presence is only revealed by examining the undersurfaces of stones or alternatively the crevices in areas where rock outcrops occur. From these observations it may be inferred that rocks in themselves do not constitute the only necessary physical feature of the *Petrobius* habitat but must also be so arranged

as to form some form of cover for the animal.

The survey undertaken in August 1952 was made in the four most southern valleys of Gannets' Combe. With the aid of an Ordnance Survey 25 inches to I mile map it was possible to obtain the broader outlines of the valleys. Unfortunately, the arrangement of the rocks on this map did not coincide with their arrangement in the field and their precise locations were inserted following personal observation of the area. The granite outcropping occurs where the flat upper surface of the island, in this section covered by Callunetum, meets the Pteridetum from the sheltered slopes of the east coast. In addition to Pteridium, the floors of the valleys were covered by the grasses Festuca and Molinia. The presence of Petrobius was assumed on seeing either the living animal or the exuviae within the areas being searched. The detailed distribution of Petrobius is displayed on a map in the author's possession and rather than consider in detail the structure, flora and Petrobius population of each rock it has been decided to present only the empirical results. Firstly, in all the areas where Petrobius was present the crevices were generally dry, free from soil and vegetation and having, at least in part, a height between ½ and 2 inches. Although the boulders of the south-east bank of Valley I had this latter characteristic Petrobius was not present. This can possibly be correlated with the presence of wet soil and moss in them, whilst the larger portion of the south bank of Valley III being free from Petrobius might well be associated with crevice width, as here, when not being colonized by vegetation they were between

6 and 9 inches wide.

The reasons for such highly specific habitat requirements still remain a matter of conjecture. Protection from climatic extremes and larger predators such as birds, may be afforded by the more secluded niche. The tendency for Petrobius to vacate cracks with the influx of soil and vegetation is in accord with its strictly petrophile habit. As this insect is wingless and also loathe to enter any soil covered areas, a considerable degree of isolation appears probable and the method and extent of transportation from one stoney habitat to another, as well as the rapidity with which this may be achieved, still remain unanswered. The egg laying habits of this species have not been described but in the allied species P. brevistylis the eggs are known to be deposited amongst accumulated dirt and soil in the very small cracks scattered over the rock surfaces. Should P. maritimus be of similar habit the probability of an outside agency transporting this stage does not appear high.

V. TEMPERATURES IN Petrobius MICROHABITATS

Between 1400 and 1500 hours G.M.T. on September 2nd, 1951, temperature measurements using an F. 1512/300 thermistor (see Delany, 1953), where made in *Petrobius* microhabitats in the vicinity of the Gates. Temperatures were taken beneath small pieces of slate, on their upper surfaces and in the air above them. The temperatures taken beneath the slates were always as near the centre of the stone as possible. The readings are shown in Table III.

	M Stone	Maximum thickness Stone of stone (ins)		Table III Temperature ° C		
	Stone	of diane (me)	I in above	Upper surface	Beneath	Petrobius
,	1	2	27.4	32.0	28.3	Present
	2	1	25.2	29.2	28.6	Present
	3	2.5	24.3	29.6	28.3	Present
	4	0.25	26.4	32.0	33 · 5	Absent
	5	0.25	27.5	29.6	31.5	Absent
	6	1.5	19.4	19.2	19.4	Present
	7	2	18.1	18.1	18.8	Present
	8	1	17.9	17.9	19.0	Present
	9	0.5	17.6	17.6	17.6	Absent
	10	0.5	17.9	17.9	17.9	Absent

Slates 1-5 were in direct sunlight and 6-10 a few feet away in the shadow of nearby cliffs. The low uniform temperatures about the shaded stones are in striking contrast to the higher and more variable temperatures of those in direct sunlight. The air beneath the slates was invariably as warm or warmer than that I inch above them with a greater temperature difference where the slates in direct sunlight were very thin. It is of note that under these conditions, when temperatures reached 33.5° C. no *Petrobius* were present. It would appear, then, that at times the temperature

beneath the thinner stones must become comparatively high and the absence of Petrobius from stones 9 and 10 could suggest an avoidance of this microhabitat on this account.

The foregoing accounts are probably best regarded as a rather loosely united assemblage of field notes and observations on the bristle-tail Petrobius maritimus. It was not possible to develop a concerted research project in the time available for this study, but the data are felt to be of value in providing additional information on the Lundy fauna and flora and particularly on the

ecology of P. maritimus.

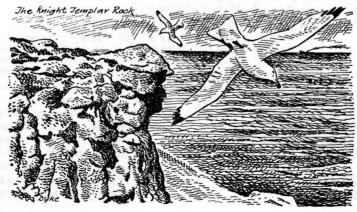
The distributional range of this insect, as known within the limits of Lundy, is wide. Providing rocks are available, whether they be slate or granite, capable of offering the appropriate cover, populations of Petrobius will survive. The factors, and their differential effects, responsible for the maintenance of the population balance of *Petrobius* in various localities have still to be determined. On account of the size and location of Lundy it cannot be stated with certainty whether this species occurs beyond maritime influences and it is only by study elsewhere that this can be ascertained.

ACKNOWLEDGEMENTS

I should like to express my gratitude to Mr Martin Coles Harman for his generosity in placing Lundy at my disposal for the purpose of making this study. I am also grateful to Professor L. A. Harvey for the very active interest he has taken in these studies and, finally, the Nature Conservancy, whose financial assistance made the undertaking possible.

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Delany, M. J., 1953. Studies on the microclimate of Calluna heathland. J. Anim. Ecol. 22: 227-239. Willem, V., 1924. Observations sur Machilis maritima, Bull. biol. France et Belg. 58: 306-320.



OWNER'S LETTER

TO THE MEMBERS,

I think we can congratulate ourselves on another successful

season thanks to the good work put in at various points.

A highlight of the season was the acceptance of Peter Davis's record of *Turdus migratorius* as constituting a good ground for adding the species to the British List.

This bird, it may be remembered, was present on Lundy from October 27th to November 8th 1952, and a very full account with photographs is to be found in the October 1953 number of *British*

Birds.

It must be a great satisfaction to Peter Davis that just as the name of Baird will always be thought of in connection with television, so that of Peter Davis will always be remembered whenever the question of *Turdus migratorius* arises in the British Isles!

I need hardly say that *Turdus migratorius* was not allowed to pass on without being ringed. It will be interesting to see if this

bird turns up again and where.

Incidentally, as an indication of the importance of Lundy's ringing operations, I think I am right in saying that approximately one in twenty of the total number of rings used in ringing wild birds in the British Isles is used on Lundy. As the area of Lundy represents only 1/40,000th of the area of the other British islands combined, it is easy to see that Lundy is relatively very busy in the bird ringing business.

The American Robin's performance of about 3,000 miles non-stop flying, taking probably forty hours, during which time it lost a third of its weight, puts into the shade the magnificent feat of Captain Abdel Rehim when he swam on July 31st, 1952, from a point between Hartland and Clovelly to Lundy in less than twelve

hours.

I am hopeful that during 1954 some of the Devon amateur swimmers will arrange a contest and will endeavour to emulate the Captain's feat, taking every precaution against accident.

DEER

Major Butler of the Queen's Own Royal West Kent Regiment had hoped to lead the party this year, but at the last minute he was given a Colonelcy and sent post-haste to Nairobi. In his absence Major P. R. H. Turner and Lieutenant G. H. W. Howlett visited us and accounted for eight deer and four goats. Lieutenant Howlett subsequently wrote an interesting and very amusing account of the visit in the Regimental Journal of October 1953.

HOOPOES

I am told that Hoopoes have bred this year in Hampshire. Members will note that a couple of nesting boxes have been put up (trunks of trees with green woodpecker breeding holes in them) in Millcombe. Let us hope for the best, even although the chances are a thousand to one against.

ARACUANAS

These little Chilean fowls to which I referred last year duly arrived and seem to be doing well. The colour of their eggs is a beautiful blue, and I am hoping that they will prove so satisfactory that in due course the other domestic fowls will make way for them.

HONORARY MEMBERS

I was delighted to hear that your Committee were proposing to the Members to offer honorary life memberships to the Commanding Officers of the Queen's Own Royal West Kent Regiment at Maidstone and also at Tonbridge, for I am sure they will appreciate the compliment and in the more peaceful days which may lie ahead we may hope to find members of the Regiment assisting at various points in the Society's field work.

Of even more immediate interest is the proposal to offer Honorary Life Membership to Mr Robert Gillespie, C.B.E., who is at this time working without respite towards the solution of the extraordinarily difficult problem of pollution of sea water by oil.

Nearly everyone must have experienced the disadvantage of oil in the sea and on beaches, for nearly everyone must have ruined or half ruined some garment or other, but only those who have gone further than merely cursing and complaining realize the difficulties with which the question is surrounded.

For one thing the use of petroleum has everywhere increased to an enormous extent. For another, if of a cargo of 10,000 tons merely 1 ton goes overboard the oil will cover the sea as far as the eye can reach. For still another, a sheet of oil seems to be capable of almost infinite expansion. Finally, however thin the film may be damage is done to the diving seabird which surfaces through it, or any bird for that matter that gets mixed up in it.

Those of us who are interested in birds have, therefore, every reason to be grateful to those like Mr Gillespie who have got the technical knowledge and ability to harness the resources necessary to deal with what is proving to be a scourge to man and to bird.

I do not claim intimate knowledge of what is going on, but I do know that a few devoted people (and not merely citizens of this country), of whom Mr Gillespie is an outstanding example, are sparing no pains to improve matters, and in my view Societies like ours do well to give token of their appreciation of work of this sort.

I have left to the last a reference to the work of our Hon. Secretary, Mr L. A. Harvey, but for whose devotion I think our Society would not exist as a flourishing concern, or at all.

He has been with us from the beginning and his enthusiasm has fired all our efforts. For approximately eight years he has been the self-starter of the Society, the central figure, the dynamo. He is remarkable for the energy that he has put into the work; remarkable too is the success which has attended his efforts equally on the business side, the scientific side, or any point that he touches.

Societies such as ours sometimes become hot-beds of intrigue and petty quarrels. The fact that we are entirely free from this sort of thing is something for which we have to thank Mr Harvey.

with his great experience and splendid example.

Societies like ours often get into difficulties for other reasons. People hold on to their jobs whilst a flicker of life remains in their breasts. This is utterly wrong from the Society's point of view. One wants to secure and make available to the Society every bit

of energy that is possible.

It has long been obvious to Mr Harvey's many friends and admirers that with the increasing demands of his profession and one thing and another he was taking too much out of himself, and there was a grave risk that under order of his doctors he would have to give up the Secretaryship of our Society, which would have been a bitter blow to all of us.

It was grand news, therefore, to learn in early December that there was an excellent prospect of Mr T. J. Budge becoming Assistant Secretary. We are at liberty to hope that Mr Budge will insist upon taking off Mr Harvey's shoulders a large portion of the

work, particularly the routine.

I personally hope Mr Budge, moreover, will get help with the routine work so that in due course there is somebody who knows what goes on and who can help out in case of holidays, accidents and whatnot. Young people who are full of energy do not suffer from having a little bit of work to do—in fact, their experience is

enhanced by taking on all jobs, even routine jobs.

The move is entirely in line with what I have been recommending for years, namely that spreading as much responsibility as we can among our Members and accordingly I congratulate Mr Budge on the appointment, and promise him (I think I take little risk in this) on behalf of the Members that they will do all they can to make his task as easy and as pleasant as possible.

Wishing the Society all success for 1954,

MARTIN COLES HARMAN.

ANNOUNCEMENT

Through the kindness of the President, Peter Davis will be publishing this summer a List of Birds of Lundy, with notes on their Status and Migrations. The approximate cost to members will be 3/6 per copy. The edition will not be a very large one, and members may therefore wish to order in advance, lest they be disappointed.

VISITING MEMBERS STAYING AT THE OLD LIGHT

Peter Davis (Warden) Dudley Iles (Ornithological Helper) John Cudworth (Ornithological Helper) Barbara Bizzell (Domestic Helper)

Miss R. A. Manwaring

I. J. Linn

R. Hankey, H. Norton J. A. C. Blake J. R. Hannam M. N. Pitt

Misses M. Chetham, B. Martin J. J. Hatch S. R. Hatch M. J. Daniel M. A. Beecroft, E. R. Kaye Mrs J. Hughes L. Brett A. L. Galliford N. Pitts Mr and Mrs D. J. Munns, Miss M. F. Goode, T. K. Beck, R. G. Turner L. M. Middleton S. G. Madge, I Taylor, M. J. Carter and M. Shaw M. Huxtable J. C. Cooke, C. Godsal N. Worthington D. Naylor I. D'O. Wright

Mr and Mrs F. F. and M. G. Glasspool, Miss K. Bort Miss A. White A. G. and Miss S. Stabler L. A. and C. C. Harvey Misses J. Bloom, E. A. King Miss A. Garrard K. B. Meecham E. Morley P. Gray Mr and Mrs R. C. Edworthy, D. Cook R. C. Miller, G. D. Short, A. V. Smith, J. M. Summerell I. Holmes Mr and Mrs D. H. Smith A. Willey

J. Miller L. Fowler

February 13th to December 14th September 3rd to 26th September 27th to October 9th June 12th to October 9th

March 14th to 31st May 21st to 26th July 27th to August 2nd March 23rd to April 9th June 19th to 22nd April 9th to 15th April 13th to 15th April 13th to 20th April 13th to 20th September 28th to October 5th April 13th to 20th April 20th to 26th April 20th to 30th May 1st to 18th May 2nd to 9th May 4th to 9th May 8th to 17th May 17th to 20th May 18th to 26th May 30th to June 3rd

May 30th to June 4th May 31st to June 6th

May 31st to June 13th June 21st to 28th June 25th to 27th June 27th to July 2nd July 5th to 18th September 5th to 18th July 31st to August 15th

July 31st to August 18th August 1st to 10th August 1st to 15th August 2nd to 17th August 2nd to 17th August 7th to 13th August 7th to 15th August 8th to 15th September 1st to 5th September 1st to 8th

September 3rd to 18th September 6th to 12th September 20th to 30th September 28th to October 3rd September 30th to October 2nd

LUNDY FIELD SOCIETY

Constitution

I. The objects of the Society shall be :-

(a) to further the study of the birds of Lundy and in particular their migrations and movements.

(b) to undertake biological investigations of the wild life

of the Island.

- (c) to further the conservation of the fauna and flora of the Island.
- 2. The Society shall consist of a President, Chairman, Secretary, Treasurer, Shore Officer and Transport Officer and ordinary members. The Officers shall be elected at the Annual General Meeting, and shall be eligible for re-election.
- 3. The Society shall appoint a Committee consisting of the Officers and not more than six other members, who shall be elected for a period of three years. The duty of this Committee shall be to organize and supervise the field work on the Island. Two senior members shall retire annually and shall not be eligible for re-election until after the lapse of one year. The initial committee shall, however, sit unchanged for two years, after which the retirement of its members shall be determined by lot.

The Committee shall have power to co-opt.

4. Persons desiring membership must agree to observe the objects of the Society and be nominated by two existing members. They may be elected at any meeting. The annual subscription shall be a minimum of Ios. payable on election and thereafter on 1st January.

5. Any member behaving in a manner prejudical to the interests and work of the Society is liable to summary expulsion at the

discretion of the Committee.

- 6. Members will be required, when visiting Lundy, to conform to the customs of the Island, and to respect its rights and privileges. Those prepared to play an active part in the work of the Society will receive annually a written invitation from the owner of the Island to visit it and to land without fee. This invitation will only be extended after the Secretary has been notified of the Member's desire to visit the Island and work there.
- 7. Meetings of the Society shall be held at the discretion of the Committee. The main object of the Society being the prosecution of field work, there need be no more than one annual meeting for the transaction of business.
- 8. Any proposed alteration or addition to the constitution must be notified by the Secretary to all members not less than fourteen days before a meeting, and must be carried by a two-thirds majority of those present.

LIST OF MEMBERS 1953

ACLAND, Miss E. M. Dyke, Middle Croft, Porlock, Somerset. ACLAND, Sir Richard, M.P., Killerton, Broadclyst. Adams, L. E. G., 15 Chertsey Street, Guildford, Surrey. Adlard, P. G., Whynbank, Hayling Island, Hants. Alford, B., Eagle House, Heavitree, Exeter.

Allen, W. D., Oadby, Leicester.

Alley, R., 23 Trelawney Road, Cotham, Bristol.

Almy, V., Pendeen, Hillpark, Underlane, Plympton (for Plympton Sec. Modern School). AMPHLETT, Miss R. E., 45 White Knight's Road, Reading, Berks. ARMITSTEAD, S. K., R.N. College, Dartmouth. Ashe, Miss S. H., Carlton House, Exeter. ASPDEN, Miss E., 59 Mandeville Road, London, N.14. BADHAM, L. W., 257 Vicarage Road, King's Heath, Birmingham, 14. BAKER, Miss L. B., 14 Oakdale Road, London, S.W.16. Balfour, Lewis, 19 Great Winchester Street, London, E.C.2. BALL, Mr and Mrs S. F., Sillery, East Down, Barnstaple. Barlow, Miss L., Woodhill, Bathampton, Bath, Som. Bastow, Rev. R. F., Chawleigh Rectory, Chulmleigh. BAUR, Mrs E. B., 15 Merton Village, Bicester, Oxon. BAXTER, R. L., Trinity College, Cambridge. BECK, T. K., 74 Reservoir Road, Ilton, Birmingham. BECKERLEGGE, Rev. J. E., Branksome, Mennaye Road, Penzance. BEECROFT, M. A., Southfield, Calverley Lane, Horsforth, Leeds. BEESLEY, C. J., Seaward, The Broadlands, Shaldon. BENTHALL, Sir Edward, Lindridge, Bishopsteignton. BEUTTNER, Dr Jur. K., Post Box 2178, Zurich 23. BIZZELL, Miss B., The Shrubbery, Westward Ho! BLACKWELL, A. E., Instow, Bideford. BLAKE, Miss D.ff., c/o Uppacott, Tawstock, Barnstaple. BLANK, T. H., I.C.I. Game Services, Burgate Manor, Fordingbridge, Hants. BLAYTHWAYT, Rev. F. L., Dipham Rectory, Chippenham, Wilts. BLOOM, Miss J. L., 10 Princes Square, Hove, 3. BLYTH, Major F. W. E., Whitefield Lodge, Muddiford, Nr Barnstaple. Bond, D. J. and W. J., 9 Clinton Road, Barnstaple. BORT, Miss K., 26 Wellington Park, Bristol, 8. BOWATER, Mrs N. M., Ravensbourne, Stoke Fleming. Bowen, Mr and Mrs H., 10 Park Town, Oxford. BOYD, H. J., Severn Wildfowl Trust, Slimbridge, Glos. BRABHAM, H. B. S., 78 Thirlmere Gardens, Wembley, Middlesex.
BRETT, L. D. D., 14 Princess Crescent, London, N.4.
BRIDGE, H. G. T., St Thomas's House, St Thomas's Hospital, London, S.E.1.
BRITTON, R. W., 30 Trafalgar Road, Lympstone.
BROWN, Miss A. J., Manor House, Aldbourne, Nr Marlborough, Wilts.
BROWN, Miss N., Phayre House, Bideford.
BROWN, Mrs T. L. L. Blenheim, Boad, Alphington, Exeter BUDGE, Mr and Mrs T. J., 10 Blenheim Road, Alphington, Exeter. Burdock, Miss I. M., Greystones, Ham Lane, Stapleton, Bristol. BURR, Dr M., Insirah Sokagi, 34 Bebek, Istanbul. Burton, B. E., 61 Burlington Avenue, Kew Gardens, Surrey. Bury, Miss V. M., Red Rock, Topsham Butters, Rev. F. C., The Vicarage, Branscombe. BUTTLE, L. A., 2 Church View, Butterleigh, Nr Cullompton. CARTER, Mrs F. E., Allerton, King's Hill, Bude. CARTER, Mrs H., Barthope, Deepdene Avenue Road, Dorking, Surrey. CARTER, L. A. and L. M., 28 Gilda Court, Watford Way, London, N.W.7. CARTER, M. J., 30 Stones Road, Epsom. CARTWRIGHT, Miss S. J., 2 Glebe Road, Bedford. CHESTON, R., 36 High Street, Highgate, London, N.6.

CHETHEM, M. M., Old Forge, Bondleigh, North Tawton.

CHUGG, B., Channel View, Braunton.

CLARKSON, M. C., Northfield, Minehead, Som.

CLEMETSON, G., East Lodge, Groombridge, Kent. Coke, Dr H., 56 Weymouth Street, London, W.I.

COLE, Mrs F., 16 Braidley Road, Bournemouth.
COLTHURST, Mr and Mrs W. B., Stonecrop, Wembden Hill, Bridgwater, Som. COLWILL, Capt. and Mrs C. L., Longmeadow, Bulverdon Hill, Sidmouth.

COOKE, J. C., Simonsbath House, Exmoor, via Minehead, Som. COOMBER, F. N. Glenroy, Pymore Road, Bridport, Dorset.

CORNWALL BIRD-WATCHING AND PRESERVATION SOCIETY.

CROFTS, Misses D. R., G. M. and S. R., Deerbank, Norsey Wood, Billericay, Essex.

CROOK, Mrs V. M., Wych, Dukes Avenue, North Harrow, Harrow, Middlesex. CROOKENDEN, P. N., Southcott, Manaton.

Cross, A. E., 23 Broad Park Avenue, Ilfracombe. Cross, W. A., 22 Ladybridge Road, Cheadle Hulme, Cheshire.

CRUMP, C. A., 5 Bute Gardens, Wallington, Surrey.

CUDWORTH, J., 17a Prospect Road, Ossett, Yorks. CURBER, R. M., Cliff Bungalow, Solent View Road, Gurnand, I. of Wight. CURREY, Mrs M. M., Erlwood, Lower Warberry Road, Torquay.

CUTCLIFFE, A. S., Tranmere Hotel, St James's Place, Ilfracombe. DANIEL, M., Winstanley, Priory Road, Malvern, Worcestershire.

DAVEY, Sqdn Ldr, D. A., R.A.F. Moreton in Marsh, Glos.

Davis, H. H., Little Stoke, Patchway, Bristol.

Davis, P. E., 191 Hall Lane, Horsforth, Leeds, Yorks. DAWKINS, H. C., Forest Department, Uganda.

DAY, Miss S. M., Alicon, Green End, Oswestry, Salop.

DELANY, M. J., University College, Exeter. DENNIS, A. J., Kenelm, Old Sticklepath Hill, Barnstaple. Down, E. H., 28 Lynton Mead, Totteridge, London, N.20.

DRYLAND, M., Easterside, Moorgate, York.

DUNN, Miss A. J., Culverlea House, Pennington, Lymington, Hants.

DYER, Miss P. M., 76 Sweetbrier Lane, Exeter.

DYKE, J. C. A., Sunbury Cottage, Fairy Cross, Nr Bideford.

ELLIS, B. W., Illsley, Higher Lane, Langland, Swansea.

ELLIS, C. R., Hillside, Bradfield College, Berks.

ESSER, R., Tenby, Northfields Street, Dewsbury, Yorks.

EVANS, G. B., Brookside Farm, Aston, Nr Market Drayton, Salop. EVANS, Miss W., White Gates, Woodbury, Exeter.

EXETER SCHOOL, N.H.S., Exeter.

FENTON, J. K., 78 Moorland Road, Thornbury, Bradford.

FOWLER, C. L., 2 Farquharson Road, West Croydon, Surrey. FRANCIS, Mrs A. W. Carlton, Tresco, Fistard Road, Port St Mary, Isle of Man.

Francis, B., 12 Highbury Road, Bury St Edmund's, Suffolk.

Francis, B., 12 Highbury Road, Bury St Edmund's, Suffolk.
Frazer, Mrs A., 25 Tregunter Road, London, S.W.10.
Freeman, Miss J. V., 2 West End House, Park Lane, Chippenham, Wilts.
Fulford, T., Wave Crest, Westward Ho!
Fursdon, G. H. J., Fursdon, Thorverton, Nr Exeter.
Gabbutt, P. D., 44 Wayside Avenue, Harrogate, Yorks.
Gade, F. W., Lundy, Bristol Channel.
Gallagher, W., Welbeck, New Road, Ascot, Berks.
Galliford, A. L., 46 Trevor Drive, Crosby, Liverpool 23.
Garrard, Miss A., Hillside, Instow.
Gay, Major A. B., R.A.M. Museum, Oueen Street, Exeter.

GAY, Major A. B., R.A.M. Museum, Queen Street, Exeter. GIBBARD, S. D., 31 Imperial Road, Exmouth. GILPIN-BROWN, J. B., Church Knowle, Nr Wareham, Dorset.

GLASSPOOL, Mr and Mrs F. F. and M. G., 6 Southfield Road, Cotham, Bristol, 6. GLIDDON, W. A., 63 Cranbrook Road, Redland, Bristol, 6. GODFREY, A. E. B., St Andrew's Lodge, Lockyer Street, Plymouth.

GOOCH, Mr and Mrs G. B., Home Acre, Swanage, Dorset. GOODE, M. F., Church Lane, Handsworth Wood, Birmingham, 20. GRAHAM, S., Wingmore Lodge, Wokingham, Surrey. GRAY, P., 3 Hill Park, Underwood, Plympton. GREEN, Mr and Mrs S. G., 111 Tamworth Road, Sutton Coldfield, Warwickshire. GRIFFIN, D. M., 92 Derry Villas, North Road, Plymouth. GRIFFIN, Miss N. M., Caradon, 50 Blandford, Lower Compton, Plymouth. GRIMSEY, Miss J., Moulshaw, Bourne Road, Colchester, Essex. Gush, G. H., c/o F. A. Larkworthy, Park Cottage, Netherton, Newton Abbot. Gwyn, Miss P. M., Wayside, Wintley, Nr Bradford-on-Avon, Wilts. Habgood, Miss M. E., 9 Burlington Road, Redlands, Bristol, 6. HANNES, J. H., 78 Granville Park, Lewisham, London, S.E.13. HAMBLETT, D. R., Silver Street, Dursley, Glos. HAMBLETT, E. P., 6 Balmoral Road, St Andrew's Park, Bristol, 7. HAMILTON, Col. and Mrs Sackville, Bayard House, Upwey, Dorset. HANKEY, R., Whingarth, Shedfield, Southampton. HANMER, Mrs I. M. F., Framfield Lodge, Uckfield, Sussex. HARDY, M., 622 Scott Hall Road, Chapel Allerton, Leeds 7, Yorks. HARMAN, Mr and Mrs Albion P. and John A., The Grey House, Kitsbury Road, Berkhamsted, Herts. HARMAN, Miss D., The Poplars, Upper Halliford, Shepperton, Middlesex. HARMAN, Miss E. J., Dean's Place, Beare Green, Holmwood, Dorking, Surrey. HARMAN, M., Deans Place, Beare Green, Holmwood, Dorking, Surrey. HARMAN, M. C., Broad Street Avenue (Ground Floor), London, E.C.2. HARMAN-JONES, Mr and Mrs P. H., Marion E. and Martin A., 25 Leinster Avenue, East Sheen, London, S.W.14. HARRISON, Miss A., 10 Beaulieu Drive, Pinner, Middlesex. HART, L. H., North Light, Lundy. HARTSHORN, Miss A. G. J., 15 Gower Street, London, W.C.1. HARVEY, Mr and Mrs L. A., Myrtle Cottage, Exminster. HARVEY, Miss M. A., Dept. of Zoology, University Museums, Oxford. HARVEY, N., 7 Hastings Avenue, Barkingside, Ilford, Essex. HASLER, W. A., The Croft, Dunmow, Essex. HATCH, J. J., Bryanston School, Blandford, Dorset. HATCH, S. R., Bishop's Nympton, S. Molton. HAWES, Dr R. S. J., University College, Exeter. HAWLEY, F. A. W., Amber Cottage, Bodenham, Salisbury. HAYEK, Miss C. E., Fom. Entomology Dept., British Museum (Natural History.) London, S.W.7. HAYWOOD, Rev. and Mrs W. J. I. R., The Manor House, Spreacombe, Braunton. HEALEY, Mrs J. M. Chadwyck-, New Place, Porlock, Som. HEAVEN, Miss E. D., Lundy Lodge, Nore Road, Portishead, Bristol. Неврітсн, G. A., 92 Ryde's Hill Road, Guildford, Surrey.

HEBDITCH, R. E., 28 Sundown Avenue, Sanderstead, Surrey. HEMSLEY, J. H., The Herbarium, Royal Botanic Gardens, Kew, Surrey. HEPBURN, I., 18 South Road, Oundle, Peterborough, Northants.

HERON, Miss D., 20 Onslow Avenue, Richmond, Surrey, Hickling, V. J., Balfield, Lyndhurst Road, Exeter. Hickley, T. N., Little Barn, Little Easton, Dunmow, Essex.

HIGGINSON, Miss P., Engleton, Tenbury Wells, Worcester, HINCHINGBROOKE, Rosemary, Viscountess, Hinchingbrooke, Huntingdon. HILL, F. F., King's Lodge, Blandford, Dorset.
HINDS, S. W., Hucclecote, The Avenue, Walton St Mary, Clevedon, Som. Hobbs, Rev. A. J., Winsford Rectory, Nr Bristol.
HODGSON, N. C., 52 Ashford Road, Topsham, Exeter.
HOFMANN, Miss T., Ritterstrasse 6, Zurich 7, Switzerland.

HOLLAND, H. N., 25 Peaselands Road, Sidmouth. HOLM, Miss B., Engmosevej 6, Charlottenlund, Denmark.

HOLMES, I., The Coppice, Ings Lane, Guiseley, nr Leeds. HOLT, C. J. N., 19 Pentrehedyn Street, Machynlleth, Montgomery. HOLT, G., 89a Fore Street, Kingsbridge.

HOOD, J. L. Linsley, Romary, 36 Peppard Road, Caversham, Reading, Berks. HOPKINS, Major A. E., Ormonde House, Sion Hill, Bath, Somerset.

HUGHES, Mrs J., Curlew Cottage, Coombe Road, Shaldon, S. Devon. Hunt, O. D. and D. B., Corrofel, Newton Ferrers, Plymouth.

HUNT, S. C. Atlee, Redhills, Exton, Nr Exeter.

HURRELL, Mr and Mrs, Miss L. E., L.H. and K.G., Moorgate, Wrangaton.

HUTCHINGS, M. T., The Myrtles, Appledore.

HUXTABLE, M., West Brae, Chestwood, Bishopstawton, Barnstaple. ILES, D. B., Alma Dene, Otley Road, Guiseley, nr Leeds. INNES, G. A., Portway, St Mary Bourne, Nr Andover, Hants.

IRWIN, Skipper C. G., 10 Champernowne Crescent, Ilfracombe (Honorary Member).

Jackson, Drs Margaret and L. N., Mount Jocelyn, Crediton.

JAMES, J. B., Down Along, Meadow Road, Torquay. JAMES, T. O., Longlands Farm, Shurdington, Nr Cheltenham, Glos.

JAMES, 1. O., Longiands Farin, Shutdington, Ni Chettenham, Glos.

JAMESON, Miss D., 42 St Brannocks Park, Ilfracombe.

JARMAN, Mr and Mrs D., 122 Grove Road, Sutton, Surrey.

JELLEY, Miss R., Barrow Court, Barrow Gurney, Somerset.

JOHNSTONE, G., Oxford and Cambridge University Club, Pall Mall, London,

JOPLING, J. L., The Manor Barn, Chesham Bois, Bucks, KAYE, E. R., Rosneath, Rawdon Road, Horsforth, Yorks.

KEAST, Mr and Mrs K., Frensham Heights, Rowledge, Farnham, Surrey.

KEEN, A. B., 5 Bay Road, Walton St Mary, Clevedon, Somerset. KING, Miss E. A., 209 Southbury Road, Enfield, Middlesex.

KISSICK, Miss E., University College, Exeter.

LAKE, Miss L., Westfield College, London, N.W.3.

LAKE, M. M., Windyridge, New Street, Torrington.

LAMPARD-VACHELL, B. G., c.c., J.P., Weare Giffard Hall, Nr Bideford.

LAND, Mrs S. V., Rockleigh, Beacon Road, Bodmin, Cornwall.

LANGHAM, A. F., 36 Santos Road, London, S.W.18. LAPAGE, M. C., C.M.S. School, P.O. Maseno, Kenya.

LATHAM, Dr and Mrs J., Davnie's Cottage, Blacktop, Counteswells, Aberdeen.

LAWS, A. T. Messrs, A. T. Laws & Co., 37 St Nicholas Street, Bristol, 1. LAWSON, Mr and Mrs D. F., 58 Lakers Rise, Woodmansterne, Banstead, Surrey. LEA, D., The Caravan, Garston Buildings, Sparsholt, nr Winchester.

LEA, Miss M. E., 20a Park Road, Teddington, Middlesex.

LEA, Mr and Mrs R., St Mary's Cottage, Park Road, Teddington, Middlesex. LEACH, Miss A. E., 6 Oakdale Drive, Wrose, Shipley, Yorks.

LEE, Miss S. M., Sunnyside, Freshford, Somerset.

LE MAISTRE, Miss V. M., 35 Alicia Avenue, Kenton, Harrow, Middlesex.

LEWIS, Miss G. E., Downrew, Bishopstawton, Barnstaple.

LIND, Miss P. B., Copperfields, Soham, Nr Ely, Cambs.

LINN, I. J., University College, Exeter. LITTLEWOOD, M., 8 Grayshott Road, Lavender Hill, London, S.W.11.

LLOYD, Major A. E., M.B.E., Raglan House, Somers Road, Malvern Link, Worcs.

LLOYD, O. C., Withey House, Withey Close West, Bristol. 9. LOVELL, D. R., 51 Mildred Avenue, Harlington, Hayes, Middlesex.

LUFFMAN, D., Lancing College, Shoreham-by-Sea, Sussex. MACK, G. T., 159 Burton Road, W. Didsbury, Manchester 20.

MADGE, A. G., 2 West View, Fordton, Crediton.

Male, A. E., 8 Eleanor Road, Old Colwyn, Denbighshire.

Manfield, M. A., 6 Higher Hill View, Peaselands Road, Sidmouth.

Manning, C. G., 18 Pottington Road, Barnstaple.

Manwaring, Miss R., 101 Etchingham Park, Finchley, London, N.3. Maples, Miss J. E., 2 George Street, Bathwick Hill, Bath, Som.

MARSH, R., 574 Kensington Hill, Brislington, Bristol, 4.

MARTIN, Miss B. S., 37 Lansdowne Road, Bedford

MATTHEWS, Dr L. H., Zoological Society of London, Regent's Park, London, N.W.8.

MAUNDER, J. L., Blue Cedars, Post Hill, Tiverton. MIDDLETON, L. M., Winterhayes, South Perrott, Beaminster, Dorset. MILLER, J. M., c/o Braeside, East Hill, Braunton. Moase, W. G., 98 Park Avenue, Barnstaple. Monro, Miss E., 28 St Paul's Road, Bristol, 8. MOORE, Dr and Mrs B., 7 Dix's Field, Exeter. MOORE, J. E., Clareville, 23 Upper Redlands Road, Reading, Berks. Moore, N. C., Eastcote, Towcester, Northants. MOORE, R. F., 6 Grove House, Topsham, Nr Exeter. Morgan, E. J., 26 Campbell Road, Salisbury, Wilts. Morgan, Miss F., Millstones, Saunton. Morgan, Mr and Mrs H. G., Staplake Mount, Starcross, Nr Exeter. MORGAN-GRENVILLE, G. H. B., Hammerswood House, Midhurst, Sussex. MORLEY, G. E., 36/38 Commercial Street, Pontnewydd, Newport, Mon-Moule, Rev. G. W. H., Damerham, Fordingbridge, Hants. Munns, Mr and Mrs D. J., Lingwell, Beacon Hill, Aldridge, Staffs. NAISH, F., Algars Manor, Iron Acton, Nr Bristol. NAUNTON, D. B., 78 Lovell Road, Cambridge.

NAYLOR, D. H., Chanters Hollow, Whitehill Road, Kidderminster, Worcs.

NEALE, W., 17 Parkhurst Road, Torquay. NEALE, W., 17 Parkhurst Road, Torquay.

NEBDHAM, Miss S. C., Southcott, Manaton.

NICOLI, J. H., Westfield House Hotel, West Haddon, Rugby, Warwicks.

NORRIS, Mr and Mrs C. A., Sycamore Cottage, Clent, Worcs.

NORTON, H. E. and W. J. E., Morestead Grove, Winchester, Hants.

OGILVIE, J. G., Lundy, Bristol Channel.

O'NEILL, Mrs Eva, Hove Mansions Hotel, Furzehill Road, Torquay.

OTTER, J. L., 4 Halstead Rise, Tilton-on-the-Hill, Leics.

OVEREND, Miss E. D., Severn Wildfowl Trust, Slimbridge, Glos.

OXBY-PARKER, J. H., Acomb Vicarage, York.

PAGNIEZ, L. C., 146 Farndale Avenue, London, N.13. PAGNIEZ, L. C., 146 Farndale Avenue, London, N.13.

PALMER, M. G., The Museum, Ilfracombe.

PALMER, W. E., M.A., M.Sc., 36 Preston Road, Yeovil, Somerset.

PALMSON, J. S., Pink Cottage, Wargrove, Berks.

PARK, Mr and Mrs N., Flat K, Belvedere Court, Belvedere Road, London, PARKHOUSE, Mr and Mrs W. R., St Johns, Coombe Road, Teignmouth. PARTRIDGE, L. G., Hilldrop, Love Lane, Iver, Bucks. Peters, Mrs S. H., The Ferns, Silver Street, Nailsea, Nr Bristol.
Phillips, A. C. J., Trevelyn, Mawnan Smith, Falmouth, Cornwall.
Pidcock, Commander F. C., Otter Holt, Budleigh Salterton.
Pitt, M. H., Seale Hayne Agricultural College, Newton Abbot.
Pitts, T. B., and Jane E. and N. B., St George's, Wilton Street, Taunton. POPE, Mr and Mrs A. E., 33 Pine Crescent, Highcliffe, Hants. Poulding, Mr and Mrs R. H., 9 Carter's Buildings, Portland Street, Bristol 8. PONTIN, F. W., Shortlake House, Osmington Bay, Weymouth. Power, E. G., 32 Morton Road, Exmouth. Prew, Rev. W. J., North Molton Vicarage. PRICE, Mr and Mrs R. F., 7 Bailey Road, Leigh-on-Sea, Essex. RAWLINGS, B., Lancarffe Manor, Bodmin, Cornwall. REAKES-WILLIAMS, J. M., Ashlands, Gobowen, Nr Oswestry, Salop. REDFERN, R., Harmer Green, Welwyn, Herts. REDWAY, B. S., St Swithuns, Gordon Road, Horsham, Sussex. REED, Mr and Mrs F. J., 78 Clarence Road, St Albans, Herts. REID, Lt-Col C., D.S.O., M.A., C.A., 24 Wildwood Road, London, N.W.11.

Old Sarum, Wilts.

Roseveare, W. L., The Orchard House, Hutton, Weston-super-Mare.

Rossiter, Mr and Mrs F. L., Strathdon, Marldon Cross, Paignton.

REID, Col E. B., O.B.E., C.A., Woodbank, Cults, Aberdeenshire. REID, Miss Rachel, West Kintrocket, Brechin, Angus, Scotland.

RICKETTS, D. A. C., No. 2 Officers' Quarters, School Land/Air Warfare,

ROWCROFT, W. Jr., 121/10 Linden Buildings, South Ozone Park 20, New York. ROWDEN, A. O., Rydon Crest, Countess Wear, Exeter. Rowe, A. D., I Meadland's Cottages, Needham Road, Stowmarket, Suffolk. Rowe, E. M., 22445652 Cfn, W.T.B., M.T.D.E., R.E.M.E., Instow. ROWETT, Miss H. G. Q., Cadover, Willowby Park, Yelverton. RowLand, A., 25 All Saints Road, Weston-super-Mare, Som. Savory, J. H., 61 Lower Redland Road, Bristol, 6. SCARBOROUGH, A. J., Greystone Cottage, Cofton, Starcross, Exeter. SCUDAMORE, E. A., Grove Chambers, Weston-super-Mare, Som. SETH-SMITH, D., Brabourne, Poyle Road, Guildford, Surrey.
SETH-SMITH, Dr D. W., 86 Brook Street, London, W.I. Sexton, E., Ridgeway, Tattersall Gardens, Leigh-on-Sea, Essex.
Shaw, M., 78 Cravells Road, Harpenden, Herts.
Shaxson, T. F., Holm View, Woodcote Road, Forest Row, Sussex. SIMMONS, E. J., M.R.C.V.S., Cattle Breeding Centre, Torrington.

SMART, A. D. G., Withylake, Seaton.

SMITH, Mrs A. E., 51 West Street, Alford, Lincs.

SMITH, D. H. and Miss J. C., Glenholme, Bromley Cross, Nr Bolton, Lancs. SMITH, F. R., Telford, Hill Barton Road, Exeter. SMITH, Sgt M., Sgts Mess, R.A.F. Station, St Eval, Nr Wadebridge, Cornwall SMITH-SAVILE, Mrs and Robin, 9 Old Queen Street, London, S.W.I. SNELL, J. R. W., 51 Granville Road, Southfields, London, S.W.18. SPINKS, Mrs L. E., Miss M. and A., 50 Leys Avenue, Letchworth, Herts. SPOONER, Mr and Mrs G. M., Five Oaks, Crapstone, Yelverton. Spooner, J. J., The Chantry, Ivybridge.
Stabler, A. G. and Miss S., Trees, Crossways, Moreton, Nr Dorchester. STANBURY, Miss F., Slieve Bloom, Willowby Park, Yelverton. STANFORD, Dr R. and Miss E., Granville House, Bridport, Dorset. STANILAND, Miss J., Rearsby, Clevedon, Somerset.
STANLEY, Miss J. E., 17 Dentin Road, Wokingham, Berks. STANLEY-BAKER, Mrs I. G., Beaconside, Bideford. STARR, A. G., 3 Pailpark, Knowle, Braunton.
STOKES, T. W., 48 Newman Lane, Loughton, Essex.
STREET, Dr and Mrs, D. F., 38 Lansdowne Road, London, N.3. STURGES, Miss M. C., Southstoke, Littleham Cross, Exmouth. STURROCK, W. D., 17 Woodside Close, Tolworth, Surbiton, Surrey. SUMMERS-SMITH, Mr and Mrs D., Rosemount, Highclere, Nr Newbury, Bucks. SWAIN, Mr and Mrs H. T., Elmbrook, New North Road, Exeter. TAYLOR, J., Westerlie, Bishop's Tawton, Barnstaple. TAYLOR, Lady R. G., Mount Ebford, Topsham. TAYLOR, Miss S. K., 5 Pembroke Vale, Clifton, Bristol, 8.
TEMPLE-BROWN, Dr K., Roseneath, Forde Park, Newton Abbot.
THEAK, Miss D. E., Hereford House, Ilfracombe. THOMSON, Mrs F. E., 15 Salterton Road, Exmouth. THORNLEY, C., Greystone, Croftslea Park, Iltracombe.
THROWER, Miss J. R. W., Royal Free Hospital, Gray's Inn Road, London, W.C.1. TIPPER, W. F., 180 Muswell Hill Road, London, N.10.
TOMLINSON, P. B., Water Willows, Nether Poppleton, York. TOMPSETT, R., Kelly College, Tavistock. TRAFFORD, Miss J., 44 Velwell Road, Exeter.
TREHERNE, J. E., 131 Victoria Road, Swindon, Wilts.
TUCKER, W. H., Netherways, 1 Sidmouth Road, Honiton.
TULLOCH, M. A., Fairhill, 9 Winchelsey Rise, Croham Hurst, South Croydon, TURNER, F. G., 60 Valleyfield Road, London, S.W.16.
TURNER, R. G., 18 Four Ashes Road, Bentley Heath, Knowle, Warwicks. Tyrrell, A. E., 179 Birchfield Road East, Northampton.
Ufullius, Mrs E. B., and E. G., Glasses, Graffham, Petworth, Sussex.
Underwood, B. L., Dene House, Cleveland Road, Torquay.

VARNEY, F. N., 65 Broad Street Avenue, London, E.C.2. VENNER, Sir Edwin, 37 Kingston House, Princes Gate, London, S.W.7. VERITY, Rev. C. L., Grundisburgh Rectory, Woodbridge, Suffolk. VICKERY, R. S., Bolealler House, Cullompton. Vowles, J., 277 Canford Lane, Bristol, 6. WADDINGHAM, R. N., The Knoll, Exmouth.
WALKER, A. F. G., Penlee, 14 St Helen's Road, Harrogate, Yorks. WALLACE, T. J., Furley, Membury, Nr Axminster.
WARD, Miss M. M., 156 Centenary Road, Goole, Yorks.
WARE, Mr and Mrs E. H. and Michael, High Beech, Woodbury, Exeter. WEBB, B., Ashcombe, 22 Thurlow Road, Torquay. WESTBROOK, M. J. D., 103 Ilsham Road, Torquay. WHEELER, B. H., 139 St Ann's Hill, London, S.W.18. WHIELER, B. H., 139 St Ann's Hill, London, S.W.18.
WHICHER, Misses E. and J. and D.S., Searles, Bridford, Nr Exeter.
WHIDBOURNE, R. F., 5 Burton Court, Chelsea, London, S.W.3.
WHITE, Miss A., Timbers, Leigh, Surrey.
WHITE, A. H., Kennsham Manor, Saltford, Som.
WHITE, B. D., Peamore Farm, Alphington, Exeter.
WHITE, Miss C., and Miss E. M., 802 Wolseley Road, Plymouth.
WHITE, G. D., Downes Lodge, Crediton.
WHITEHEAD, G. K., The Old House, Withnell Fold, Chorley, Lancs.
WHITEHEAD, N. A., South Bank, Compton, Nr Wolverhampton.
WHITTAKER, Miss B., Freeman Road Hostel, Newcastle-on Tyne 3.
WIGGINS Mr and Mrs F. D. (10 Bayer Products Research Station WIGGINS, Mr and Mrs E. D., c/o Bayer Products Research Station, Crawley, WILDE, G. C. A., Greenhill, Thorncombe, Chard, Som. WILLEY, A., 27 Ferndale Road, St Thomas, Exeter. WILLIAMS, C. R., Midland Bank College, Oxted, Surrey. WILLIAMS, Miss F. N., 126 Sunningfields Road, Hendon, London, N.W.4. WILLIAMS, Mr and Mrs G. J., 15 Claude Road, Cardiff. WILSON, Mrs D., Lower Lease, Saunton, Braunton. WINCHESTER, A. M., 114 Cotham Brow, Cotham, Bristol, 6. WINTER, R. L., Rockmount, Hill Barton Road, Exeter-WORDEN, Prof. A. N., Cromwell House, Huntingdon. WREN, G. A. and W. P. J., 19 Ashley Terrace, Bideford. WRIGHT, Dr F. R. Elliston, Braunton. WRIGHT, J. D'O., Rose Cottage, Lower Upham, Hants. YEATMAN, A. J., Ottersfield, Newton Poppleford, Nr Sidmouth. The state of the s