

The **BEDFORDSHIRE NATURALIST**

BEING THE
JOURNAL
OF THE
BEDFORDSHIRE
NATURAL HISTORY SOCIETY
AND FIELD CLUB
FOR THE YEAR
1956

No. 11

Price Five Shillings

PUBLISHED BY THE
BEDFORDSHIRE NATURAL HISTORY SOCIETY & FIELD CLUB

BEDFORD
STONEBRIDGES PRINTERS LIMITED
1957

BEDFORDSHIRE NATURAL HISTORY SOCIETY & FIELD CLUB 1957

President

SIR FREDERICK MANDER, M.A., B.Sc.

Past Presidents

OLIVER G. PIKE, F.R.P.S., M.B.O.U.

MAJOR SIMON WHITBREAD, B.A., D.L., J.P.

Chairman

F. G. R. SOPER, J.P.

Hon. General Secretary

HENRY A. S. KEY, M.P.S., 61B GOLDINGTON ROAD, BEDFORD

Hon. Programme Secretary

L. A. SPEED, 226 GOLDINGTON ROAD, BEDFORD

Hon. Treasurer

J. M. DYMOND, 27 WENDOVER DRIVE, BEDFORD

Hon. Editor

A. W. GUPPY, 53 GRANGE LANE, BROMHAM

Hon. Librarian

MISS E. PROCTOR, B.Sc., THE NATURE ROOM, 4 THE AVENUE, BEDFORD

Council

MISS A. L. COOPER

J. G. DONY, Ph.D.

W. DURANT

F. C. GRIBBLE

W. G. HARPER

MISS E. PROCTOR

S. W. RODELL

MISS G. M. TATTAM

B. B. WEST

K. E. WEST

RECORDERS

BOTANY :

Except Fungi : J. G. Dony, Ph.D., 41 Somerset Avenue, Luton.

Fungi : D. A. Reid, B.Sc., The Herbarium, Royal Botanical Gardens,
Kew.

Plant Galls : H. F. Barnes, M.A., Ph.D., 21 Carisbrooke Road,
Harpenden, Herts.

METEOROLOGY :

A. W. Guppy, B.Sc., 53 Grange Lane, Bromham.

PALAEONTOLOGY :

P. J. Smart, 1 Laburnum Avenue, Bedford.

ZOOLOGY :

Crustacea : Miss E. Proctor, B.Sc., 253 Goldington Road, Bedford.

Insecta : *Coleoptera* : C. MacKechnie Jarvis, F.L.S., Sussex House,
Parkside, Wimbledon.

Diptera : B. R. Lawrence, B.Sc., Ph.D., 4 Princes Garth
London Road, Forest Hill, London, S.E.23.

Hymenoptera : V. H. Chambers, Ph.D., 47 Westbourne Rd.,
Luton.

Lepidoptera : B. B. West, 37 Cardington Road, Bedford.

Odonata : B. B. West, 37 Cardington Road, Bedford.

Mollusca : (Vacant).

Vertebrates :

Amphibians : F. G. R. Soper, The Briars, Bromham Park, nr. Bedford.

Birds : Henry A. S. Key, M.P.S., 61B Goldington Road, Bedford.

Fishes : F. G. R. Soper, The Briars, Bromham Park, near Bedford.

Mammals : Henry A. S. Key, M.P.S., 61B Goldington Road, Bedford.

Reptiles : F. G. R. Soper, The Briars, Bromham Park, near Bedford.



[Photograph by Henry A. S. Key

BLACK-HEADED GULL AT NEST, STEWARTBY (see p. 36)

THE BEDFORDSHIRE NATURALIST

BEING THE

JOURNAL

OF THE

BEDFORDSHIRE NATURAL HISTORY SOCIETY AND FIELD CLUB

EDITED BY A. W. GUPPY, B.Sc.

No. 11—1956

CONTENTS

	PAGE
OFFICERS OF THE SOCIETY	cover ii
CONTENTS	1
1. REPORT OF COUNCIL	2
2. STATEMENT OF ACCOUNTS	4
3. PROCEEDINGS—	
Indoor Meetings	5
Field Meetings	5
Botanical Section	8
The Fungus Foray	9
Ornithological Section	11
Special Meeting	11
Annual General Meeting, 1957	12
Seventh Ornithological Conference	13
4. OBSERVATIONS AT A STARLING ROOST. <i>By H. A. S. Key</i>	14
5. COLLECTING MOTHS BY MERCURY VAPOUR LAMP. <i>By Kenneth E. West</i>	16
6. REPORTS OF RECORDERS	
FLOWERING PLANTS. <i>By J. G. Dony</i>	18
FUNGI. <i>By D. A. Reid</i>	18
METEOROLOGY. <i>By A. W. Guppy</i>	20
PALAEOLOGY. <i>By P. J. Smart</i>	23
LEPIDOPTERA. <i>By B. B. West</i>	26
BIRDS. <i>By H. A. S. Key</i>	28
MAMMALS. <i>By H. A. S. Key</i>	42
7. NOTES, QUERIES AND OBSERVATIONS	
LEARNING TO KNOW PLANTS. <i>By J. G. Dony</i>	42
THE CLOUDED YELLOW BUTTERFLY. <i>By H. C. M. Felce</i>	43
HOW LONG CAN PRIMROSES BLOOM? <i>By Mrs L. M. Goosey</i>	43
PECTORAL SANDPIPER IN BEDFORDSHIRE. <i>By David and Roger White</i>	44
8. ABSTRACTS OF LITERATURE ON BEDFORD NATURAL HISTORY FOR 1956	44
THE LIBRARY	45
NEW MEMBERS	47
NOTICES	cover iii

Report of the Council

The steady influx of new members during the year has been most gratifying, amounting to 32 in all. 13 members resigned and the Council unfortunately found it necessary to delete the names of several others who were grossly in arrears with their subscriptions. Even so, by the end of the year there were 269 names on the register.

The Society further lost one esteemed member by the death of Lady Dorothy Wells of Felmersham Grange. Although for some years in indifferent health yet she was always observant and reported many interesting aspects of the bird life from Felmersham Gravel Pits. Among her friends her lively spirit will be sadly missed.

Both the indoor and outdoor meetings were reasonably well attended though particularly at lectures there is room for improvement. A great deal is to be learned on a wide variety of subjects and the Council will welcome suggestions for improving the programmes. Petrol rationing seems as yet to have had no marked effect on attendance and it is hoped that the position will soon be eased.

Several special events during the year call for particular mention. The 7th Ornithological Conference (reported on page 13) held in Bedford on 4th March was on the whole successful, despite the fall in attendance, and the lecture on Icelandic birds by George Yeates was greatly appreciated. On 22nd November in the Corn Exchange, Bedford, more than three hundred saw the wonderful colour film on the birds of the Spanish Marismas, called by us "Coto Donana" but now officially titled "Wild Spain". The superb lecture by Guy Mountfort which the film illustrated and the very true sound recordings of Spanish birds by Eric Simms together produced a memorable and most enjoyable evening.

It was thought that the successful conclusion to the first ten years of the Society's existence should be fittingly commemorated and this resulted in a dinner being held at the Swan Hotel, Bedford, on 11th October, when nearly eighty were present. An outstanding feature were the table decorations, prepared by Mr and Mrs W. H. Bonnett from colourful wild foliage, fruits and fungi collected by several members from such localities as Rowney Warren, River Ouse, Felmersham Gravel Pits and the Yelnow Lane near Sharnbrook, with the addition of a special contribution by Mr D. W. Elliott from Burdelys Manor, Stagsden. The speeches were perfect and evoked much laughter. The health of "The Society" was proposed by Mr F. G. R. Soper, and Mr Keith Piercy responded. The toast of "Our Guests" was proposed by Dr J. G. Dony, and Sir Frederick Mander replied. It was in every respect an outstanding occasion, the fore-runner, we hope, of more to come. To

complete the success of the evening Dr G. A. Metcalfe showed more of his colour films of birds.

Apart from one fiasco, namely the Geological Meeting at Marston Mortaine, most of the field meetings were well supported, despite the fact that the weather at times left much to be desired. Particularly pleasing were the coach trips and the combined meeting with Suffolk and Letchworth Societies.

It is regretted that delay in submitting material has delayed publication of the 1955 journal, in fact it cannot be expected from the printers before February 1957. The Hon. Editor, Mr A. W. Guppy, is certainly not responsible for this and rightly he has laid down stringent conditions for the 1956 issue. It is hoped that in future all contributors will be more expeditious in submitting articles and reports.

Probably because they do not attend meetings, many members seem to be unaware of the fact that the Society possesses a not inconsiderable library of its own. This collection exists solely for the benefit of members who, with few exceptions, have not availed themselves, up to the present, of the free loan of books. The Council appeals to all to make the library a really live institution.

Once again, to all those who have in any way shown interest in our aims and aided our progress we express our grateful indebtedness.

HENRY A. S. KEY, *Hon. General Secretary.*

4

STATEMENT OF ACCOUNTS FOR 1956

We have examined the above Account with the books and vouchers of the Society and certify the same to be correct in accordance therewith.

BEDFORD,
28th January, 1957

MCPHERSON, TIMMINS & EDNIE,
Chartered Accountants, Honorary Auditors.

PROCEEDINGS 1956

Indoor Meetings

92ND ORDINARY MEETING, 19th January, 1956, Bedford. 'Clouds' by R. H. Pedlow. Attendance 32. *Chairman* : Mr L. A. Speed.

93RD ORDINARY MEETING, 25th January, 1956, Luton. 'Bird-life in Scandinavia' by F. C. Gribble and Henry A. S. Key. Attendance 52. *Chairman* : Mr W. G. Harper.

94TH ORDINARY MEETING, 9th February, 1956, Bedford. 'A Bird-watcher in Norway' by F. C. Gribble. Attendance 24. *Chairman* : Mr H. C. M. Felce.

SPECIAL MEETING TO AMEND THE RULES OF THE SOCIETY. Details printed on page 11 of this issue.

9TH ANNUAL GENERAL MEETING, 16th February, 1956, Bedford. Details as printed in the last issue, No. 10, 1955, page 10.

95TH ORDINARY MEETING, 22nd February, 1956, Luton. 'British Woodland Life' by B. W. Beard. Attendance 27. *Chairman* : Mr F. C. Gribble.

96TH ORDINARY MEETING, 15th March, 1956, Bedford. 'To set you talking' by W. Haylock. Attendance 24. *Chairman* : Mr F. G. R. Soper.

97TH ORDINARY MEETING, 28th March, 1956, Luton. 'Bedfordshire Inhabitants of 120 million Years Ago' by M. W. Hughes-Clarke. Attendance 32. *Chairman* : Miss A. L. Cooper.

98TH ORDINARY MEETING, 4th October, 1956, Luton. 'Owl Pellets' by G. D. Heathcote. Attendance 23. *Chairman* : Mr L. A. Speed.

99TH ORDINARY MEETING, 18th October, 1956, Bedford. 'The Work of the Forestry Commission' by B. W. Beard. Attendance 18. *Chairman* : Mr F. G. R. Soper.

100TH ORDINARY MEETING, 8th November, 1956, Luton. 'Spring Flowers in Wales and Scotland' by E. Meadows. Attendance 33. *Chairman* : Mr W. G. Harper.

101ST ORDINARY MEETING, 13th December, 1956, Luton. 'Birds and Islands' by F. C. Gribble. Attendance 20. *Chairman* : Mr E. Meadows.

Field Meetings

SUNDAY, 8TH JANUARY, 1956. CLEY, NORFOLK. *Leader* : F. C. Gribble. Thirty-two members journeyed to Cley from Luton and Bedford by special coach. Strong winds and a heavy snowstorm occurred, but during a bright interval between 1 and 4 p.m. the party enjoyed quite good bird-watching, during which Snow Buntings, Twites, Shore Larks and the usual winter waders were seen.

SUNDAY, 12TH FEBRUARY, 1956, WREST PARK, SILSOE. *Leader* : J. Dunn. Seventeen members visited Wrest Park in the afternoon and were shown round, particular attention being given to the trees.

SUNDAY, 25TH MARCH, 1956, YELNOW LANE. *Leader* : F. C. Gribble. A party of eighteen members walked up the lane in a strong wind, across Podington Aerodrome and down to the end of the Forty-Foot Lane. A few Jays and Long-tailed Tits were seen, and most of the usual hedgerow birds. About eighty Golden Plover were seen on the aerodrome, and with them were at least two birds of the Northern race.

SUNDAY, 15TH APRIL, 1956, CLOPHILL. *Leader* : B. W. Beard. Twenty-two members were conducted round the Forestry Commission's woodlands by the Head Forester, Mr B. W. Beard. Particular interest was shown at the Nursery, where planting was being undertaken, and a detailed account of the methods and policy was given by Mr Beard.

SUNDAY, 22ND APRIL, 1956, TRING RESERVOIRS. *Leader* : S. W. Rodell. This was primarily an ornithological meeting, fifteen members attending ; the weather was cold at first, but warm and sunny later.

Birds seen were : Golden-Crested and Little Grebe, Coot, Moorhen, Shoveller, Pochard, Tufted Duck, Swans, Willow Warbler, Sandpiper, and probably a Black Tern.

THURSDAY, 3RD MAY, 1956, RAVENS DEN WOOD. *Leader* : W. Durant. Seventeen members attended this evening meeting, the weather being fine and warm. Abundant mistletoe was found growing on hawthorn, together with the usual spring flowers and wild daffodils, which were unfortunately past their flowering period.

SUNDAY, 13TH MAY, 1956, MAULDEN AND CLOPHILL WOODS FOR DAWN CHORUS. *Leader* : F. C. Gribble. A party of thirty-five gathered at 3.45 a.m. on a fine morning to listen to the 'Dawn Chorus'.

SUNDAY, 20TH MAY, 1956, FLITWICK MOOR. *Leader* : F. C. Gribble. Twenty members were present on a rather dull afternoon. A walk round the peat diggings and Folly Wood revealed most of the visiting summer birds such as Whitethroat, Sedge Warbler, Willow Warbler and Chiffchaff. Nests found included those of Tree-Pipit and several Jays. The usual bog plants were noted, with a few patches of Bog Cotton and Sphagnum moss in the boggy areas.

SATURDAY, 26TH MAY, 1956, BROMHAM PARK. *Leaders* : B. B. and K. E. West. About thirty-five people attended this late evening meeting for the purpose of watching the capture of moths by means of the mercury-vapour lamp.

The weather, however, was cold and windy, the temperature falling to 41 deg. F., and no moths were flying. It was appreciated by all that the success of such meetings is dependent upon weather conditions, and, although disappointing, a very sociable meeting was held, which broke up quite early.

Messrs. West express their gratitude to Mr and Mrs Soper for allowing their electric power to be used for working the lamp, and wish only that it had been possible to have had a further evening with the aid of their hospitality similar to those previously enjoyed.

SUNDAY, 27TH MAY, 1956, THERFIELD HEATH, ROYSTON. *Leader* : W. Durant. Twenty-five people attended this meeting, travelling in cars. A bright hot day, full of interest ; the principal botanical finds are listed in the report of the Botanical Section on page 8.

THURSDAY, 7TH JUNE, 1956, WARDEN HILLS. *Leader* : M. Wortley. Only six members attended this meeting under a very threatening sky, meeting at the Warden Tavern and walking round the back of the Warden Hills. A male Red-backed Shrike was seen, as well as other interesting birds.

SUNDAY, 17TH JUNE, 1956, CLEY, NORFOLK. *Leader* : F. C. Gribble. A special coach with thirty-eight passengers visited Blakeney Point on a dull rainy day. The party crossed by boat from Morston to Blakeney Point, where they were shown round the ternery.

Nests of some seventy-seven Sandwich Terns, two hundred and fifty Common Terns, one Arctic and several Little Terns were seen, as well as those of Ringed Plover, Oystercatcher, Redshank and Black-headed Gulls. The Horned Poppy was found in abundance on various stretches of the beach.

SUNDAY, 24TH JUNE, 1956, PRINCES RISBOROUGH AREA. *Leader* : K. West. About forty people in private cars visited the Princes Risborough area, the weather being mixed but generally fine.

This was a new locality to many present, and much of interest was found. Fine specimens of Beech, White Beam, and Juniper were seen, and one or two colonies of Alkanet (*Pentaglottis sempervirens*) and Deadly Nightshade (*Atropa belladonna*) were found. Few birds were seen, and fewer insects, but ova of the Duke of Burgundy Fritillary (*Hamearis lucina*) were found in quantity on cowslip, and whole armies of the caterpillar of the Six-spot Burnet (*Zygaena filipendulae*) were seen, with many of their attractive pupa cases on the grass stems.

An easy journey home was made through the charming wooded country of the area, and later we called at one of the local haunts, Totternhoe Knolls, returning to Bedford in the late evening.

SUNDAY, 8TH JULY, 1956, CHIPPENHAM FEN AND DEVIL'S DYKE. *Leader* : B. D. Jones. This meeting was held in conjunction with the Suffolk Natural History Society, making a total party of over fifty people, all travelling in private cars, in seasonable weather.

The eastern part of the Devil's Dyke was first visited, and a Shrike's nest with young was found. After a picnic lunch, the party went on to Chippenham Fen, where an interesting three hours was spent; the usual fen flora was in evidence.

SATURDAY, 14TH JULY, 1956, PEGSDON HILLS. It had been intended to hold this meeting jointly with the Letchworth Society, but we failed to contact them. Some fourteen of our own members enjoyed a walk over the hills until rain brought the meeting to a premature conclusion.

SUNDAY, 22ND JULY, 1956, DOVEDALE, DERBYSHIRE. *Leader* : W. Durant. Over thirty members in a special coach visited Dovedale, and walked through the beautiful scenery of the Dove Valley. Rain in the afternoon ended the meeting sooner than had been intended. A report on the items of botanical interest appears in the Botanical Report on page 9.

SUNDAY, 12TH AUGUST, 1956, PAVENHAM TO STEVINGTON. *Leader* : Miss G. H. Day. Fourteen members attended this riverside walk from Pavenham to Stevington. The Bog Pimpernel (*Anagallis tenella*) was found though not in flower, as also was the Orange Balsam (*Impatiens capensis*) in the riverside wood. The usual river flora was seen. The party broke up at Stevington Church after seeing the colonies of Butterbur and liverwort at the Holy Well.

SATURDAY, 18TH AUGUST, 1956, MAULDEN WOOD. *Leaders* : B. B. and K. E. West. Eighteen people visited Maulden Wood on a cool, and later, very wet evening to take part in moth-trapping by mercury-vapour lamp. Little of interest was found, and eventually it became so wet that the meeting was forced to an early termination.

SUNDAY, 19TH AUGUST, 1956, MARSTON MORETAINE. *Leader* : M. W. Hughes-Clarke, F.G.S. Only four members attended this meeting and it was therefore cancelled.

SUNDAY, 9TH SEPTEMBER, 1956, WHITE LANE, HARROLD. *Leader* : W. Durant. Meeting cancelled due to excessive rain.

SATURDAY, 15TH SEPTEMBER, 1956, OUGHTON HEAD. *Leader* : J. B. Robertson. Fifteen members took part in this study of aquatic life. An interesting afternoon was spent, but nothing outstanding was found.

SUNDAY, 7TH OCTOBER, 1956, FUNGUS FORAY AT CHICKSANDS WOOD. *Leader*: D. Reid. Forty-two members were present at the annual Fungus Foray. This is reported in detail on page 9.

SUNDAY, 18TH NOVEMBER, 1956, FLITWICK MOOR. *Leader*: F. C. Gribble. The weather was very dull and misty; fourteen members attended. A few Redwings were seen, as well as a single Brambling, a Siskin, and odd Robins and Tits. Some Comfrey was found, still in flower, in one part of the Moor.

Botanical Section

It is pleasing to record that the enthusiasm shown last year for the botanical side of the Society's activities has been well maintained throughout 1956, which has been a very successful year.

The Section held two indoor meetings in the early part of the year on "Flower Identification". The first, on Tuesday, 28th February, dealt with the different methods of identification used in the various Floras and flower books available, and a lively discussion resulted on this difficult problem: the second, in March, was devoted to the practical side, and a number of specimens brought by members were examined and identified by means of some of the Floras.

This year, as last, the botanical side was well represented in the general Summer Programme, and consequently no sectional meetings were arranged for the season.

Although practically all the field meetings in the Summer Programme held botanical interest, the following notes record some of the Section's special activities.

An evening meeting on Thursday, 3rd May, to Ravensden Wood provided a good list of woodland flowers, the most interesting being a fine patch of the primrose-cowslip hybrid (*P. veris x vulgaris*). This plant has often been mistaken for the Oxlip, and is commonly referred to as the False Oxlip. Interest was also shown in a patch of Mistletoe (*Viscum album*) growing on Hawthorn. Although past flowering, the leaves of the Wild Daffodil (*Narcissus pseudonarcissus*), for which the wood is known, were also found.

On Sunday, 27th May, Therfield Heath, Royston, was visited, and a long list of chalk plants was recorded, these including the Field Fleawort (*Senecio integrifolius*) and the Purple Milk Vetch (*Astragalus danicus*). It was a little disappointing, however, that we were unable to see, in flower, two of the important plants for which the Heath is noted; we were too late for the Pasque Flower (*Anemone pulsatilla*), which had finished flowering, and too early for the Bastard Toadflax (*Thesium humifusum*), which was recorded, however, at a later date.

The ornithological coach trip on Sunday, 17th June, to Cley, Norfolk, was not without botanical interest, and thirty-four shingle and salt-marsh plants were recorded; perhaps the most outstanding, in view of the atrocious weather of the day, was the colourful display of the Yellow Horned Poppy (*Glaucium flavum*) on the bare shingle, and the pink flowers of the Sea Milkwort (*Glaux maritima*) on the edge of the salt-marsh.

The Princes Risborough area of Buckinghamshire was visited on Sunday, 24th June, and was full of interest. On the way, the Green Alkanet (*Anchusa sempervirens*) was noted in quantity by the roadside, and among a very long list of plants recorded for the day, the following are worthy of

mention. The Juniper (*Juniperus communis*), which does not grow in Bedfordshire, was of special interest, and some fine spikes of the Bird's Nest Orchid (*Neottia nidus-avis*) and the White Helleborine (*Cephalanthera damasonium*) were seen in the beechwoods. The Deadly Nightshade (*Atropa belladonna*) was another plant which roused much interest; it is scarce in Bedfordshire, now only as an escape, but it is undoubtedly native in the Buckinghamshire beech-woods.

On Sunday, 8th July, a joint meeting with the Suffolk Society took us into Cambridgeshire, where the Devil's Dyke and Chippenham Fen were visited. A number of chalk plants was recorded at the Devil's Dyke in the morning, and two which do not occur in Bedfordshire were specially noted, the Bloody Cranesbill (*Geranium sanguineum*) and the Bastard Toadflax (*Thesium humifusum*), the later being the plant we had hoped to see earlier in the season at Therfield Heath. Chippenham Fen, visited in the afternoon, added further plants to the list, and perhaps the most interest was shown in the Orchids, the following being recorded:

Marsh Helleborine (*Epipactis palustris*)

Early Marsh Orchid (*Orchis latifolia*)

Common Marsh Orchid (*Orchis praetermissa*)

Marsh Fragrant Orchid (*Gymnadenia conopsea* var. *densiflora*)

Another plant worthy of mention was the Wild Columbine (*Aquilegia vulgaris*).

The Annual Botanical Exhibition again adopted the procedure of last year following one of the season's main meetings, and it was held this year on Monday, 9th July, at the Nature Room, 4 The Avenue, Bedford, following the previous day's meeting in Cambridgeshire. Forty-five members visited the Exhibition, and the specimens on display provided much interest and discussion, particularly the Orchid group. Sixty-five species were shown.

This year the main Botanical meeting was the coach trip to Dovedale on Sunday, 22nd July. The Dale is well-known for its flora, and contains many interesting and rare plants. We were fortunate in having a fine day, and our walk through the Dale was well repaid with a list of sixty-eight plants recorded, including two rarities, locally abundant there, Alpine Currant (*Ribes alpinum*) and Nottingham Catchfly (*Silene nutans*). A fine patch of Monkey Flower (*Mimulus guttatus*) was observed, and Long-stalked Cranesbill (*Geranium columbinum*), Shining-leaved Cranesbill (*Geranium lucidum*) and Wall Lettuce (*Lactuca muralis*) were found in abundance.

This concludes a very brief botanical survey of the main meetings, all of which were well attended. It is obvious that the botanical side of the Society's work is on the increase, and I anticipate another successful year in 1957.

W. DURANT.

The Fungus Foray

The foray was held on 7th October, 1956, at Chicksands Wood, and was led by Mr D. A. Reid. About thirty members of the Society were present.

The area visited consisted largely of oak-hazel coppice and fungi were quite plentiful. It is, however, rather interesting to note the scarcity or absence of such genera as *Amanita*, *Lactarius* and *Russula*. Another unusual feature was the occurrence of *Hygrophorus pratensis* and *H. niveus*, both typically grassland species, in the heavily shaded hazel coppices. The abundance of *Omphalia atropuncta*, with its thick cream-coloured decurrent gills and characteristically black-spotted stem, is also worthy of mention, whilst

the discovery of *Microglossum viride* caused considerable excitement. *Trametes albida* does not seem to have been previously recorded from Britain, but it is extremely probable that this is no more than a pileate form of *T. serpens*.

The most interesting find was that of *Stereum sulphuratum*, which is new to the British Isles. It was abundant in Chicksands Wood on twigs, and closely resembled small washed-out specimens of *S. hirsutum*, from which it is distinguished by its silvery hirsute surface and pallid hymenium. The species has since been found in other parts of the country including Hertfordshire, and is probably not uncommon.

Altogether 85 species were collected, of which 20 were new to the county, and 3 confirmed ancient records.

Armillaria mellea (Vahl.) Fr.; *Bolbitius vitellinus* (Pers.) Fr.; *Clitocybe geotropa* (Bull.) Fr.; *Collybia radicata* (Rehl) Berk.; *Coprinus cortinatus* Lange; **C. lagopus* Fr.; *C. picaceus* (Bull.) Fr.; **C. radians* Desm.; *Cortinarius hemitrichus* (Pers.) Fr.; *Crepidotus mollis* (Schaeff.) Fr.; *C. variabilis* (Pers.) Fr.; *Hebeloma crustuliniforme* (Bull.) Fr.; **Hygrophorus fornicatus* Fr.; *H. miniatus* Fr.; *H. niveus* (Scop.) Fr.; *H. pratensis* (Pers.) Fr.; *H. psittacinus* (Schaeff.) Fr.; **H. reai* Maire; *Hypholoma fasciculare* (Huds.) Fr.; *Inocybe geophylla* (Sow.) Fr.; *I. geophylla* (Sow.) Fr. var. *lilacina* Fr.; *Laccaria amethystina* (Vaill.) Cooke; *L. laccata* (Scop.) Cooke; *Lactarius blennius* Fr.; *L. pyrogalus* (Bull.) Fr.; *L. subdulcis* (Pers.) Fr.; *Leptonia euchroa* (Pers.) Fr.; *Marasmius epiphyllus* (Pers.) Fr.; *M. peronatus* (Bolt.) Fr.; *M. ramealis* (Bull.) Fr.; *M. rotula* (Scop.) Fr.; *Mycena galericulata* (Scop.) Fr.; *M. galopus* (Pers.) Fr.; *M. polygramma* (Bull. Fr.; *Nolanea cetrata* (Fr.) Schroet.; **Omphalia atropuncta* (Pers. ex Fr.) Sacc.; *Pholiota togularis* (Bull.) Fr. non Ricken; *Psathyrella disseminata* (Pers.) Fr.; *P. gracilis* Fr.; *Russula fragilis* Fr.; **Tricholoma saponaceum* Fr. var. *squamosum* Cke.; †*T. sulphureum* (Bull.) Fr.

Boletus scaber (Bull.) Krømh.

Polyporus caesius (Schrad.) Fr.; *P. fragilis* Fr.; *P. hispidus* (Bull.) Fr.; **P. rutilans* (Pers.) Fr.; *Polystictus versicolor* (L.) Sacc.; *Poria versipora* (Pers.) Baxter; **Trametes albida* (Fr.) Bourd. & Galz. [? pileate form of *T. serpens* Fr.]; *Trametes confragosa* (Bolt.) Jörst.

Clavaria cinerea (Bull.) Fr.; *C. corniculata* (Schaeff.) Fr.; *C. cristata* (Holmsk.) Fr.; *C. fusiformis* (Sow.) Fr.; **C. pulchra* Peck.

**Corticium comedens* (Nees) Fr.; *Craterellus cornucopioides* Fr.; **C. sinuosus* Fr.; *Hymenochaete rubiginosa* (Dicks) Lev.; **Peniophora cinerea* (Fr.) Cke.; *Stereum hirsutum* (Willd.) Fr.; **S. sulphuratum* Berk. & Rav.

†*Cyathus striatus* (Huds.) Pers.; *Lycoperdon pyriforme* (Schaeff.) Pers.; *Sphaerobolus stellatus* Pers.

**Sebacina fugacissima* Bourd. & Galz.; **S. incrustans* (Fr.) Tul.

Dacryomyces deliquescens (Bull.) Duby.

**Aleuria umbrina* Boud.; **Calycella claroflava* (Grev.) Boud.; *Coryne sarcoides* (Jacq. ex Fr.) Tul.; †*Dasyascypha virginea* (Batsch ex Fr.) Fuckel; **Galactinia succosa* (Berk.) Sacc.; *Helotium fructigenum* (Bull. ex Fr.) Fuckel; *Helvella crispa* Scop. ex Fr.; *Leotia lubrica* (Scop.) Pers. ex Fr.; **Microglossum viride* (Pers. ex Fr.) Gill.; **Orbilbia curvatispora* Boud.; *O. xanthostigma* Fr.

Hypoxyylon fuscum (Fr.) Fr.; *Lasiosphaeria hirsuta* (Fr.) Ces. & de Not.; *Xylaria hypoxyylon* (L. ex Fr.) Grev.

Arcyria denudata Wettstein; *Lycogala epidendrum* Fr.

* Species new to the county. † Ancient records confirmed.

D. A. REID.

Ornithological Section

This year's activities commenced with a coach outing to Cley, Norfolk, on the 8th of January. Arriving at their destination at 1 p.m. in snowy weather the party enjoyed three hours bird-watching during a sunny period. In spite of the north-east wind several species of waders were seen, also a few Twites, Shore Larks and Snow Buntings. The return journey was made for the most part on badly iced roads, and from Newmarket in a very severe snow storm which will long be remembered by those present.

Two indoor meetings were held in January and February at which Mr Key and the Secretary spoke of their experiences in Scandinavia the previous summer. In March the Seventh Ornithological Conference was held (see page 13) and later in the month a field meeting at Yelnow Lane, when all the party had good views of the Northern race of Golden Plover on Podington aerodrome.

Further field meetings were held in the summer months at Tring Reservoir and at Clophill for the "Dawn Chorus". The visit in June to Blakeney Point and Cley was also unfortunate as regards weather, this time there being a strong north-east wind with heavy rain. All present, however, had a good view of the ternery. Those who returned to Morston saw a Black Tern whilst the others, who trudged along the shingle ridge to Cley, found several nests of Sheld-ducks.

At Luton in October, G. D. Heathcote, M.Sc., of Rothamstead Research Station gave an interesting lecture on "Owl Pellets" based on his own observations.

To conclude the year's activities the Secretary gave a lecture at Luton on birds in North-West Sutherland and the Isle of May.

During the year a number of members helped in the monthly counts for the Wildfowl Trust and in the British Trust for Ornithology's enquiries regarding Herons and Mute Swans. I look forward to their help in the coming year in respect of the enquiries into the status of Nightjars and Red-Backed Shrikes, two interesting species of which the distribution in the county is not yet fully known. I would like to say that the efforts of members who help in these enquiries are very much appreciated by the organisers who look forward to our continued support.

F. C. GRIBBLE.

Special Meeting

Forty members assembled in the Nature Room, The Avenue, Bedford, on Thursday, 16th February, 1956. The Chairman, Mr F. G. R. Soper, opened the proceedings by explaining that, to accord with legal requirements of the Finance Act when seeking exemption from Entertainments Duty, certain amendments and additions to the Rules of the Society had been recommended by the authorities.

He then read to the meeting the following draft of rules which had been submitted to H.M. Customs and Excise and approved in principle:—

(a) Rule 11 amended to read :

"The funds of the Society shall be both utilized and invested by resolution in Council and the banking accounts shall be held in the name of the Society."

Additional rules (the numbers of the other rules to be put forward in sequence):

(b) To be Rule 12 :

"The funds of the Society shall be utilized only for the objects stated in the Rules. No member of the Society shall receive payment, direct or indirect, for services or anything but legitimate expenses incurred in the Society's work, but the Council reserves the right to make suitable grants in aid of research on the flora and fauna of the county."

(c) To be Rule 13 :

"In the event of dissolution, no part of the remaining funds and assets shall be distributed among the members, but shall be devoted to objects similar to those of the Society, approved by the Commissioners."

These rules were adopted unanimously on a show of hands.

Amendment to Rule 6 : Mr Eric Lucas motioned that "The Annual General Meeting shall be held in Bedford not later than 31st March." The proposition was seconded by Miss E. Proctor and carried on a show of hands, with only three dissenting.

The Chairman then declared the Special Meeting closed.

Annual General Meeting 1957

THE TENTH ANNUAL GENERAL MEETING was held as usual in the Nature Room of the Training College, The Avenue, Bedford, on Thursday, 28th February, 1957, with forty-seven members present and Mr F. G. R. Soper in the chair.

The proceedings opened with the reading of the minutes of the previous A.G.M. which were adopted, and the Hon. General Secretary then submitted the Report of the Council for 1956. The Report, printed on page 2, gave details of another satisfactory year with a further increase in membership. The death of Lady Dorothy Wells of Felmersham was announced with regret. An appeal was made for a greater use of the Library. The Report was adopted.

The Statement of Accounts presented by the Hon. Treasurer, Mr J. M. Dymond, showed a relatively large sum standing to the Society's credit, but an outstanding account for printing the Journal would offset this. Even so, the finances of the Society had greatly improved. The gratitude of the Society was recorded to its many benefactors, with two of special mention : Mr Eric Lucas, the Hon. Auditor, and the College authorities (through Miss E. Proctor) for the free loan of the Nature Room. The accounts were received, with an expression of thanks to Mr Dymond.

Mr A. W. Guppy, as Hon. Editor, appealed for an increase in material for the Journal, especially in the form of short notes.

Both the Ornithological and Botanical Sections were well reported by the respective Section Secretaries, Messrs F. C. Gribble and W. Durant, and showed that the year had been one of considerable activity in the field in each case. Those concerned were thanked for their co-operation and leadership.

Miss E. Proctor as Hon. Librarian indicated the growth of the Library, and requested members to be more expeditious in both signing for, and returning, books borrowed. A further request for constructive suggestions from the body of members to assist in compiling programmes was launched by Mr L. A. Speed.

A vote of thanks from the Chair to all the officers was endorsed by the meeting.

Then came the election of officers. The Chairman announced that in pursuance of its policy of honouring a succession of noteworthy persons in the county by offering them, in turn, the Presidency of the Society, Sir Frederick Mander, M.A., had been approached and had graciously accepted the appointment; Major Simon Whitbread had endorsed the Council's decision. The meeting unanimously approved this action, and also, without dissent, re-elected the retiring officers en bloc.

As only ten nominations for the same number of seats on the Council had been received there was no need for a ballot, and the following members were duly elected without division:

Miss A. L. Cooper, Miss E. Proctor, Miss G. M. Tattam, Dr J. G. Dony, and Messrs W. Durant, F. C. Gribble, W. G. Harper, S. W. Rodell, B. B. West and K. E. West.

When dealing with 'any other business' a hope was expressed from many members that there would be a greater balance of articles among the several interests in the Journal which at present was predominantly ornithological. It was, of course, up to each and every member to remedy this. The business of the meeting was then declared closed.

To conclude the evening's programme, Mr F. C. Gribble showed a number of colour-slides depicting the activities of the Society and suitably commented on them. An additional point of interest was provided by cases of insects exhibited by Messrs B. B. and K. E. West.

Seventh Ornithological Conference

As on the previous occasion, this function was held in the Civic Theatre, the Town Hall, Bedford, when the chair was taken by Mr F. G. R. Soper. The attendance was less satisfactory this time, with 176 persons present. Fewer people came from outside the county than in former years, making the event much less representative, and this fact, coupled with the small amount of discussion in which relatively few of the audience participated, now raises the question of whether such meetings are desirable in the future.

It is regrettable that keener interest should not have been evinced both by individuals and associated Societies in what could be the means of co-ordinating work and disseminating information. Constructive suggestions would be welcome from all quarters, aiming at a solution which would be to mutual advantage.

From the general atmosphere of the meeting, however, it was evident that the audience thoroughly enjoyed itself, more particularly during the morning session, when an address was given by Mr George Yeates, B.A., F.R.P.S., on "The Pink-footed Geese of North Iceland". Magnificently illustrated with monochrome slides, this not only described the experiences of the lecturer in company with Col. Nial Rankin during a recent trip to the Skalfandafloft River, but the descriptions of the numerous other species encountered on former visits suggested that a more appropriate title would have been "Birds of Iceland". The audience showed its appreciation in no uncertain manner.

Then, after brief discussion, there was an interval for lunch in which, as on former occasions, the ladies of the Social Committee earned added praise for their excellent catering arrangements.

The afternoon session opened with an address by Mr George Atkinson-Willes of the Severn Wildfowl Trust in which he not only enumerated the various species involved in "Wildfowl Counts" but dwelt on the several factors governing distribution, and explained with detail in a delightful style the processes of observation, collation of data, and assessing results. His talk was both illustrated with graphs and diagrams and a series of Kodachrome slides showing habitats, prepared by Mr Henry A. S. Key.

Mr N. G. Blurton Jones followed with a lecture on "Canada Geese in Britain", supported by a film.

The programme terminated with a showing of more of his excellent colour-films of birds by Dr G. A. Metcalfe.

A special stall under the management of Mr J. Parslow of the British Trust for Ornithology and Mr F. C. Gribble, the county representative of that organisation, sold appropriate literature.

Observations at a Starling Roost

BY HENRY A. S. KEY

The Starling (*Sturnus Vulgaris*) is a common bird in Bedfordshire at all seasons of the year, nesting, not only in rural areas but very abundantly in towns. These resident numbers are considerably augmented during the winter months by tens and probably hundreds of thousands of others, which arrive chiefly from Scandinavia, Russia and the Baltic States during the autumn and feed mainly in our agricultural countryside, though large numbers scavenge the built-up areas and such by-products of civilisation as sewage farms and refuse dumps.

These birds congregate at night from extensive areas, in much the same manner as rooks, to communal roosts which are usually sited in thorny copses and spinneys and the passage of small parties may be witnessed soon after sunset, in the direction of the favoured area. Although there is some fluctuation of roosting sites, in the main, once a roost has reached an optimum condition of growth and non-disturbance, it is often used for many seasons. At each roost the pattern of assembly is much the same. The birds fly at first in leisurely stages towards the roost, but as the daylight fades and they get nearer to the point of assembly, their flights are more direct and flocks tend to converge and amalgamate.

The point of assembly is close to the roosts and often on the ground, where the birds form a dark carpet and the noise of their whistling and chattering is considerable. Then suddenly they get up, often indulging in some preliminary aerobatics, first in extended and then in close formation, before the entire party moves in a steady stream into the roost proper. Here with a great deal of commotion they wheel around and settle on the trees. For a short period there may be changes of perching areas within the roosting wood, but finally, when it is almost dark, the whole mass of birds is assembled in the regularly used part and then as each stem

becomes packed with the jostling mass the din reaches its crescendo. From this tight grouping they are then not easily disturbed and sharp noises such as hand-clapping usually only suffice to cause the nearest group to move a few yards away.

In north Bedfordshire it would appear that the majority of the birds frequent one or other of two very large roosts, the populations of which would be hard to determine. These are Horn Wood, near Bozeat, Northants., just outside the west boundary of the county and another site near Everton in the east. There was some years ago a smaller roost in Keysoe Park Wood, but this seems to have been abandoned. The Horn Wood-roost is in conifers, some twenty-five or so years old, but it is with the so-called Everton-roost that my following more detailed observations are concerned. This roost is sited on the flat plain below Everton, between that village and Tempsford rail-crossing, to the west of Waterloo Farm. The area is to the south of the now disused R.A.F. airfield and consists of several acres of hawthorn scrub, mainly surrounded by arable land, both features being used for assembly. Immediately adjoining, to the south, is the roost proper, in an overgrown copse of a few acres, marked "Ash Plantation" on the Ordnance Survey, though now thick with ragged hawthorn some 10-15 feet high. The main roost is sited in the centre of the spinney and is difficult to penetrate by reason of the wilderness of dead and fallen branches.

Early in 1956 in company with Messrs F. C. Gribble and J. A. D'E. Miller I paid a number of visits to the roost, arriving before sundown. On entering the wood the stench of the ordure was very noticeable with a strong ammoniacal content as one approached the main area. Having been in use for a number of years, the droppings, which thickly coated each twig and the ground for several inches in depth, had killed much of the growth. The excrement contained a high proportion of vegetable matter, the seeds of hips and haws being very noticeable. One evening we set up a hide and recording apparatus in the wood and recorded the sounds of the birds. One or two interesting points were noted. A number of explosive "crow-scarers" had been set up in neighbouring fields and when these fired there was little diminution in the volume of the noise made by the birds. Yet when a train passed (not sounding its hooter) on the main line, nearly half a mile away, there was a noticeable lull.

The sharp frosts of February killed scores and probably hundreds of these roosting birds. A slight powdering of snow some days before one visit had formed just sufficient backcloth for the tragedy and helped our investigations. The dead birds lay for the most part on their backs and many had been dead for several weeks. Predators had eaten them partly or almost entirely, the

breast being favoured. Although we examined a large number carefully we could not discover a single identification ring.

It was the numerous pellets and other castings that particularly aroused our attention. Rubber bands of all sizes were abundant, often up to a dozen in a square yard of ground area. The pellets consisted of string, corn-husks and other vegetable matter and hair, while snail shells lay thickly around. Mr G. D. Heathcote of Rothamsted Experimental Station identified some of these as probably *Helix Cantiana* (Montagu) and *H. Nemoralis/nortensis* group, though fading and discolorations made recognition difficult. They are all common species and widely distributed. It seems most probable that the rubber bands came from a sewage farm, possibly that at Bedford, where they float out on to filters and sludge deposits.

It was intended to study the roost more closely during the winter of 1956-57 but a visit on 31st October, 1956 to the area revealed that the hawthorns were in the process of destruction by felling and burning and the whole roosting area was being reclaimed. Owing to petrol rationing it has been difficult to trace the displacement of the roost.

Information relating to other starling roosts in Bedfordshire is particularly wanted, and I shall be grateful if members will supply me with details at an early date.

Collecting Moths by Mercury Vapour Lamp

BY KENNETH E. WEST

Having tried the ordinarily accepted methods of collecting over a long number of years which, if interesting, can be a long and at times an unrewarding pastime, my son Bernard and I decided, after much talk upon the subject, to invest in a Mercury Vapour Lamp. We collected data upon the matter, receiving quite a lot of help from a friend, Dr N. Birkett of Kendal, who had collected by this method for years.

We came to the conclusion quite quickly that this could be a costly business if done thoroughly, particularly if one had to buy all the various parts of equipment needed, but as both of us are fairly handy with tools we decided to buy what we had to and make the rest, and in consequence we feel that we are far better equipped than if we had been supplied by professional makers.

To work a Mercury Vapour Lamp it is essential to have alternating current and as this is now almost universal, it is quite easy to collect in many habitats, always providing one can plug

in to a supply of electricity. This does not necessarily tie one down to urban districts as remote farms have power lines laid on now, and it is remarkable how co-operative and interested the average farmer is if approached in the right manner. As our other interests in natural history have enabled us to make many friends in the countryside we have not had any difficulty in fixing up a night's collecting. However, there are the really remote places away from any supply and for these one needs to generate one's own supply. There are on the market 24-volt D.C. generators with a small petrol engine with which one must have a rotary converter to convert the electricity from D.C. to A.C. and to step up the voltage from 24 to 230/240, and these can cost a lot of money.

By careful scrutiny of various trade papers we were able at last to pick up ex-Government equipment in new condition for a fraction of its original cost. So having acquired this, with a reel of cable and a tripod to hold the lamp and a white sheet for the moths to come to rest upon, we could now collect anywhere. It should be made clear that amongst the many hundreds of moths that come to light one takes only a very limited number and what to do with the others is a problem. We have partly solved it by collecting the "unwanted" and retaining them in a perforated canister to be released at the end of our outing.

It is necessary to clear the air of these, as to try and collect the one specimen needed amid hundreds of others is to attempt the impossible, and here a note of warning; if one is using a car the moths should not be released too early or one will have moths around, and in, the car the moment the lights are put on, so release should be delayed, driving away with side lights for a few yards, keeping the windows closed.

The attractive power of a Mercury Vapour Lamp is remarkable and can hardly be believed until seen; I understand that it is almost as effective if screened by a "Woods" glass, a black envelope that only allows a small percentage of light to pass, so its efficiency does not rely upon light alone but upon the degree of ultra-violet radiation. When collecting at a fixed site it is not necessary to be in constant attendance, one can use a trap.

This consists of a box-like cage with a funnel top over which is fixed the lamp; the moths, attracted by the light, fall, and are guided by the funnel into the box, the hole in which is about two inches square.

A door at the side allows one to sort things out in the morning, and as a point of interest it is remarkable how the sparrows sit around and wait for one to do this in anticipation of an easy meal. Incidentally, one does not find any traces of moths on the lawn after a night's collecting; the early birds have seen to that. Originally it was intended to have a killing device in the trap, but this was

thought to be needless slaughter and was not fitted as on many nights hundreds of moths are caught and not a single insect is retained. We remember one night, when the cage was opened, we had 550/570 insects inside, over 400 of which were Yellow Underwings (*pronuba* (Linn)). This, we feel, in its season, must be one of our most common moths. We found that to place pressed cardboard egg-containers haphazardly inside the cage gave the insects many nooks and crannies to hide in, but having seen interesting specimens enter and not finding them in the morning, we were forced to the conclusion that there must be quite an exodus at the entrance when the light was extinguished, so here was another problem. We had by this time evolved a time-switch to cut out the light at any desired time, thus enabling us to set it, go to bed and sort the catch in the morning. Using the same switch we fitted an electro-magnet to a small weight-operated trap-door at the cage entrance, thus retaining everything that entered.

We found it quite impossible to classify everything as we caught it, as on some occasions the numbers were quite formidable. We just set each specimen with date and place, and so provided pleasant work for many winter evenings.

Reports of Recorders

FLOWERING PLANTS

My own attentions have been again turned mainly to a revision of the flora of the neighbouring county of Hertfordshire and I report that very few records from Bedfordshire have reached me. The most interesting referred to the discovery in 1955 by Mr L. G. Adams at Fancott of *Carex x pseudoaxillaris*, this being the first record of this interesting hybrid sedge for almost a century. Mrs G. Ashton reported new stations for *Orobanchae latior* (Tall Broomrape) near Church Street Station, Dunstable and *OphioGLOSSUM vulgare* (Adder's Tongue) in abundance at Well Head, Eaton Bray. *Genista tinctoria* (Dyer's Greenweed) was observed by J. D. Stephen growing plentifully on the site of the disused aerodrome at Tempsford.

Records for the county for the Distribution-Maps Scheme of the Botanical Society of the British Isles have been completed from the records so far available. The records for the Ampthill grid square (53/03) so far lead for the country as a whole with a total of 828 species. The rest of the county is very well represented in the Scheme but some comparatively common species are still awaiting record in some squares in the Bedford area. The recorder will gladly provide lists of these plants in the hope that they may be recorded in the remaining months of 1957 or in 1958.

The very wet summer gave expectations of a large number of wool adventive and other alien species. These hopes were not realised and only six new species were added to the list.

J. G. DONY

FUNGI

During the 1956 spring foray of the British Mycological Society a visit was made to Kings Wood and Stockgrove Wood, Heath and Reach. A large number of fungi were collected (see Trans. Brit. Mycol. Soc., 39, 282-286, 1956), of which 53 were new to the county. For convenience a list of the species collected in Bedfordshire is given below.

Bolbitius vitellinus (Pers.) Fr.; *Entoloma clypeatum* (L.) Fr.; *Galera hypnorum* (Batsch) Fr.; *Hypholoma fasciculare* (Huds.) Fr.; *Marasmius esculentus* (Wulf. ex Fr.) Karst. sub. sp. *pini* Singer; **Mycena pseudo-crispula* Kühner; **Panaeolus ater* Kühner and Romag.; *Panus stipticus* Karst.; **Pholiota sphaeromorpha* (Bull.) Fr.; *P. togularis* (Bull.) Fr.

Daedalea quercina (L.) Fr.; *Polyporus adustus* (Willd.) Fr.; *P. betulinus* (Bull.) Fr.; *Polystictus abietinus* (Dicks.) Fr.; *Poria versipora* (Pers.) Baxter [as *P. mucida*]; **Trametes subsinuosa* Bres.

Radulum orbiculare Fr.

**Pistillaria setipes* Grev.

**Corticium confine* Bourd. & Galz.; **C. lacteum* Fr. non Bourd. & Galz.; *C. laeve* (Pers.) Quél.; **C. sphaerosporum* Maire; **Cyphella capula* (Holmsk.) Fr.; **C. sulphurea* Fr.; *Gloeocystidium lactescens* (Berk.) v. Höhn. & Litsch.; **G. tenue* (Pat.) v. Höhn. & Litsch.; **Pellicularia botryosum* (Bres.) Rog.; **Peniophora byssoides* (Pers. ex Fr.) Bres.; *P. gigantea* (Fr.) Masee; **P. hydroides* Cooke & Masee; **P. mollis* (Bres.) Bourd. & Galz.; **P. pallidula* Bres.; **Solenia anomala* (Pers.) Fr.; *Stereum hirsutum* (Willd.) Fr.

Exidia glandulosa (Bull.) Fr. [as *E. spiculosa* (Gray) Sommerf.].

Puccinia adoxae Hedw.; *P. obtegens* Tul.; **Tranzschelia anemones* (Pers.) Nannf.; *Uromyces dactylidis* Othth.

**Urocystis anemones* (Pers.) Wint.

**Acetabula leucomelas* (Pers. ex Gill.) Boud.; *Aleuria repanda* (Karst.) Boud.; **Belonopsis pilosa* (Crossl.) Rehm; **Dasyscypha diminuta* (Rob.) Sacc.; *D. nivea* (Hedw. fil ex Fr.) Sacc.; **Desmazierella acicola* Lib.; **Helotium conigenum* (Pers. ex Fr.) Boud. sensu Karst.; **Hyaloscypha dematiicola* (Berk. & Br.) Nannf. [Conidial]; **H. leuconica* (Cooke) Nannf.; **H. stevensoni* (B. & Br.) Nannf.; **Hyalotricha trichoides* (Phill. & Plowr.) Dennis; **Mollisia cinerea* (Batsch. ex Fr.) Karst.; **M. dilutella* Fr.; **M. minutella* (Sacc.) Rehm; **Ombrophila clavus* (Alb. & Schw. ex Fr.) Cooke var. *grandis* Boud.; **Sclerotinia fuckeliana* (de Bary) Fuckel [as *Botryotinia fuckeliana*].

**Actidium hysterioides* Fr.; **Anthostomella tomicum* (Lév.) Sacc.; **Chaetosphaeria innumera* (Berk. & Br.) Tul.; **Cryptosphaeria eunomia* (Fr.) Fuckel; **Cryptospora betulae* Tul.; **Diaporthe leiphaemia* (Fr.) Sacc.; **Hypocrea pulvinata* Fuckel; **Hypoxylon rubiginosum* (Pers. ex Fr.) Fr. [Conidial]; **Leptosphaeria graminis* (Fuckel) Sacc.; **L. nigrans* (Rob. in Desm.) Ces & de Not. [in error as *L. nigricans*]; *Lophodermium pinastri* (Schröd. ex Fr.) Chev.

**Acrothecium simplex* Berk. & Br.; *Aegerita candida* Pers. ex Fr.; **Arthrimum curvatum* Kunze ex Fr.; **A. puccinioides* DC ex Fr.; **Dactylium dendroides* Fr. [as conidial *Hypomyces rosellus* (A. & S. ex Fr.) Tul.]; **Helminthosporium longipilum* Corda [as conidial *Melanomma subdispersum* (Karst.) Berl. & Vogl.]; **Periconia hispidula* (Pers. ex Fr.) Mason & Ellis; **Tetracladium marchalianum* De Wild.

Peronospora alsinearum Casp.; **P. aparines* (de Bary) Gäum.; **P. dentariae* Rabenh.; *P. ficariae* Tul.; *P. ranunculi* Gäum.; *P. trivialis* Gäum.; **P. verna* Gäum.; **Synchytrium mercurialis* (Lib.) Fuckel.

Arcyria ferruginea Sauter.

The fungi listed below were isolated by Janet E. Mollison from soil samples taken at Ampthill, during her work on the effects of partial sterilization and acidification of soil on the fungal population (See Trans. Brit. Mycol. Soc. 36, 217, 1953). Very little is known of the soil fungi of the county, so it is not surprising to find that 23 of the 28 fungi mentioned are new records for Bedfordshire.

**Arachniotus candidus* (Eidam) Schroeter.

**Acrostalagmus cinnabarinus* Corda; *Cladosporium herbarum* Link ex Fr.; *Cylindrocarpon radicicola* Wollenw.; **Gliocladium roseum* (Link) Thom.; **G. atrum* Gilman and Abbot; **Gliomastix convoluta* (Harz) Mason; **Monilia geophila* Oudemans; **Oidiodendron griseum* Robak; **Penicillium adametzi* Zaleski; **P. janthinellum* Biourge; **P. lilacinum* Thom; **P. nigricans* (Bainier) Thom; **P. restrictum* Gilman & Abbot; **P. spinulosum* Thom; **P. vermiculatum* Dangeard; *Phoma eupyrena* Sacc.; **Sporotrichum carnis* Brooks & Hansford; **Stachybotrys atra* Corda; **Trichocladium asperum* (Corda) Harz; *Trichoderma viride* Pers. ex Fr.; *Trichothecium roseum* Link; **Verticillium nubilum* Pethyb.

**Mortierella hygrophila* Linneman; **M. hygrophila* var. *minuta* Linneman; **Mucor hiemalis* Wehmer; **M. ramannianus* Möller; **Rhizopus stolonifer* (Fr.) Lind.

* Species new to the county. † Ancient records confirmed

D. A. REID

METEOROLOGY

The severe and prolonged drought which began in July, 1955, continued into 1956 until the end of May; thereafter the three summer months, June, July and August, were wetter in total at all stations than the corresponding months of 1954. 1956 thus supplants 1954 as having, with 1903, 1912 and 1917, one of the four wettest summers of the present century. The net result was a year with a total rainfall only slightly less than average, although the deficiencies of 1955 were still not made good by the end of the year.

One of the disadvantages of assessing rainfall by annual totals is that it tends to conceal the occurrence of dry periods which continue from the last few months of one year into the beginning of the next; it is thus not easy to observe that the eleven months from July 1955 to May 1956 inclusive, constitute one of the driest spells of the present century. At Bromham, for example, only 11.18 inches of rain fell during this period, comparing fairly closely with amounts recorded from other stations near Bedford during the famous droughts of 1920-1921 and 1933-1934. The deficiency was most acute during the early months of the year from February to May and consequently had a great influence upon the spring growth of most vegetation.

The year began, somewhat strangely, with a thunderstorm on New Year's Day, and three days of thick fog on 5th, 6th and 7th January. A blizzard on the evening of the 8th gave a foretaste of winter, but a thaw occurred on the 10th, and the remainder of the month was fairly wet with a few slight falls of snow. The last day of January initiated four weeks of severe weather, the first three days of February being intensely cold with nearly 20 degrees of frost at night. A brief second cold spell occurred on the 9th and 10th, while the third and longest began on the 13th and continued through to the 27th. During the seven days from 19th to 25th February inclusive the thermometer never rose above freezing-point, day or night.

March, April and May were dry and chilly. The second half of April was dominated by persistent north-east winds, and despite a return to westerly conditions at the beginning of May, the drought persisted with but slight intermissions throughout the latter month; May 1956, was in fact, the driest May since 1901, with rain on four days only, totalling about half an inch. Air frost was recorded on the night 17th-18th May.

The year-long drought finally broke in June, which was rather cool and wet throughout, with several thunderstorms. Unsettled weather persisted during July, with further heavy thunderstorms. The three hottest days of

the year were 25th to 27th July, but the warm spell collapsed after the heavy storm of the 28th and was never resumed, August being wet and cool without any settled fine weather, and similar conditions continued until 9th September.

The remainder of September was dry and fine, with much sunshine, and temperatures up to 74 deg. during the third week. October, although dominated by westerly conditions and mild in consequence, was deficient in rainfall, and similar conditions prevailed in November.

December was exceptionally dull and sunless, the average sunshine being only .62 hours daily. It was, however, mostly mild, with thick fogs during the third week. A slight cold spell around Christmas Day brought some snow, but milder and wet conditions were resumed before the end of the year.

RAINFALL

The rainfall at most stations was between 25% and 30% more than for the previous year. With one exception (Carlton) the July rainfall was the heaviest monthly total, largely due to thunderstorms, while May and February were closely similar in having half an inch or less at most places.

The wettest day was 8th July with 1.04 inches (.88 inches at Carlton) due to an overnight thunderstorm, and ten days later, on 18th, another thunderstorm gave .87 inches.

The longest wet period was from 14th to 31st January—13 days, although daily amounts were often very small. The longest continuous dry period was from 17th to 29th April inclusive, although there were only five wet days in the seven weeks between 17th April and 3rd June.

Snow fell on sixteen days, the heaviest fall, .45 inches, during the blizzard of 8th January.

THUNDERSTORMS

Thunder activity was greater than for the past few years, and occurred on 13 days. It was accompanied by heavy rain on the evening of 11th June (.72 inches), the early morning of 9th July (1.04 inches), the evening of 18th July (.87 inches) and the morning of 28th July (.39 inches); the high July rainfall totals were everywhere directly attributable to these storms.

TEMPERATURE

The following averages are those for the N.I.A.E. at Wrest Park, Silsoe :

January	38.05 deg. F.	July	60.7 deg. F.
February	29.5	August	56.9
March	43.05	September	58.0
April	43.45	October	48.75
May	53.65	November	41.95
June	54.05	December	42.3
Average for the whole year	47.53 deg. F.
(Average for 1955	48.76 deg. F.)

The low averages for February and August will be noted; that for February is nearly 5 deg. less than for February 1955, which was itself unusually cold, while the August figure is 7.6 deg. colder than for August 1955.

The hottest day was 26th July with 80 deg.; the coldest, 2nd February with a maximum day temperature of 24 deg. The coldest night was that of 31st January - 1st February with a minimum of 15 deg. although temperatures fell as low as 10 deg. in some other localities.

RAINFALL FOR 1956

	Amphthill	Bedford	Bromham	Cardington	Carlton	Kempston	Silsoe
January	3.64	3.64	3.35	3.71	3.99	3.86	3.44
February	0.47	0.47	0.42	0.52	0.45	0.56	0.32
March	0.74	0.65	0.54	0.56	0.78	0.66	0.60
April	1.20	1.02	0.84	0.99	0.96	0.99	1.27
May	0.41	0.55	0.42	0.45	0.42	0.55	0.39
June	2.29	2.47	2.37	2.33	2.87	2.43	2.44
July	3.89	4.26	3.74	4.00	3.72	4.31	3.98
August	3.55	3.86	3.31	3.27	3.52	3.54	3.57
September	1.80	1.63	1.37	1.55	1.77	1.57	1.36
October	1.66	1.43	1.26	1.44	1.79	1.66	1.65
November	0.61	0.63	0.78	0.65	0.94	0.66	0.62
December	2.67	2.50	2.20	2.34	2.86	2.48	2.55
Totals ...	23.14	23.11	20.60	21.81	24.07	23.27	22.19

Amphthill (Mr Horne)
 Bedford (Mr Lock)
 Bromham (The writer)

Cardington Aerodrome (Mr Pedlow per Mr Speed)
 Carlton (Col. Battcock)
 Kempston (Mr Payne)
 Silsoe (N.I.A.E., Wrest Park, per Mr Dunn)

SUNSHINE

Records at Silsoe show that May was by far the sunniest month of the year with a daily average of 7.81 hours, while April, with 5.97 hours, was an easy second. March was actually sunnier than June, and very nearly as good as July and August. The very low average for December has already been referred to.

A. W. GUPPY

PALAEOLOGY

This year is my first year in the Natural History Society as Recorder of Palaeontology. This subject is, without doubt, one of the most neglected of the sciences covered by the all-embracing term "Natural History" and, consequently, the Records must suffer through lack of knowledge and understanding.

To compensate for this present lack of interest it is essential for all members of the Society to take an active part in the future, to assist the Recorder to compile accurate and comprehensive data.

Very briefly, for the benefit of members who are unfamiliar with the geology of the county, Bedfordshire is composed mainly of the rocks of two Systems—the Jurassic and the Cretaceous. Both these Systems belong to the Mesozoic Era or, in popular phrase, the "Age of Reptiles". The Jurassic rocks extend over the greater part of the Northern half of the county (the Oxford Clay is the common deposit familiar to everyone) and the Cretaceous rocks extend over the Southern half (the Chalk and Gault Clay etc.). These are the largest sedimentary deposits. Various smaller sedimentary rocks occur in different parts of the county and are no less important, but space forbids me to make a complete list at this stage. (Mr Nicholls, my predecessor, produced an article in 1948, and members are recommended to consult this issue of the "Bedfordshire Naturalist", and the excellent geological map that it contains.)

Overlying large areas of these rocks are deposits of a different nature—the Boulder Clay in the north, and Clay-with-flints in the south. These deposits have no connection with the sedimentary rocks beneath and generally contain very few fossils. Most of the fossils found, however, can be proved to be derived from other deposits in various parts of the country—even from the north of England—thus indicating the distances travelled by ice action.

Frequently (and this is where the Man-on-the-Spot enters into the picture) excavations are made for various purposes. These excavations, often only temporary, are an extremely useful guide if taken advantage of, and the identification of a few fossils to determine the exact horizon at that point is vital to the production of an accurate scientific record.

Identification of fossil specimens, especially if in a poor state of preservation, is incredibly difficult. Often it is impossible, and the species alone can be determined. In cases such as these expert advice is necessary, and the sending of the specimens to an authority such as the Geological Survey and Museum (Natural History) or the British Museum (Natural History) for comparison with type specimens, is the only course to follow.

Members who discover specimens can either (a) send them to London for identification or (b) forward them to me and, after identification, they will be returned. I would emphasize that if sent to me, in all probability some will have to be sent away for comparison with known specimens.

In all cases the following information must accompany the specimens (or the data, if already identified) when sent for recording.

- (a) The exact locality in the county.
- (b) The depth as accurate as possible—if found on a spoil heap, the depth can often be determined by comparing the colour of the rocks and the specimen in question.
- (c) The rock formation and the System to which it belongs.

These are only a few hints to bear in mind. Probably they are unnecessary, as this information would be taken on site as a matter of course, but Palaeontology bears no resemblance whatever to any of the present day sciences. This Record has to extend back in time, with reasonable scientific accuracy, to a period of over a hundred million years ago.

Finally, I wish to thank all quarry owners who have contributed to the production of the records by allowing access to the various pits, for the purpose of collecting and studying the fauna.

This year proved a fairly fruitful one with regard to the palaeontological discoveries. The outstanding find was a gigantic specimen of the brachiopod *Rhynchonella shenleyensis* (Lamplugh & Walker) from the Lower Greensand (Shenley Hill Limestone) of Mundays Hill Quarry, Leighton Buzzard. This specimen, over three times larger than any specimen found previously, now reposes in the National Collection at the Geological Museum, South Kensington.

Large numbers of fossils occur in the Shenley Limestone lenticles at Mundays Hill quarry. Notable records, other than the giant *R. shenleyensis*, were a group of *Terebratula biplicata* var. *gigantea*, and the unusual brachiopod *Terebratrostra incurvirostra*. Crinoids (the rare "pipe crinoid" *Torynocrinus* is also recorded from Double Arches quarry, near Mundays Hill) were occasionally found in the rotted surface of the limestone, during the year.

The Shenley Limestone at Mundays Hill Quarry is an extremely dense, whitish limestone, bedded into the ferruginous conglomeratic layer above the Leighton Sands. Various fossils occur commonly in the lenticles. *Terebratula depressa*, *T. capillata*, *Rhynchonella shenleyensis*, *R. latissima* are frequent in much of the limestone, but large masses of the rock are often completely devoid of all fauna. The distribution of the various species in the limestone will be interesting research sometime in the future.

No unduly rare specimens were seen in the Gault Clay above the Shenley Limestone. Fossils were common, especially in the nodule bed at the base of the Upper Gault, but Ammonites were in a poor state of preservation.

Recording of the Gault Clay species was waived this year due to the Shenley Limestone studies.

The Shenley Limestone lenticles at Double Arches Quarry, north of Mundays Hill, were not rich in palaeontological specimens. The "Pipe crinoid" *Torynocrinus* was recorded, and also the cirripede *Cretiscalpellum unguis*. Brachiopods were uncommon, but this must be due to a poor exposure of limestone, as the beds are identical with those at Mundays Hill and all the species found at Double Arches have been verified, in previous years, as occurring at Mundays Hill also.

The Gault Clay at Chamberlain Barn Quarry and Billington Road Quarry, Leighton Buzzard, was not studied closely this year. Billington Pit is now badly overgrown, and the fossiliferous nodules are not in evidence. Fragments of Ammonites were generally common in Chamberlain Barn pit, but no records were taken due to the activity on the Shenley Limestone in Mundays Hill and Double Arches quarries.

The Lower Chaik at Houghton Regis and Sundon was visited and a few scattered specimens collected. The Ammonite *Acanthoceras rhotomagensis* is recorded from Houghton Regis, and *Austoniceras austeni* from both localities. Fossils are uncommon in these quarries, especially Houghton Regis, but *Rhynchonella mantelliana* is one of the most abundant of the few that do occur. No important specimens were discovered, however.

The Lower Chalk at Barton-in-the-Clay yielded a well-preserved crushing tooth of the shark *Ptychodus*, which is well worth putting on record, as this tooth is certainly not common. Many various small teeth

(*Pisces*) occur in this quarry, most of which are extremely well-preserved. *Austiniceras austeni* and *Acanthoceras rhotomagense* occur near the base of the section, but fossils are again generally scarce.

The Lower Oxford Clays of Kempston Hardwick and Lidlington were paid visits but no new species were observed. The familiar crushed Ammonites (*Kosmoceras* sp.) were abundant, and a very large *Erymnoceras reginaldi* was discovered at Kempston Hardwick, unfortunately in a poor state of preservation due to weathering. The Recorder intends, however, to carry out a more intensive survey of both the Lower Chalk and the Lower Oxford Clay during 1957 and 1958, and the records thus obtained should be of interest and value.

The following were recorded from the localities shown.

Mundays Hill Quarry, Leighton Buzzard (Shenley Limestone only)

Brachiopoda : *Zeilleria* (*Ornithella*) *convexiformis*

Terebratula capillata, *Terebratula depressa*, *Terebratula biplicata*
var. *gigantea*, *Terebratula incurvirostra*, *Rhynchonella shenleyensis*, *Rhynchonella leightonensis*, *Rhynchonella latissima*

Cephalopoda : *Belemnites attenuatus*

Cirripedia : *Cretiscalpellum unguis*

Crinoidea : *Isocrinus* sp.

Double Arches Quarry, Leighton Buzzard (Shenley Limestone only)

Brachiopoda : *Terebratula capillata*, *Terebratula depressa*,

Rhynchonella leightonensis

Cirripedia : *Cretiscalpellum unguis*

Crinoidea : *Isocrinus* sp., *Torynocrinus* sp.

Houghton Regis Quarry (Lower Chalk)

Brachiopoda : *Terebratula biplicata*, *Rhynchonella mantelliana*,

Concinnithyris subundata, *Concinnithyris albensis*

Cephalopoda : *Austiniceras austeni*, *Acanthoceras rhotomagense*,
Nautilus sp.

Lamellibranchia : *Pecten* (*Aequipecten*) *Beaveri*

Pisces : *Odontaspis* (tooth)

Sundon (Lower Chalk and Chalk Marl)

Brachiopoda : *Terebratula biplicata*

Cephalopoda : *Austiniceras austeni*

Barton-in-the-Clay (Lower Chalk)

Brachiopoda : *Terebratula biplicata*, *Rhynchonella* sp.

Cephalopoda : *Austiniceras austeni*, *Acanthoceras rhotomagense*,
Nautilus sp.

Pisces : *Ptychodus* (tooth)

Kempston Hardwick (Lower Oxford Clay)

Cephalopoda : *Cosmoceras duncanii*, *Cosmoceras* (*gulielmites*)

grossouvrei, *Kosmoceras* (*spinkosalokeras*) *pollux*, *Peltaceratoides*
sp., *Erymnoceras reginaldi*, *Cylindroteuthis Oweni*, *Belemnopsis*
hastatus

Lamellibranchia : *Thracia depressa*, *Nucula ornata*, *Gryphea bilobata*

Reptilia : *Plesiosaurus* sp., *Ichthyosaurus* sp.

Marston (Lidlington Quarry) (Lower Oxford Clay)

Cephalopoda : *Kosmoceras* (*spinkosalokeras*) *pollux*, *Cosmoceras*

(*gulielmites*) *grossouvrei*, *Cosmoceras duncanii*, *Quenstedtyoceras*
sp., *Cylindroteuthis Oweni*

Lamellibranchia : *Thracia depressa*, *Gryphea bilobata*, *Nucula ornata*

Reptilia : *Plesiosaurus* sp., *Ichthyosaurus* sp.

LEPIDOPTERA

In a year of very indifferent weather we can consider ourselves to have been fortunate in that so many outings were successful. Collecting and field-work was confined mainly to the week-ends (which seem to have been invariably wet) and to the annual holiday. In consequence of the limited time at our disposal much work was done outside the county borders, in Northamptonshire, Huntingdonshire, Norfolk and the northern mountains and moorlands, where more varied habitats than ours are available.

However, our Mercury Vapour Lamp was run throughout the year at Cardington Road with some very interesting results, and also in early June in Northill Woods, using our new portable generator. A list is appended which gives most of the more interesting moth captures of the season. The intention is to continue to publish these lists until such time as a worthwhile record is built up of species of moths in the county at the present time.

It was not a good butterfly year. It may be of interest to record that we reared *Melitea cinxia* (Linn), the Glanville Fritillary, in Bedford, and also *Erebia aethiops* (Esp.), the Scotch Argus, both far from their natural habitats. Some of our native species seemed to have been completely absent, for example the Holly Blue, *Celastrina argiolus* (Linn). There has been no repetition of the phenomenon of 1948 when this delightful insect swarmed in the county, particularly around the old priory wall at Newnham. The Comma, *Polygonia c-album* (Linn), also seems to be declining in numbers very seriously, but this may be attributable to the weather. I did not manage to visit the Clifden Blue, *Lysandra bellargus* (Rott) colonies this year, but I understand that this species is still with us, and the decline which was so serious from 1952-5 appears to be arrested. The Chalk Hill Blue, *Lysandra corydon* (Pod), is still plentiful, and the renewed sheen-grazing on the hills will help it, but the disastrous spoliation of the Pegsdon habitat will undoubtedly spoil the extensive colony there.

Before recording our list of moths for the season it must be noted that both the Society outings with the Mercury Vapour Lamp, one at Bromham Park, where the Soper family were our hosts, and the other at Maulden, were disastrous failures. On the first outing there was a gratifying but embarrassing attendance, but the night was bitterly cold and not a moth was seen, and at Maulden there was a gale, and driving rain, with very limited captures. This is one of the hazards of prearranging outings with the lamp. Generally, spot decisions are taken to go out if the weather is at all favourable.

Records of Moths for 1956. Unless otherwise stated the captures were by M.V. lamp, and were made either by my father, Mr K. E. West, or myself, or Dr D. M. Jeffereys.

Mimas tiliae (Linn), Lime Hawk—Two at Cardington Road early June, a poor year for this species.

Laothoe populi (Linn), Poplar Hawk—Plentiful, June-July, at Cardington Road.

Smerinthus ocellatus (Linn), Eyed Hawk—One taken at Cardington Road in June.

Deilephila elpenor (Linn), Elephant Hawk—Very plentiful in May and June, both at Cardington Road and Northill. This species was a long time on the wing this year.

Cerura vinula (Linn), Puss—One taken, June, Cardington Road. Normally more common.

Pheosia tremula (Clerck), Greater Swallow Prominent—Very plentiful in June, this magnificent insect appears to breed in the St John's Glebe and along the river.

Notodonta ziczac (Linn), Pebble Prominent—One at Cardington Road. It was a good year for them in some of the bigger oakwoods.

Lophopteryx cucullina (Schiff) Maple Prominent—Three taken at Cardington Road in June. This is a very interesting record for the county, as this species is not common and is generally confined to chalky districts.

Lophopteryx capucina (Linn) Coxcomb Prominent—Plentiful throughout the summer, a form with a particularly dark facies was present towards the autumn.

Phalera bucephala (Linn), Buff-Tip—These were present in numbers; on one night in June quantities arrived at the light in a glittering cascade. They are the one species which seems to be rendered senseless by ultra-violet light.

Habrosyne derasa (Linn), Buff Arches—This arrived very often with *L. Cucullina*, and looks disconcertingly like it when at rest.

Thyatira batis (Linn), Peach Blossom—One specimen taken at Northill though our others were outside the county.

Tethea ocularis (Linn), Figure of Eighty—This was not common this season, only a few taken and those mostly badly worn.

Dasychira pudibunda (Linn), Pale Tussock—Abundant at Cardington Road, doubtless breeding locally.

Cilix glaucata (Scop), Chinese Character—This loveliest of the "Hook tips" occurred sparingly throughout the summer at Cardington Road.

Episema caeruleocephala (Linn), Figure of Eight—A full series at Cardington Road, August.

Apatele tridens (Schiff) and *A. psi* (Linn), Dark and Grey Dagger—We consider that we have taken both species, but are not wholly satisfied about the identification. It will be necessary to rear some in order to find out, as the larvae are quite dissimilar.

Simyra albovenosa (Goeze), Powdered Dagger—Formerly called the Powdered Wainscot, this is an interesting record for Cardington Road as the species is mainly found in the Fens. One in June.

Triphaena comes (Hübner), *orbana* (Hufner), *pronuba* (Linn), *janthina* (Esp), *interjecta* (Hübner)—All these "Yellow Underwings" were taken at Cardington Road during the summer. At times *pronuba* was a pest, on one night over 600 were found in the trap at once. They are very restless when captured and damage everything else.

Ceramica pisi (Linn), Broom Brocade—Two at Cardington Road. One assumes they have fed on ornamental Brooms; it is unlikely that they could have flown from the Greensand.

Hadena trifolii (Rott), Small Nutmeg—One taken at Cardington Road.

Apamea hepatica (Hübner), Large Clouded Brindle—Several taken at Cardington Road.

Meganephira oxyacanthae (Linn), Green Brindled Crescent—The normal form was taken outside the county in Bucks.: but I took the melanic form in Bedford. It would be interesting to know if this is a form of industrial melanism.

Leucania pallens (Linn), Common Wainscot—These swarm up from the river as might be expected. I have several other "wainscots" which still await identification.

Cosmia pyralina (View), Lunar Spotted pinion—One, Cardington Road.

Citrea lutea (Stroem), Pink-Barred Sallow—This was surprisingly plentiful in the town; it was, in fact, a particularly good year for "Sallows".

Cirrhia icteritia (Hufner), Common Sallow—Very plentiful late into the autumn.

Xylocampa areola (Esp), Early Grey—Very plentiful in late March at Cardington Road.

Cucullia umbricata (Linn), Common Shark—A long time on the wing in 1956, July to mid-September. Three specimens retained from numbers taken.

Catocala nupta (Linn), Red Underwing—Not a good year for the species; it does not come readily to light, and normally one finds the best specimens on the riverside willows. We took only three by this method in 1956.

Hemithea aestivaria (Hübner), Common Emerald—Two taken at Cardington Road.

Ourapteryx sambucaria (Linn), Swallow-tailed Elder—There were some particularly wonderful flights of this species in the early summer, as many as 20 at a time around the light. The form here appears to be of a much richer yellow than anything I have seen elsewhere.

Bupalus piniaria (Linn), Bordered White Beauty—Returning from the Lake District where this species was abundant on the "Mosses", it was surprising to take it in Bedford. One specimen arrived at the light, a female of the southern form.

Zeuzera pyrina (Linn), Wood Leopard—Fairly common in the town, it would be interesting to know if any damage is recorded to trees by the larval borings.

Cossus cossus (Linn), Goat—One badly damaged specimen, Cardington Road, late July. This should be more frequent, as the larva is a pest in the riverside willows.

Hepialus humuli (Linn), Ghost Swift—One female specimen taken at Cardington Road. It seems surprising that this species is not proving more common.

Note—This list is not a complete one, as I have not included many of the more common species. Eventually, when space permits, it may be possible to prepare an up-to-date record of everything.

B. B. WEST

BIRDS

The outstanding event of 1956 was the establishment of a breeding colony of Black-headed Gulls at Stewartby flooded clay pits. Although few young were reared, it is hoped that the birds will return in 1957 when the islands should be inaccessible, except by boat. Unfortunately, the continually rising waters will eventually leave a very small number of nesting sites, but when the pool is filled and the aquatic vegetation has become established, it is reasonable to suppose that most of the species already breeding there will remain. An increasing variety of winter records, too, may be expected. It is gratifying to think that the combined efforts of many individuals, societies and public bodies to improve the countryside are having positive results, and the Management of the London Brick Company are to be congratulated on their policy of eradicating eyesores. With the tidying-up of more pits in the district and possible flooding, the creation of a chain of lakes in the Marston Valley would add greatly to the amenities.

Similar remarks apply to the numerous gravel workings in the county, several of which could become admirable nature reserves and it is hoped that suitable action may be taken before the opportunity is irretrievably lost.

Among the more interesting occurrences during the year were Red-Throated Diver, Black Redstart, Pectoral Sandpiper—an addition to the County list—and the successful breeding of the Little Ringed Plover.

The weather reached no extremes and had no marked effect on distribution, apart from noticeable mildness at the latter part of the year when

the diminution in number of migrants was obvious. Some of the summer visitors were also rather later in departing.

My thanks are due to our Ornithological Secretary, Mr F. C. Gribble, for assistance in preparing this report. Unfortunately our task was not made easier by some observers still submitting their records without proper sequence. I appeal once again not only for all records of any one species to be placed under a single heading, but also to see that these species follow the Whetmore system of classification, which has been adopted for our reports.

A word of thanks to all who sent in their notes. Most of these observers are acknowledged in the Report by the following initials :

T.W.A. = T. W. J. Abbiss ; W.B. = W. Burridge ; H.C. = Harry Cole ; D.W.E. = D. W. Elliott ; J.F.L. = I. J. N. Ferguson-Lees ; F.C.G. = F. C. Gribble ; A.R.J. = A. R. Jenkins ; A.L. = A. J. Livett ; M.O. = more than 4 observers ; C.S.P. = C. S. Payne ; W.K.P. = W. E. K. Piercy ; R.E.C. = Recorder (Henry A. S. Key) ; S.W.R. = S. W. Rodell ; M.P.R. = M. P. Rosevear ; H.B.S. = H. B. Sargeant ; W.G.S. = W. G. Sharpe ; C.F.T. = C. F. Tebbutt ; D.R.W. = D. and R. White ; M.W. = Michael Wortley.

Localities : S.F. = Sewage Farm ; L. = Lake ; G.P. = Gravel Pit ; C.H.P. = Chalk Pit ; C.L.P. = Clay Pit ; B.S.F. = Bedford Sewage Farm ; D.S.F. = Dunstable Sewage Farm.

Eastwoods C.L.P. and Coronation C.L.P. refer to the respective clay pits at Kempston Hardwick, near Bedford, some of which are wholly or partly flooded.

References to Ickleford (Herts.) are to be interpreted as relating to the Beds.-Herts. border near the watercress beds.

The following species were also recorded, most of them fairly frequently, and their distribution was considered to be about normal :

93 Sparrow-Hawk ; 110 Kestrel ; 115 Red-Legged Partridge ; 116 Partridge ; 118 Pheasant ; 126 Moorhen ; 232 Stock-Dove ; 241 Barn Owl ; 246 Little Owl ; 247 Tawny Owl ; 262 Green Woodpecker ; 263 Greater Spotted Woodpecker ; 280 Carrion Crow ; 282 Rook ; 283 Jackdaw ; 284 Magpie ; 286 Jay ; 288 Great Tit ; 290 Coal Tit ; 292 Marsh Tit ; 294 Long-Tailed Tit ; 298 Tree Creeper ; 299 Wren ; 301 Mistle Thrush ; 303 Song Thrush ; 308 Blackbird ; 364 Goldcrest ; 371 Hedge Sparrow ; 373 Meadow Pipit ; 380 Pied Wagtail ; 392 Greenfinch ; 393 Goldfinch ; 395 Linnet ; 401 Bullfinch ; 407 Chaffinch ; 409 Yellow Hammer ; 410 Corn Bunting ; 421 Reed Bunting ; 424 Tree Sparrow.

4. RED-THROATED DIVER. One, Eastwoods C.L.P., 27th-30th Dec. (C.S.P. and F.C.G.)

5. GREAT CRESTED GREBE. A count was taken during the breeding season at the under-mentioned pools. The numbers of *pairs* present were :

Felmersham G.P., two ; Eastwood's C.L.P., one ; Coronation C.L.P., one ; Houghton Regis C.H.P., one ; Battlesden L., one ; Southill L., five ; Luton Hoo L., one ; Arlesey C.L.P., three *birds* present but no proof of breeding ; Stewartby C.L.P., two *pairs* at beginning of season. On 21st July there were 15 adults with 8 young and 3 nests also contained fresh eggs. Proof of nesting was not obtained at all stations. No reports were received concerning the Woburn lakes.

Winter records : Jan.-March : Southill L., two birds ; Eastwood's C.L.P., two birds ; Coronation C.L.P., three birds.

Oct.-Dec. : Stewartby C.L.P., 6 to 12 birds ; Coronation C.L.P., one. No reports received concerning Woburn and Southill lakes. (D.R.W., F.C.G. M.P.R. and A.R.J.)

7/8. SLAVONIAN/BLACK-NECKED GREBE. A bird which was not specifically identified due to bad visibility was seen at Stewartby C.L.P. from 21st October to early December. At a range of never less than 100 yards, details of the bill and extent of dark head markings could not be determined. (F.C.G., M.P.R. and J.F.L.)

9. LITTLE GREBE. Largest winter parties : up to 12, East Hyde during January (D.R.W.) and at least 20, Stewartby C.L.P., 8th April (F.C.G.).

Present at the usual breeding stations, being most frequent at Stewartby C.L.P. where at least 6 nests were found in one day. (F.C.G. and W.B.)

30. HERON. At the time of the annual census the numbers of *pairs* present at the following stations were : Tempsford, 2; Sandy, 12 (no young reared, cause not determined) (F.C.G.); Bromham Park, 5 (Mrs. Skinner); Southill, 16, but probably more as it was only possible to count the island site from the margin of the lake (M.P.R.); Leighton Buzzard, 2 made nests but were disturbed (O. G. Pike).

38. BITTERN. One seen alive in Stanford brook, 23rd February, was found to be dead on 27th (W. Inskip per W.K.P.).

DUCKS. The 'freeze-up' during February led to a build-up of flocks in the larger waters. The dry state of Bedford Sewage Farm accounted for the low numbers in the latter part of the year.

Numbers in the neighbouring clay pits at Eastwood's and Coronation Works, together with Stewartby, fluctuated due to shooting.

45. MALLARD. Towards the end of the summer, birds collected at Stewartby C.L.P. to form flocks of c. 150, 7th August and c. 300 by 25th; c. 60, Felmersham G.P., 12th August.

Largest winter flocks : Stewartby C.L.P., c. 250, 4th November; Southill L., c. 100, 19th February; Bedford S.F., c. 300, 12th February; Eastwood's C.L.P., c. 150, 9th December; Drakelow L. (Woburn), c. 40, 22nd January; Luton Hoo L., c. 125, 4th February and c. 60 in December; Coronation C.L.P., c. 150 January and February and c. 50, November and December. (M.O.)

46. TEAL. No reports of breeding. Largest winter parties : Stewartby C.L.P., never more than 20; Southill L., c. 50, 15th January (none on 19th February); Bedford S.F., c. 300, 12th February (meadows flooded, see also Mallard), only 30 here, 2nd December (ground relatively dry); Eastwood's C.L.P., never more than 20; Luton Hoo, c. 50, 18th February; Battlesden L., c. 50, 15th January; c. 50 flying over Arlesey C.H.P., 19th February. No reports received of Woburn lakes. (M.O.)

47. GARGANEY. Three, Luton Hoo L., 6th August. (A.L.)

50. WIGEON. Stewartby C.L.P., no reports for Spring, first winter arrival (male) 17th November; Bedford S.F., 12, 19th February increased to c. 80 by 26th due to floods; Eastwood's C.L.P., c. 120, 12th February and 11th March, c. 40, 9th and 30th December; Luton Hoo L., three females, 4th February; Coronation C.L.P., up to 30 during February; Battlesden L., 17, 31st March. (M.O.)

No reports received from lakes at Felmersham, Southill and Woburn.

52. PINTAIL. Five (three males and two females), Bedford S.F., 4th February, land flooded (D.R.W.); one killed by power cables, Felmersham G.P. early in February (Comdr. G. E. P. Milburn); two females, Felmersham G.P., 14th October. (M.P.R.)

53. SHOVELER. Three (two males and one female), Stewartby C.L.P., 7th April and pair till 21st (W.B., F.C.G. and D.R.W.); a pair, Dunstable S.F. 14th-15th April (A.L. and D.R.W.); no proof of breeding in either locality. One, Luton Hoo L., 6th August and 7th October. (A.L.)

56. TUFTED DUCK. Breeding records : Stewartby C.L.P., at least three pairs bred and 20+ young seen 11th August (F.C.G. and M.P.R.); Battlesden, one pair reared three young (D.R.W.); Luton Hoo, one pair reared four young (M.W.); City Fields Farm G.P., Henlow, one pair with several young seen. (C.F.T.)

Present in summer at Wyboston G.P. but no proof of breeding.

Winter distribution : Stewartby C.L.P., 6, 19th February, and up to 30 present in December; small numbers at Bedford S.F., East Hyde and Houghton Regis C.H.P.; Woburn lakes, 20 to 30, January and February and again November and December; Luton Hoo L., c. 20, 12th February and 33, 29th December; Southill L., c. 100, 21st December. (M.O.)

57. POCHARD. Breeding records : Stewartby C.L.P., nest with 10 eggs found 22nd May (F.C.G. and W.B.) and six young hatched. At least one further pair bred.

Spring : Stewartby C.L.P., up to 30 present January - March; Southill L., six, 19th February (lake freezing) and c. 50 here, 4th March; Battlesden L. up to 35, January - May. Small numbers also present at Coronation C.L.P., Houghton Regis C.H.P., Luton Hoo L. and Felmersham G.P.

Autumn : Stewartby C.L.P., c. 40 during November. Smaller numbers at most other stations. (M.O.)

60. GOLDEN EYE. Luton Hoo L., one pair, 18th - 19th February and a female, 26th February; East Hyde, one female, 25th - 26th February had probably flown from the nearby lake at Luton Hoo. (H.C., A.L., M.W. and D.R.W.)

64. COMMON SCOTER. The female reported in 1955 at Bedford Park L. stayed till 13th January and disappeared when lake froze. (M.P.R.)

One, first-summer male, with two drake Pochard, Bedford S.F., 17th July. (M.P.R. and F.C.G.)

One, male, Felmersham G.P. for few days prior to 21st April. (Comdr. G. E. P. Milburn)

69. RED-BREASTED MERGANSER. Two males and one female, Luton Hoo L., 18th February. (M.W.)

70. GOOSANDER. One female, Southill L. (lake almost frozen), 4th February. (D.R.W.)

71. SMEW. One female, Bedford S.F., 12th February (Miss G. Gribble); one male with two females Stewartby C.L.P., 19th February (F.C.G. and R.E.C.); a pair, Coronation C.L.P., 29th January, when male departed and female stayed till 5th February. (C.S.P.)

73. SHELD-DUCK. Three during floods, Bedford S.F., 3rd February. (F.C.G.) Two immature birds, Kempston S.F. and Eastwood's C.L.P., 22nd - 24th August. (F.C.G., C.S.P. and M.P.R.)

GREY GESE. Several reports received of skeins flying chiefly towards the north during the early part of the year as follows :

22 over Flitwick, 22nd January (W.G.S.); large party over Bedford, 9th February. (G. A. Robinson)

C. 100 thought by calls to be 'Pink Feet', over Luton, 31st January. (H.C.)

79 over Flitwick, 16th February and 72 over Westoning, 23rd February (W.G.S., who also states that these birds were seen to visit and feed on fields near Sharpenhoe during the cold spell).

Further parties seen over Flitwick during February were : 10 on 24th, four on 25th and five on 27th. (W.G.S.)

Seven flying south over Oakley, 3rd November ; seven on stubble, Houghton Conquest, 24th December. (C. F. Green)

75. GREY-LAG GOOSE. A male, which flew strongly with parties of swans, frequented Longholme Pool, Bedford on 31st March and 1st April. It allowed close approach and was photographed (F.C.G. and R.E.C.). 7 flying south over Oakley, 3rd November, 7 on stubble, Houghton Conquest, 24th December (C. F. Green).

78. PINK FOOTED / BEAN GEESE. Eight, Bedford S.F., 12th February. (M.P.R.)

84. MUTE SWAN. At least 38 pairs nested in the county. About 60 unmated birds were present during the breeding season, chiefly on the river in Bedford and at the Woburn Lakes. (F.C.G.)

A pair with two 'Polish' cygnets and two ordinary cygnets was seen at City Fields Farm, Henlow, on 9th August by C.F.T. It was later reported that both these 'Polish' cygnets had died.

85/86. WILD SWANS - BEWICK/WHOOPER. 22 birds arrived calling at dusk at Felmersham G.P., 12th February. They had left by the following morning (Comdr. G. E. P. Milburn). (About this time a similar party of Beswicks frequented meadows several miles upstream above Olney, Bucks) (D.W.E.)

A skein of 58 in V formation was seen flying towards Leagrave over Luton, by several people, on 18th February.

86. BEWICK SWAN. 15 flew about 100 ft. above Pope's Meadow, Luton, in chevron formation towards N. on 19th February. They were calling loudly, and this fact, together with the visible yellow beak markings and noticeably small size, confirmed identification. (A.L.)

Two adults, Eastwood's C.L.P., 12th February. (F.C.G. and M.P.R.)

91/92. BUZZARD (*sp.* ?). Plumage details of 'winter' birds should be checked carefully to confirm exact species.

Occurrences reported were : One, Battlesden, 15th January (M.W.) ; one intermittently, Luton Hoo, 22nd January and 25th February, and again 7th October - 30th December (M.W. and A.L.) ; single birds seen in Eversholt, Milton Bryan - Millbrook area in January, and three near Ridgmont, 20th December. (W.G.S.)

91. BUZZARD. Single birds seen on several occasions in the Woburn area during the summer. (W.G.S.)

1955 Record : One shot at Turvey, 3rd September, 1955. (D.W.E.)

One being mobbed by rooks at Burdelys Manor, Stagsden, during week ending 15th September. (D.W.E.)

104. HOBBOY. A male was seen above and along the chalk escarpment (area withheld for obvious reasons) on 2nd, 7th and 23rd June, 17th July and 12th August. All characters were fully noted. (H.C., D.R.W., A.L. and M.W.)

117. QUAIL. One male calling during late June at Burdelys Manor, Stagsden. (D.W.E.)

120. WATER-RAIL. One heard Flitwick Moor, 30th April (D.R.W.). Heard again here 11th June. (F.C.G. and W. Champkin.)

This species was definitely proved to have nested at the moor this season when two parent birds were seen with two recently hatched chicks on 28th May. (T.W.A.)

125. CORN-CRAKE. One heard in grass field near Galley Hill, Luton, 19th May. (D. White). (One heard at Lavendon, Bucks, 19th May, and on several subsequent days, the first for a number of years.) (J. Waller)

127. COOT. Breeding : A few pairs were present at most of the usual pools but by far the largest number was at Stewartby C.L.P., some 20 or so pairs bred here.

Spring flocks : Southill L., 320 January, c. 250 February ; Luton Hoo L., c. 25, January, c. 70, February ; Battlesden L., c. 150, Jan., c. 50, 3rd March ; Coronation C.L.P., c. 40, January - April ; Stewartby C.L.P., very few in early part of year. A few birds came to Bedford S.F. on the open river, during the period of frost.

Autumn : Stewartby C.L.P., c. 40, September - December (c. 80, 23rd November, when smaller pools were frozen). Luton Hoo L., c. 200, December ; Battlesden L., c. 60+, 12th November ; smaller numbers on other pools. No reports received of Southill L. (D.R.W., F.C.G., M.P.R., M.W. and R.E.C.)

133. LAPWING. Autumn flocks late in arrival. No appreciable numbers till second week in December when a flock of c. 2,000 was seen near Luton and similar numbers in the Marston Valley. (F.C.G.)

Did not nest at Dunstable where normally c. 20 pairs breed and it has been suggested that this was probably due to disturbance by Black-headed Gulls during the previous season. (D.R.W.)

134. RINGED PLOVER. Bedford S.F., one 11th and 23rd March ; two, 1st-2nd April and four, 5th-6th August ; Dustable S.F., one, 19th August ; Stewartby C.L.P., one, 11th August ; East Hyde, two, 11th September. (F.C.G., C.S.P., M.P.R., D.R.W. and A.L.)

A few heard at night over Bedford 9th August. (J.F.L.)

135. LITTLE RINGED PLOVER. Breeding : Birds nested at two gravel pits in North Beds. At one pit a pair reared two young to the free flying stage and the other pair, which nested late, possibly after being flooded out of a pit in a neighbouring county, reared two or three young. Birds were last seen at this second locality, 19th August. (F.C.G. and J.F.L.)

140. GOLDEN PLOVER. Spring : Small parties reported from Wyboston, Flitwick, Kempston Hardwick, Stewartby, Cardington, Felmersham and Luton areas (January - March).

Largest flocks : c. 80, Podington aerodrome, 25th March (including at least three 'Northern' birds) ; c. 50 of the Northern race, Warden Hill, Luton, 6th-8th April. (F.C.G., A.L., M.W. and D.R.W.)

First autumn arrivals : Luton Hoo, 6th November and up to 65 here by 29th. (A.L.)

143. TURNSTONE. One, Houghton Regis C.H.P., 3rd August (D.R.W. ; one Stewartby C.L.P., 4th and 10th September (F.C.G. and M.P.R.), in each case the diagnostic characters were noted.

145. COMMON SNIBE. Numbers at Bedford S.F. during the autumn were very low due to the dry conditions, not more than 30 at any one time. (F.C.G.)

At Dunstable S.F. the peak numbers were : Spring, c. 50+, 10th March ; Autumn, 75+, 14th October. (D.R.W.)

147. JACK SNIBE. Bedford S.F., only one record ; one, 2nd December. (M.P.R.)

Dunstable S.F., 3-4, 11th February ; two, 31st March ; one, 9-15th April ; one, 14th October, and one, 24th November. (D.R.W., M.W. and A.L.).

East Hyde, one, 19th February. (D.R.W.)

148. WOODCOCK. Widely distributed during winter.

One flew over Bedford School, 24th March. (D.R.W.)

No nests found, but birds present during breeding season along the Greensand Ridge being seen at Rowney Warren, Clophill, Flitwick Moor and the Woburn estate. (M.O.)

150. CURLEW. A small number, Flitton Marsh, 2nd January (one was shot and sent to W.G.S.), and 2 here on 12th ; one, Wyboston, 18th March (F.C.G.) ; one, Stewartby C.L.P., 5th May and another here 24th August (W.B. and M.P.R.), and 8 or 9 flying towards S.W. over Kempston, 28th October. (F.C.G.)

Single birds were heard calling at night over Bedford, 3rd and 27th August and 17th September. (J.F.L.)

151. WHIMBREL. One, D.S.F., 5th May (H.C.) ; one heard at night over Stagsden, 10th May (R.E.C.), and others at night over Bedford, 3rd August and 14th September. (J.W.L.)

156. GREEN SANDPIPER. Odd birds at Ickleford watercress-beds till 29th April. (A.R.J.).

The only other records received for the first part of the year were of single birds at B.S.F., 15th and 29th April. (F.C.G. and M.P.R.)

Return passage : One, Ickleford, 28th June and several here July-September, with maximum of 10, 14th August (A.R.J.). Up to 6 late July-mid October. (F.C.G. and M.P.R.)

One, East Hyde 13th-21st July ; three, D.S.F., 14th July and up to 8 here 3rd-23rd August, with last bird 12th September (H.C. and D.R.W.) ; one, Wyboston G.P., 8th July (F.C.G.) ; two, B.S.F., 16th-24th December. (M.P.R.)

157. WOOD-SANDPIPER. One, B.S.F., 12th-18th August (F.C.G. and M.P.R.) ; two, D.S.F., 9th-10th September (D.White and H.C.) ; one, East Hyde, 11th September. (A.L.)

159. COMMON SANDPIPER. Spring passage : one, Arlesey C.L.P., 6th May (A.R.J.).

Return passage : two, Wyboston G.P., 8th July, two B.S.F., 15th July and up to five here till 19th September (F.C.G. and M.P.R.) ; one, D.S.F., 14th July, and two on the next day. Up to four here, 3rd August - 30th September, and a late bird, 20th October (D.R.W. and H.C.) ; one Harrold G.P., 5th-12th August (F.C.G. and M.P.R.) ; one, Houghton Regis C.H.P., 3rd August, and five here on 24th (D.R.W. and H.C.) ; one, Coronation Pit, 5th August, single birds at Stewartby C.L.P., 27th July - 10th September. (F.C.G. and M.P.R.)

161. REDSHANK. First arrival B.S.F., 4th February, did not stay; three more here, 11th March. Not more than 10 birds present during the Spring passage and not more than two pairs bred here (F.C.G. and M.P.R.); first arrival D.S.F., 3rd March, and up to 8 by 29th. 3-4 pairs stayed during the breeding season, but no definite proof of breeding. At Stewartby C.L.P. probably two pairs bred (F.C.G. and M.P.R.). A pair was present in an area to the south of Steppingley Church, 30th April - mid July (T.W.A.).

Odd birds were seen elsewhere on passage.

One was heard at night over Bedford, 2nd August. (J.F.L.)

One, Stewartby C.L.P., 27th December (M.P.R.).

165. GREENSHANK. Recorded during the Autumn passage only.

Single birds heard calling at night over Bedford, 15th July and 22nd August (F.C.G. and J.F.L.); one, B.S.F., 15th July and 6th August, and three here, 10th September (F.C.G. and M.P.R.); one, Stewartby C.L.P., 7th August, two on 11th and up to three till 14th September; one, Kempston S.F., 24th and 29th August, three here 4th September, and one, 10th-11th September (F.C.G., M.P.R. and C.S.P.); two, Coronation C.L.P. 5th August. (D.R.W.)

It is probable from the dates that some of these birds interchanged between the various stations and were consequently recorded more than once.

169. KNOT. One, Ickleford, 4th-5th February. (A.R.J.)

171. LITTLE STINT. Two, D.S.F., 16th September (full description supplied) (D.R.W. and H.C.).

176. PECTORAL SANDPIPER. This addition to the County list was observed at D.S.F. on 14th October by D.R.W. A full report appears on page 44.

178. DUNLIN. Single birds at B.S.F., 26th February, 6th May, 22nd-31st July, 2nd August and 7th October (F.C.G. and M.P.R.); one, Stewartby C.L.P., 18th September; one, D.S.F., 19th August, and three 4th September. (D.R.W. and A.L.)

One heard over Bedford at night, 3rd August. (J.F.L.)

184. RUFF. B.S.F., one male, 14th June; one male and two females, 15th-26th July; two, 9th-18th August. (F.C.G. and M.P.R.)

D.S.F., one, 4th-10th September. (A.L. and H.C.)

189. STONE-CURLEW. Birds were reported by the keeper to have been seen and heard in the usual locality in late April, but they apparently did not stay to nest and none was heard later on.

198. GREATER BLACK-BACKED GULL. Two, Copt Hall, Luton, 11th January. (R. White).

199. LESSER BLACK-BACKED GULL. One over Luton, 11th January; one, Ickleford, 25th March; one, Stewartby, 22nd May; five flying N. over Kempston, 26th April and a small party flying W. over the same place, 14th May; one, Stewartby C.L.P., 23rd May - 2nd June; three, Houghton Regis C.H.P., 3rd June; two, Luton, 27th August; two flying N. over D.S.F., 10th June; a dark bird at B.S.F., 2nd December, was probably of the Scandinavian race; one, Luton, 26th December. (F.C.G., M.P.R., D.R.W. C.S.P. and A.R.J.)

200. HERRING GULL. Largest recorded parties during winter months as follows : c. 80 over Luton, 11th January ; c. 150 at Sundon dump, 25th January, and c. 300-400 flying S. over Luton to roost on the same day.

Between 3-4 p.m. on 30th November, a total of c. 500 birds was observed flying S. over Ickleford. Has increased as a winter visitor in recent years. (A.R.J.)

Small numbers were seen in several other localities during the winter months and occasional immature birds during the summer.

201. COMMON GULL. Up to 10 with Black-headed gulls at Houghton Regis C.H.P., January - 9th April (D.R.W.) ; slight Spring passage noticed near Ickleford, 8th April, 52 birds (A.R.J.) ; small parties scattered about Warden Hill, Luton area from 31st March and on 8th April the number totalled c. 60. A few birds seen at this season in several other localities. (D.R.W. and M.W.)

Seven over Luton, 28th October, c. 100 here 26th November and c. 300 16th December. (D.R.W. and H.C.)

Three Houghton Regis C.H.P., 11th November. (D.R.W.)

208. BLACK-HEADED GULL. Widely distributed during winter months with the largest parties in the south of the County, many being birds which roost in the London area and fly northwards to our county daily to feed.

The largest recorded parties were c. 140, Luton Hoo L., 11th January and 12th February, on the later date resting on the ice ; up to 80, Houghton Regis C.H.P., January - April ; several hundreds at Sundon dump during February ; c. 150, B.S.F., 19th February, and c. 500, Coronation C.L.P., with a few Herring and Common Gulls, 19th February. (D.R.W., M.W., F.C.G. and C.S.P.)

At D.S.F. the breeding colony of the previous year was not re-established. Breeding at first seemed probable, with about 22 birds in summer plumage present during the first three weeks in April and a few rough nests were made in grass tussocks but no eggs were seen. However, numbers slowly diminished until only two birds were here on 20th May. (D.R.W. and H.C.)

A new colony was established at Stewartby C.L.P. The flooding of the pit had produced numerous islands of varying size covered with Coltsfoot and scrubby vegetation, many of which were only accessible by boat. C. 20 birds were here on 22nd May when F.C.G. in company with Mr and Mrs W. Burridge made an extensive search and found at least seven nests, and J.F.L. carried out a further survey on 27th when 21 adults were seen and 10 nests were discovered as follows : four had three eggs each ; one had two eggs and two others a single egg ; one had one egg and one chick ; two were empty but with a single chick near and one was empty and unattended (see frontispiece).

During the next few weeks the numbers of adult birds increased, at least 65 being seen on one occasion. A few more pairs may have nested but the number of young reared was very small. Predation by Carrion-Crows, which were very common in the area, was probably one of the main causes.

On 8th August at least 70 birds were present, predominantly adults.

A few of the gulls frequenting New Mill End near Luton now have the habit of perching on the tops of big beech trees. (H.C.)

212. BLACK TERN. Only recorded on Autumn passage, all from Stewartby C.L.P. : four, 7th August ; one on 8th and seven on 11th ; one, 4th September, and three on 18th. (F.C.G., M.P.R. and D.R.W.)

217/8. COMMON/ARCTIC TERN. One flying near Ickleford, 10th June. (A.R.J.)

Return passage : one, Stewartby C.L.P., 5th August ; two here, 14th September, and one on 29th. (C.S.P., D.R.W. and M.P.R.)

One, B.S.F., 19th September. (M.P.R.)

234. WOOD-PIGEON. The winter flocks of November-December were down in numbers on the previous year, probably due to the open weather

235. TURTLE-DOVE. First arrival, Rowney Warren, 29th April (F.C.G. ; one, Stagsden, 3rd May (D.W.G.), and at East Hyde and Lilley Park (Herts) on 5th. (D.R.W. and M.W.)

Last emigrants : Luton, 28th August (D.R.W.), and Kempston Hardwick, 29th August. (F.C.G.)

237. CUCKOO. First heard : Luton Hoo, 17th April (A.L.), and Flitwick on 20th. (D.R.W.)

Last seen : one juvenile, Eaton Socon, 31st August (C.F.T.), and one, D.S.F., 16th September. (H.C.)

248. LONG-EARED OWL. One flushed from pine tree at Fairy Hole, Hexton (just over border in Herts.) 20th June. (M.W. and A.L.)

One, Westoning Moor, 28th December. (W.G.S.)

249. SHORT-EARED OWL. One, Luton Hoo Park, 17th November. (A.L.)

252. NIGHTJAR. All reports referred to Greensands area.

Heard near Bucks. border near Bow Brickhill (J.F.L.) ; Stockgrove Park (J. R. Cobring), and the following areas : several pairs present at Aspley Heath during the breeding season (J. Foll) ; one nest found, Maulden Wood and at least three pairs present at Rowney Warren where a nest with two young was found. (R.E.C.)

255. SWIFT. First arrivals, one, Bedford, 24th April (M.P.R.) ; one, Kempston (C.S.P.), and c. 15, Luton Hoo Park, 28th (A.C.), and several, B.S.F., 30th (F.C.G.).

Last emigrant : B.S.F., 8th September. (F.C.G. and A.L.)

258. KINGFISHER. Few reports received. Nested at Blunham (R. Ivel), and Flitwick Moor and probably at Felmersham G.P. (F.C.G.)

Seen also East Hyde and Luton Hoo L. (D.R.W.)

264. LESSER SPOTTED WOODPECKER. Only reported seen at Luton Hoo Park (A.L. and M.W.) and Bedford S.F. (M.P.R.)

271. WOOD-LARK. Only one report received and that just over the County boundary near Bow Brickhill in Bucks., nest with three young found by R. G. Goosey, 2nd July. These were ringed by F.C.G.

272. SKYLARK. Normal breeding distribution. Largest winter flock c. 200 on snow-covered field, B.S.F., 26th February. (F.C.G.)

274. SWALLOW. First arrivals : one, Luton, 10th April (M.W.) ; D.S.F., 14th (A.L.) ; Hockliffe (D.R.W.) ; Flitwick (T.W.A.) ; Kempston (C.S.P.) ; and B.S.F. (F.C.G.), all on 15th.

Albino reported at Stewartby C.L.P., 2nd September. (M.P.R.)

Last emigrants : one, 15th and 22nd October, Luton (J. Harper) ; one, juvenile and one adult, Kempston, 21st October (C.S.P.) ; one, 'hawking' stream at Flitwick Mill, 4th November, and another, Westoning, on 8th (W.G.S.).

276. HOUSE-MARTIN. First arrivals : small numbers at East Hyde, 17th April (D.R.W.), Southill L., 21st (M.P.R.), and Stagsden, 29th. (D.W.E.)

Still feeding young at nest, Stewartby, 23rd September. (F.C.G.)

Last emigrants : Bedford, 19th October (R. White), and Stagsden on 26th. (D.W.E.)

277. SAND-MARTIN. First arrivals : two, B.S.F., 8th April (F.C.G.) ; several, Tingrith sand pit, 15th (T.W.A.), and three, East Hyde, 17th (D.R.W.).

281. HOODED CROW. One, Arlesey, 4th January (D. E. Wooberry) ; one, D.S.F., 11th February and 3rd March (M.W. and D. White).

289. BLUE TIT. Common at all seasons. Bird with deformed beak seen by R. P. Whyment at Luton.

293. WILLOW-TIT. A.R.J. who is familiar with the species recognised three at Flitwick Moor, 29th December, by their characteristic call-note.

296. NUTHATCH. Only a few reports received, all from the Greensand area.

302. FIELDFARE. D.R.W. reported that the species was affected by the cold snap of late February, when several were unable to fly at D.S.F. and were easily caught.

Spring departure : last party (c. 50), Barton, 29th April (D.R.W.).

Autumn arrivals : smaller numbers than usual, five, Luton Hoo, 2nd October (A.L.), and several, B.S.F., 28th October (M.P.R.). Party of c. 200 flying S.W., B.S.F., 2nd December. (F.C.G.)

304. REDWING. Reported in smaller numbers than for Fieldfare.

Spring departure : last seen, Leighton Buzzard, 29th March. (D.R.W.)

Autumn arrivals : two, Luton, 28th October (D.R.W.), and several B.S.F., on the same date. (M.P.R.)

311. WHEATEAR. Spring passage : early arrivals, four males, Tingrith, 23rd March ; one, Totternhoe quarries, 1st April (V. H. Chambers).

Main movement continued from 4th April, with six at Blows Downs, Dunstable, till the last bird at Marston Moretaine, 13th May. During this period reports were received from the following localities :

Luton Hoo ; Warden Hill, Luton ; Dunstable (including S.F.) ; Priestly ; Steppingley ; Sundon ; Tempsford ; B.S.F. ; Stewartby C.L.P. and Stagsden. There was no evidence of breeding in the county. (M.O.)

Return passage : this was mainly of single birds and lasted from 7th August (Stewartby C.L.P.) till 12th September (Luton Dump). Other localities recorded during this period : B.S.F. ; Warden Hill ; Luton ; and Kempston Hardwick. (M.O.)

317. STONECHAT. One female, Stewartby C.L.P., 4th November (F.C.G.) ; a pair, Kempston Hardwick, 20th November. (M.P.R.)

318. WHINCHAT. First arrival, East Hyde, 5th May. (D.R.W.)

One pair bred B.S.F. (young ringed) (M.P.R. and F.C.G.); nest with seven young, Luton, 27th June (M.W. and D.R.W.); pair on Dunstable Downs, 8th-15th July, no proof of breeding (D.R.W.); pair Coronation C.L.P., 17th May, no proof of breeding. Birds also present at Stewartby C.L.P. during the summer but again no proof of breeding. (W.B.)

Single male, East Hyde, 13th July - 15th August (D.R.W.). Also reported from Eaton Bray area (C. Walker).

Last birds seen at B.S.F., 18th August (F.C.G.), and Stewartby C.L.P., 23rd September (F.C.G.).

320. REDSTART. First arrivals (all males) : Thorn, 25th March ; Pegsdon, 12th April ; Battlesden, Woburn Sands and B.S.F., 15th April and Flitwick Moor on 20th (F.C.G., M.P.R. and D.R.W.). Pair at Burdelys Manor, Stagsden, 16th April remained to nest in a nesting box and reared four young (F.C.G. and D.W.E.).

Two pair bred, Rowney Warren and one pair, Keepers Warren (Southill estate).

Several other regular localities apparently not visited by observers.

Last seen : pair with four young, Millbrook, 3rd September. (T.W.A.)

321. BLACK REDSTART. A female was seen in gardens and allotments at Cutenhoe Road, Luton, by H.C. and later by W.B.S. on 20th and 21st October. It was observed with glasses at about 25 yards range for some time, when its size, bobbing action, flicking of tail and general dark greyish colouring were noted. Later it was seen to hover for several seconds with rapidly beating wings, and to fly with slight undulations.

In good sunlight on 21st, better views of the plumage showed the dark central feathers of the otherwise chestnut tail ; upper parts and head, dull grey ; breast, slightly paler grey ; wings, slightly darker than back ; bill, dark ; legs, dark.

322. NIGHTINGALE. First arrival heard Stagsden, 27th April. (D.W.E.)

Last bird seen at Lilley Wood (Herts.), 8th August. (A.L.)

325. ROBIN. A bird was heard singing in two widely separated areas in Kimbolton Road, Bedford, late at night above strip-lighting on 26th and 31st December. (F.C.G.)

327. GRASSHOPPER-WARBLER. First bird heard near Millbrook, 17th April. (T.W.A.)

Also reported from Maulden Woods, Dunstable Downs, Chicksands Great Wood (new locality), Barton Hills and near Eaton Bray. (M.O.)

333. REED-WARBLER. First reported at Luton Hoo L. (3-4 pairs), 26th May, and the last birds here had left by 16th September. (M.W.)

Normal distribution during breeding season.

Last bird seen Oakley bridge, 6th October. (F.C.G.)

337. SEDGE-WARBLER. First birds seen B.S.F., 23rd April (M.P.R.), and Luton Hoo L., 28th April. (M.W.)

The species was well distributed at B.S.F. by 29th April. (F.C.G.)

Last seen D.S.F., 17th September. (D.R.W.)

343. BLACK CAP. First birds : Millbrook, 21st April (T.W.A.), and Dunstable on 24th. (H.B.S.)

346. GARDEN-WARBLER. First heard Battlesden, 6th May (D.R.W. and M.W.), and Woburn Sands and Blunham on 13th. (M.W. and F.C.G.)

347. WHITETHROAT. First arrivals : Kempston, 28th April, Stagsden 29th and several at B.S.F. on the following day. (F.C.G.)

348. LESSER WHITETHROAT. First arrival : Chicksands Great Wood, 15th May (V. H. Chambers).

Nests found at Bromham Park and Spittlesea, Luton.

Also reported from Houghton Regis and Felmersham G.P.

Last seen : B.S.F., 8th September. (F.C.G. and A.L.)

354. WILLOW-WARBLER. First arrivals : Flitwick, 11th April (T.W.A.); Sundon, 12th (D.R.W.); well distributed at Kempston and B.S.F. by 15th (F.C.G. and C.S.P.).

Last heard, Flitwick, 3rd September. (T.W.A.)

356. CHIFFCHAFF. First arrivals : B.S.F. and Lilley (Herts), 25th March (M.P.R. and A.L.), and Flitwick on the following day. (T.W.A.)

Last seen : B.S.F., 24th September. (D.R.W.)

357. WOOD-WARBLER. First arrival seen and heard Deadmansey Wood, 6th May (V. H. Chambers).

Also seen and heard, Keepers Warren, Southill, 13th and 24th June. (M.W. and D.R.W.)

366. SPOTTED FLYCATCHER. First arrival : Bedford, 9th May. (M.P.R.)

Last migrant : Dunstable, 29th August. (D.R.W.)

376. TREE-PIBIT. Several seen Rowney Warren, 29th April, but reported as having occurred there several days previously. (M.P.R. and F.C.G.)

Also reported from Woburn Sands, Eaton Bray and Clophill areas.

Nests found at Flitwick Moor and Galley Hill, Luton.

380. WHITE WAGTAIL. One male, B.S.F., 15th and 18th April (F.C.G. and Miss G. Gribble).

381. GREY WAGTAIL. Mainly single birds (chiefly males) reported from D.S.F., 11th February; East Hyde on 19th and B.S.F. on 26th; D.S.F. 23rd September; Stagsden 3rd October and Bedford on 19th; Ickleford and D.S.F., 11th November and Eaton Socon later in the month. (M.O.)

382. YELLOW WAGTAIL. B.S.F. : First arrivals (13 males) 15th April and c. 60 here by 18th (including three females); one male on 30th and c. 25 (including one female) on 2nd May. Bred at this station.

D.S.F. : First arrival 18th April. 4-5 pairs nested here and the last bird was seen here 23rd September.

Nested also at Flitwick Moor.

Birds were particularly plentiful at Stewartby C.L.P. and several pairs bred; no census was taken.

Reports from other normal localities were incomplete but distribution appears to be normal.

383. WAXWING. One, feeding on hawthorn berries at Flitwick, 3rd January and three here 16th February. (W.G.S.)

388. RED-BACKED SHRIKE. No early dates of arrival.

Nesting records : pair, feeding one young, Blows Downs, Dunstable, 19th August ; another nest with five eggs in same area, 30th June (D.R.W.) and S.W.R.) ; H.C. saw three pairs at the Dunstable end, and it is probable therefore that at least five pairs bred in the area.

Nest with five eggs (afterwards hatched), Bradgers Hill, Luton, 22nd June (J. Harper).

Nest with five eggs found at Galley Hill, 6th June, this was afterwards robbed (M.W. and D.R.W.). A pair was seen in a garden in Whitehill Avenue, Luton, 17th July (D.R.W.) ; male, East Hyde, 8th July (D.R.W.) ; pair, Houghton Regis, 5th August, no proof of breeding (F.C.G.).

389. STARLING. See article page 14 on Starling roost at Everton.

Large gathering at Carlton, presumably for Horn Wood near Bozeat, Northants, contained a buff-coloured bird.

Information about assemblies and roosts of this and other species in the county is earnestly sought. Members should report on these as soon as possible.

Bird ringed 3rd February at Luton recovered in Sweden 23rd July. (S.W.R.)

Considerable movement westwards of small flocks in the Marston Valley, 28th October. (F.C.G.)

391. HAWFINCH. Birds seen on several occasions during the year in the Flitwick area (W.G.S.). Several birds reported seen in the grounds of Milton House in July (J.F.L.).

394. SISKIN. Recorded at the following usual winter haunts, where birch and/or alder trees occur plentifully : Flitwick Moor, c. 120, 12th February and c. 80 on 26th ; one there, 18th November. (M.W. and D.R.W.)

Rowney Warren c. 30, 8th April ; Clifton, c. 20, 25th January. (W.K.P.)

Maulden Wood, small party, 25th March. (W.K.P.)

Southill Park, small party, 19th February. (F.C.G.)

397. REDPOLL. Recorded from much the same stations as the above species and often in association : Flitwick Moor, 10, 22nd January ; c. 30, 12th and 26th February and 14, 14th April ; one here, 26th November. (M.W., D.R.W. and T.W.A.)

Clifton, two, 25th January (W.K.P.) ; Clophill, 10, 10th November (A.L.).

Round Wood, Luton, 14, 9th January (D.R.W.).

Luton Hoo, two, 12th February and two, 29th December (M.W.).

404. CROSSBILL. Four, Aspley Woods, 3rd February. (W.G.S.)

On 14th October Mrs E. Lucas had good views of c. 12 birds at Aspley Heath. She was informed by Mrs J. Foll that small parties had been seen on several occasions during the previous three months or so among the pine woods.

F.C.G. discussed the 'invasion' with Mr J. Foll who informed him that small parties of up to 12 birds visited the larch trees and the feeding table in his garden from July to December.

408. BRAMBLING. Largest recorded flocks during the year were : c. 100 Slip End, Luton, 16th January and c. 50, Stockwood Park, 28th March. (D.R.W.)

Also reported at : Luton Hoo, D.S.F., B.S.F., Pegsdon, Barton, Willington, Bedford and Flitwick. (M.O.)

Last emigrants : eight near Hexton Wood, 15th April. (M.W.)

First arrivals : two, Bushmead, 28th October. (C.F.T.)

425. TREE-SPARROW. No particularly large flocks reported, the greatest being c. 40, B.S.F., during February. (F.C.G.)

HENRY A. S. KEY

MAMMALS

I am sorry to report so little response to my previous appeals for information concerning the animal life of the county.

Such as I have received indicates that the Rabbit has established itself in small numbers in a few areas, and that the present stock shows no signs of infestation by myxomatosis. Now that official action is being directed towards the extermination of the species, many warrens are being 'gassed', and in consequence several instances have been brought to my attention where badgers are still being victims.

Pygmy Shrews were found by David White in his garden at Luton during the summer.

HOUSE MOUSE. (*Mus musculus*). Two white specimens, not definitely stated to be albinos, were brought to D. W. Elliot of Stagdsen on 20th May, 1955, by two village boys who had caught them in a corn-stack there.

HARVEST MOUSE. (*Micromys minutus soricinus*). Two found in sugar-beet seed in Stevington Park, 22nd November, 1956, by C. F. Green and sent to D. W. Elliott.

May I once again ask all members to keep me informed of what they see and to seek the co-operation of others who get about the country.

HENRY A. S. KEY.

Notes, Queries and Observations

LEARNING TO KNOW PLANTS.

In 1955, a group of boys, three (J. David Stephen, John Harper and Dennis Stanbridge) members of the Society and a fourth, Colin Humphreys, a fellow scholar at Luton Grammar School, made a group to record flowers in one of the competition branches of the Wild Flower Society. They came second in their branch with a total of over 600 plants. Last year (1956) they competed again and won with a total of 792. Of this total 423 plants were recorded in Bedfordshire and the remainder were found on visits to various parts of the country on holiday.

For me the most interesting feature of the experiment was that in 1955 the boys needed to be told the name of almost every plant. In 1956 some confidence had been gained and a considerable number of plants were known and in this year (1957) so far very few plants have been brought in for identification. It is obvious that a competition of this kind is an excellent way for a young person to learn his plants.

The Wild Flower Society was formed in 1892 by Mrs E. V. Dent who made no claim to be a botanist, to teach her children and the children of her friends to know wild flowers. Since her death in 1948, the Society has been guided by her two daughters. The Society limits its recordings to those species included in Bentham and Hooker's *Flora*. I will gladly send any member further details of the work of the Society.

J. G. DONY

THE CLOUDED YELLOW BUTTERFLY ; A PROBLEM.

I suppose few people with any eye for an insect at all fail to experience a mild excitement when they see the first Clouded Yellow of the season, and always the question that comes to mind is : "Will this be The Year?" If that season does turn out to be a "Clouded Yellow Year", then the rapid build-up of these lovely butterflies quickly turns that mild excitement into a thrill.

When I landed in the U.S.A. on 9th July last, I stepped straight into the real thrill, and perhaps may be forgiven for feeling that I had at last come to the right country, for there were Clouded Yellows (*edusa*) with the white form (var. *helice*) flying all along the 100-mile drive from New York to Allentown in N. E. Pennsylvania. These butterflies were more plentiful than Common Whites, and there was quite a number of the Pale Clouded Yellows (*hyale*) also, whilst the Small Clouded Yellows (*chrysotheme*) were not uncommon. Nor was this all, for without having to go beyond the back-garden even, I saw four species of Swallow-tail—Tiger, Spicebush, Black and Zebra, of which Tiger seemed to be representative of our *Machaon*—and for the first time in my life, Camberwell Beauty (Mourning Cloak in America). As well as these, there were great Monarch butterflies, the closely-resembling though slightly smaller Viceroy, and a host of others, some of which I knew, and a lot that I did not.

However, my purpose here is not to record what I saw, but rather to pose a problem and seek guidance, so let us return to the Clouded Yellows.

I have always been taught that there is no spring generation in this country and that our English second, and sometimes subsequent, generations depend in the first place upon migrants from the Mediterranean area of the Continent, the reason given being that first-generation larvae cannot survive the frost and damp of our winter. Now, although I was not in the U.S.A. in the spring, nevertheless the vast number of Clouded Yellows I found at the beginning of July, evenly distributed over the entire country through which I travelled, led me to believe that they were bred there and were certainly not migrants. The butterfly continued till about mid-November when we had cold and snow. A sudden warm spell at the beginning of December cleared the snow, and, after rain, the 6th, 7th, 8th and 9th December were mild and sunny. On these days the butterflies were on the wing again, apparently unharmed. On 9th December I caught three, including one *helice*, and examined them carefully before releasing them again, to be quite certain that they were identical with our own type, which they were. On that day also Monarch and Camberwell Beauty were flying. Shortly after this, cold weather returned, with snow and sub-zero temperatures which still continued when I sailed for home on 17th January, so, of course, I saw no more butterflies.

At the opening of the Allentown (Pennsylvania) Audubon Society's winter session in November I was invited to attend at Muehlenberg College as a guest member, and was asked to speak about our British birds, insects, etc., and this gave me an opportunity to raise the question of Clouded Yellows and their early spring breeding habits. The opinion was that they did not migrate at all in the U.S.A. and that they were always present in large numbers from spring onwards throughout the year. Surprise was expressed at the idea that they could not survive quite severe winters.

Are we now to seek some other reason for there being no spring brood in Britain, or what is the answer? Perhaps some reader can help a very puzzled amateur.

H. C. M. FELCE

HOW LONG CAN PRIMROSES BLOOM ?

In a wood near to Melchbourne my husband and I have gathered primroses since last September each week or fortnight ; on October 7th we

gathered quite a good bunch. The wood in question is being cut down and replanted, so in the open spaces the roots have had more sunshine than usual; also there has been no severe frost yet this winter. Last Sunday, January 27th, we gathered a large bunch, also today February 3rd 1957, as at the present time they are in full bloom.

(MRS.) L. M. GOOSEY

PECTORAL SANDPIPER IN BEDFORDSHIRE.

On October 14th, 1956, a wader with an unfamiliar call was flushed from some wet ground at Dunstable sewage farm. This proved to be a Pectoral Sandpiper. It flew round calling with a husky trill for some time but was lost amongst some flying Snipe, the sizes being almost the same.

It was found again, however, ten minutes later on some mud at the edge of a pool, but was not seen soon enough and it flew back to the spot where it was originally seen. It was noted that in flight there was no distinct white wing-bar, and the tail pattern, with a dark central area, was distinctive. When it was again located, good views down to distances of twenty feet were obtained. A detailed description was taken down and ten feet of colour cine film were used. The bird was under observation for about one hour.

In size it was larger than a Dunlin but definitely smaller than a Ruff. Its bill was black, quite long and slightly decurved, and its legs a dull yellow, although the colour was often obscured by mud. The crown was a darkish brown with black streaks and a light stripe extended from the base of the bill over the eye and a short distance behind it. Actually it was more of an 'area' than a stripe. A thin dark line extended from the base of the bill to the eye, which was black.

The throat and breast were buffish and delicately speckled grey, the speckling coming to quite an abrupt end on the breast. The back was a darkish brown, the feathers being edged light and rufous. From behind and even the side at times a distinct light chevron was visible. The back of the bird was therefore very similar to that of a Little Stint. The belly was white.

In flight there was no distinct wing-bar although the primaries were slightly lighter. The flight was characteristic more of the larger type of wader, e.g., Ruff, than of the Dunlin class. This is well seen on the cine film taken. The bird was attached to this small area and always returned immediately when flushed, uttering its call each time.

In general the bird appeared very slim due to the constant extension of the neck, which was then very slender. It fed chiefly by picking off the surface of shallow water, turning its head from side to side as it did so.

It was last seen heading westwards about noon.

The Pectoral Sandpiper is a North American species, a few of which have occurred annually in the British Isles in recent years. This, however, is the first record for Bedfordshire.

DAVID and ROGER WHITE

ABSTRACTS OF LITERATURE ON BEDFORDSHIRE NATURAL HISTORY FOR 1956

BRITISH BIRDS, Vol. 49 (1956).

(a) 'Wood-Sandpipers in the autumn of 1952', by I. C. T. Nisbet, No. 2, p. 62. Gives references to occurrences as reported in our Journal for that year.

(b) 'Delayed emigration of certain birds in autumn, 1954', by J. A. G. Barnes, No. 2, p. 76. Gives references to Turtle Dove.

(c) 'Quail in the British Isles', by R. E. Moreau, No. 5, p. 164.

- (d) 'The Crossbill invasion of Great Britain in 1953', by E. M. Barraud, No. 8, p. 293. Detail of occurrence.
- (e) 'The status of the Lesser Black-backed Gull in Hertfordshire', by Brian L. Sage and A. B. Sheldon, No. 8, p. 307. Details of movements along county borders with Herts. and Cambs.
- (f) Foreign ringed birds, No. 11, p. 444. (i) Lapwing ringed as a juvenile male on 20/11/1948 at Reeuwijk, Zuid Holland, recovered on 4/1/1952 at Biggleswade. (ii) Rook ringed as nestling on 10/5/1949 at Giethoorn, Overijssel, Holland, recovered on 2/3/1950 at Toddington.

BEDFORDSHIRE MAGAZINE Vol. 5.

- (a) 'A Quiet Retreat', by J. H. Kennedy, No. 35 (Winter 1955-56). An account of the natural history of open areas between St. John's Street and Cardington Road, Bedford.
- (b) 'On Markham Hills', by Frank Horsler, No. 36 (Spring 1956). Details of past natural history.
- (c) 'Did Bedfordshire escape the invasion?', by S. H. Kershaw, No. 39 (Winter 1956-57). An appeal for information concerning the Death's Head Hawk Moth.

THE LIBRARY

All library books were checked on 16th February and again on 23rd May, 1957; all those missing on the earlier date have now been returned, but one volume now missing, *A Synopsis of Bacteria and Yeast Fungi*, catalogue number Fi/a, has not been signed for, and thus cannot be traced.

It would assist greatly if members borrowing books would remember to sign for them on the sheet inside the Library door, and, in particular, to enter the date of their return.

I am glad that secretaries and librarians of other societies are now sending journals direct to me at the Nature Room. There may have been some delay in our copies reaching them, but this will be rectified when I have a better arrangement for access to our Journals and can help to make up back numbers.

ADDITIONS TO THE LIBRARY

BOOKS

The First Fifty Years, a history of the Kettering and District Nat. Soc. and F.C.

PERIODICALS

Countryside, 1956 (complete).

The Countryman, 1954 (4 issues, complete); 1955 (3 issues). From Miss A. L. Cooper.

Natural History (J. of the American Museum of Nat. Hist.), 1956, Feb., March, April, May, June, Dec.

OUR CONTEMPORARIES

Folkestone Nat. Hist. Soc., *Rep.* 1955.

Hertfordshire Nat. Hist. Soc., *Trans.* Vol. XXIV, Pt. 5, (1956).

Huntingdonshire Flora and Fauna Soc., *Ann. Rep.* 1955.

London Nat. Hist. Soc. (The London Naturalist), *Jour.* 1955.

Northumberland, Durham and Newcastle-on-Tyne Nat. Hist. Soc., *Trans.*, Vol. XI, Nos. 8 and 9, June and July, 1956.

Suffolk Nat. Hist. Soc., *Trans.*, Vol. IX, Pt. IV, (1956).

ORNITHOLOGICAL REPORTS

- Cambridge Bird Club, Rep. for 1955 (fiftieth anniversary year).
 Leicestershire and Rutland Ornithological Soc., Rep. 1955 and Jour.
 (The Grebe), Vol. I, No. 1, Sept., 1956.
 London Bird Report, 1955.
 The Norfolk Bird Report, 1955.

REPRINTS

'On the foraging activities of the Wood Ant', by S. J. Holt (Jour. of Animal Ecology, May, 1955); 'Food collection by a Scottish ant community', by M. V. Brian (Jour. of Animal Ecology, Nov., 1955); 'The Wood Ants of the English Lake District', by J. E. Satchell and C. A. Collingwood, March, 1955; 'On the two forms *macrogyna* and *microgyna* of the Ant *Myrmica rubra*', by M. V. Brian and A. D. Brian (Evolution, Vol. IX, No. 3, Sept., 1955); 'Studies in Caste Differentiation in *Myrmica rubra* L. 3. Larval dormancy, winter size and vernalisation', by M. V. Brian (Memoires Originaux); '*Allalobophora limicola*, an Earthworm new to Britain' by J. E. Satchell (Ann. and Mag. of Nat. Hist., March 1955); 'On the colour forms of *Allalobophora chlorotica* Sav. (Lumbricidae)', by H. Kalmus, J. E. Satchell and Jean C. Bowen (Ann. and Mag. of Nat. Hist., Oct., 1955); 'The use of Phytosociological methods in ecological investigations : I. The Braun-Blanquet System; II. The Practical Issues involved in an attempt to apply the Braun-Blanquet System; III. Practical Applications', by M. E. D. Poore (Jour. of Ecology, 1955); 'Ecology of *Alnus glutinosa* : I. Fruit formation; II. Seed distribution and germination', by D. N. McVean (Jour. of Ecology, Jan., 1955); 'Studies of the development of woodland conditions under different trees : the ground flora', by J. D. Ovington (Jour. of Ecology, Jan., 1955); 'The Ecological Conditions of different woodland types', by J. D. Ovington (Proc. Linn. Soc., June, 1955); 'A comparison of light in different woodlands', by J. D. Ovington and H. A. I. Madgwick (Forestry, Vol. 28, No. 2, 1955); 'The Cairngorms weather survey, 1953', by M. W. Dybeck and F. H. W. Green (Weather, Feb., 1955); 'Climatological work in the Nature Conservancy', by F. H. W. Green (Weather, July, 1955); 'The mathematical approach to dynamics', by J. G. Skellam (Inst. of Biology, 1955); 'Quadrat sampling from the mathematical standpoint', by J. G. Skellam (Proc. Linn. Soc., June, 1955); 'Soil zoology' (Proc. of the Univ. of Nottingham Second Easter School in Agric. Science, 1955); 'A simple spinning joint for a rotary film evaporator', by Bockock and Gilbert (Nature, March, 1956); 'Notes on the vegetation of Iceland', by D. N. McVean (Trans. and Proc. Bot. Soc. Edinburgh, Vol. XXXVI, Pt. IV); 'The work of the Nature Conservancy', by A. R. P. Hayden (The Starfish, July, 1955); 'The Moor House National Nature Reserve', by V. N. Conway (Soc. for Promotion of Nature Reserves, Handbook, 1955); '*Nephronium arcticum* (L.) Fr. A lichen new to Britain', (Trans. Brit. Mycological Soc., Vol. 38, Pt. 3, 1955); 'The Rothamstead Light Trap', by C. B. Williams (Proc. Roy. Ent. Soc., Sept., 1948).

PAMPHLETS

- The Linnaean Society of London. Synopsis of the British Fauna, No. 6. Lumbricidae (Annelida), Key to the common species.

RECHECKING

Will any member holding any copies of the following Journals and Transactions kindly bring them for rechecking ?

- Letchworth Nat. Hist. Soc. J., 1951, 1952, 1954, 1955, 1956.
 Middle Thames Naturalist Ann. Rep. Any previous to 1951.
 Northants Nat. Hist. Soc. J.
 Suffolk Nat. Hist. Soc. Trans., 1952, 1953, 1954, 1955.

DESIDERATA

The following periodicals have not been regularly received. Will any members kindly examine this list to see whether they can supply any of the copies mentioned?

Cambridge Bird Club Rep. for 1956.

The Countryman, Spring 1955 and the whole of 1956.

Natural History, 1953, Jan., June and Nov. : 1956, Jan., Sept., Oct. and Nov.

Middle Thames Naturalist, 1955 and 1956.

Wild Bird Protection Soc. of Norfolk, 1954.

E. PROCTOR, *Hon. Librarian*

NEW MEMBERS

- Cranfield, Miss A., 22 Spenser Road, Bedford.
Farrar, Mrs. J., 3 Chaucer Road, Bedford.
Forsdyke, Mrs. M. L., 51 Spring Road, Kempston.
Franghiadi, G. P., Wrest Park Lodge, Silsoe.
Huckle, Miss D., 21 Dunstable Road, Flitwick.
aMartin, Mrs. C. A., 7 Bromham Road, Biddenham.
Martin, T. Stirling, B.Sc., 7 Bromham Road, Biddenham.
Pape, T. V. F., 162 Kimbolton Road, Bedford.
Perryman, Mrs. O. M., 17 Eaton Valley Road, Luton.
jRandall, G., 17 Prospect Avenue, Rushden, Northants.
jRichardson, Miss J., 84B Alexandra Avenue Luton.
Smart, P. J., F.R.E.S., 1 Laburnum Avenue, Bedford.
aThorp, Mrs. E. M., Ivy Cottage, Newton Blossomville, Bucks.
Thorp, W. J., Ivy Cottage, Newton Blossomville, Bucks.
Tower, M. D. C., Sunnymead, Lilley, Luton.
Tunstall, Mrs. M. E., 478 New Bedford Road, Luton.
Tunstall, R. P., 478 New Bedford Road, Luton.
Walker, Mrs. M. E., 51 Spring Road, Kempston.
Williams, J. W., 9 Rothsay Gardens, Bedford.

DEAD BIRDS

Mr Jennings, Department of Animal Pathology, School of Veterinary Medicine, Madingley Road, Cambridge, would welcome any dead birds which members may find. They should be wrapped in some absorbent material and sent by post to the address above. Postage will be refunded later. Mr Jennings and Dr Soulsby are investigating the diseases and parasites in wild birds and any help the members of the Society can give would be much appreciated.

CONDITIONS OF MEMBERSHIP

The Council of the Society shall approve each application for membership, but subject to this condition, membership shall be granted on payment of the annual subscription, viz :

- 10s. 0d. Ordinary members and affiliated institutions (full membership).
- 7s. 6d. Full time students (full membership).
- 5s. 0d. Associate members (do not receive the Society's Journal).
- 2s. 6d. Junior members (under sixteen years of age, do not receive the Society's Journal).

Application Forms for membership can be obtained from the *Hon. Treasurer*, 27 Wendover Drive, Bedford.

LIFE MEMBERSHIP

Any member may compound for life by a single payment of £10.

SUBSCRIPTIONS

Members are reminded that their subscriptions are due on the 1st January in each year. These should be sent to :

The Honorary Treasurer,
J. M. DYMOND,
27 Wendover Drive, Bedford.

NOTICE TO CONTRIBUTORS

The Editorial Committee welcomes suitable contributions on the natural history of the County for publication in THE BEDFORDSHIRE NATURALIST. Short paragraphs from members about their own observations of general interest are specially desired. All material should be typewritten in double spacing on one side of the paper only, or written very legibly. Illustrations should not be prepared before consultation with the Editor.

Contributions to be considered for publication in the next issue should be sent to the *Honorary Editor* by 31st January, 1958.

SETS OF THE JOURNAL

Complete sets of the JOURNAL (Nos. 1-10) are now obtainable, price twenty-five shillings, from the *Hon. Librarian*. Single copies remain at five shillings each.

LIBRARY

All presentations, gifts of books and journals, as well as exchanges should be sent direct to

The Honorary Librarian,
MISS E. PROCTOR, B.Sc.
The Nature Room,
4 The Avenue, Bedford