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AND FIELD CLUB
FOR THE YEAR
1951

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BEDFORDSHIRE
NATURAL HISTORY SOCIETY & FIELD CLUB
1952

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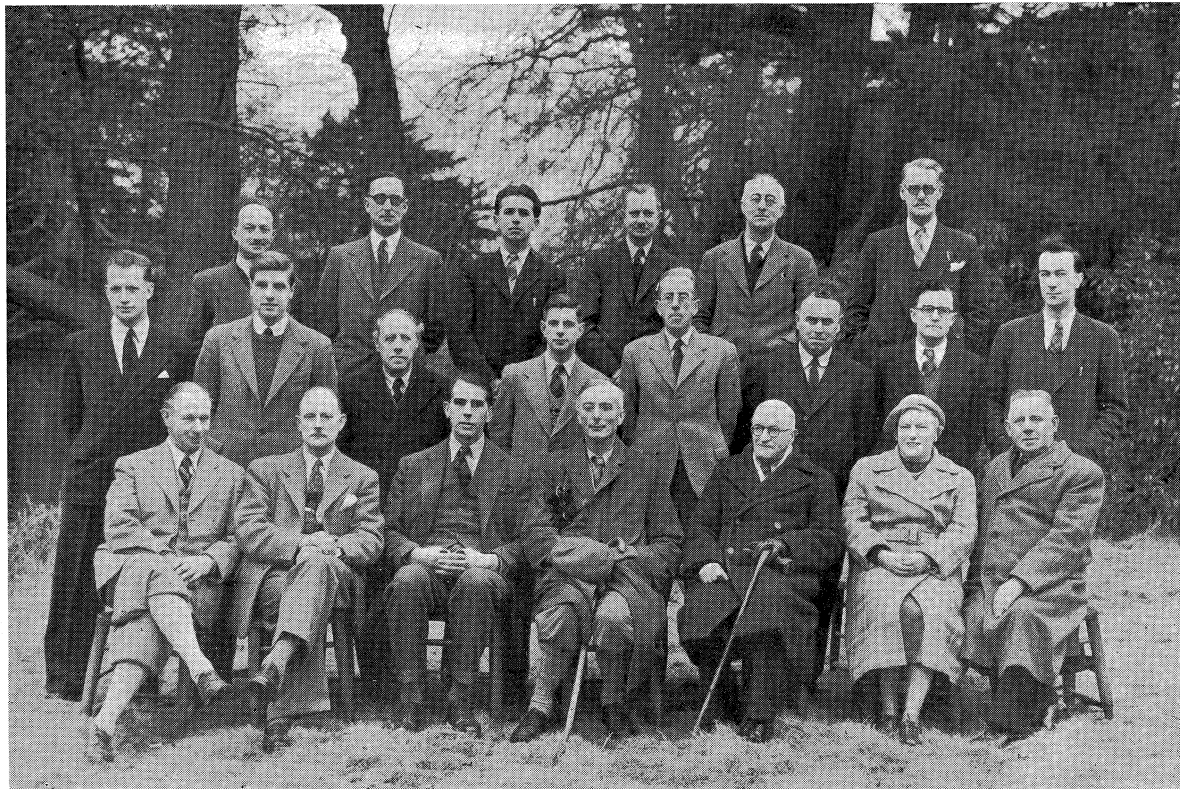
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[Photograph by F. Jewell Harrison]

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EDITED BY H. F. BARNES, M.A., Ph.D.

No. 6—1951

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THE BEDFORDSHIRE NATURAL HISTORY SOCIETY AND FIELD CLUB

STATEMENT OF ACCOUNTS FOR THE YEAR ENDED 31st DECEMBER 1951

RECEIPTS				PAYMENTS			
	£	s.	d.		£	s.	d.
To Cash in Bank, 1st January 1951 ...				By Cost of Journal and Reprints ...			
„ Subscriptions—1949-50 ...	14	5	0	„ Printing and Stationery ...	100	3	6
1951 ...	97	19	6	„ Hire of Halls ...	12	15	0
1952 ...	1	0	0	„ Hire of Coaches—1950 ...	25	8	6
				1951 ...	46	18	0
„ Collections at Meetings ...			113 4 6	„ Postages ...			72 6 6
„ Coach Fares ...			5 6 6	„ Lecturers Expenses ...			8 1 4
„ Sale of Tickets — Ornithological			44 5 0	„ Hire of Taxi ...			9 11 8
Conference ...			20 0 0	„ Bank Charges ...			10 0 0
„ Sale of Journals ...			4 4 9	„ Hire of Crockery ...			10 6
„ Sale of Reprints ...			8 13 0	„ Refreshments ...			1 13 0
„ Subscriptions towards cost of Journal			8 7 6	„ Cash in Bank, 31st December 1951 ...			14 5 0
							4 14 0
			£243 6 10				£243 6 10

STATEMENT OF ACCOUNTS FOR 1951

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.
18th February 1952.

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

Report of the Council for 1951

Despite the difficult conditions of the times, the past year proved to be a satisfactory one for the Society. Membership remains firm and the roll at the end of the year consisted of 170 Ordinary, 13 Corporate, 10 Student, 41 Associate and 19 Juniors, making a total of 253. During the year the Society lost two Ordinary members by the regretted deaths of Mr. B. H. Alabaster and Sir Malcolm Stewart.

Fifty-two members have not paid their subscriptions since 1949 and must be presumed to have resigned. It is gratifying however to note that 23 new members were enrolled during 1951. Three resignations at the end of the year mean that 1952 began with a total of 250 names on the register, a level which it is hoped will be raised substantially in the new year through the efforts of all members, by interesting their friends in the numerous activities of the Society.

The standard of lectures remained at a high level and the subjects chosen were as usual varied. Notable visiting speakers were L. Hugh Newman, F.R.E.S., C. G. Johnson, D.Sc., and P. S. Milne, B.Sc. A highly successful innovation was a combined meeting with the Bedford Camera Club when a packed house enjoyed a memorable evening with John Chear, F.L.S., lecturing on bird life and showing cine illustrations in colour. It is hoped that more such meetings with associated Societies will be possible in future programmes. Some concern is felt at the poor attendance at the majority of lectures held in Luton. The reasons are somewhat obscure and the Council, alive to the exigency, welcomes constructive suggestions from members.

The third Ornithological Conference held in Bedford in November was outstanding, more than 160 delegates from the six counties evinced lively interest in the proceedings; the British Trust for Ornithology being well represented both by the lecturers and in the audience. The addresses given by G. K. Yeates, B.A., and Bruce Campbell, Ph.D., were most stimulating and led to instructive discussion of current ornithological problems. The sales of "Trust" literature broke all national records for similar meetings.

The Council desires to record its appreciation to Dr G. A. Metcalfe for further projection of his excellent colour films and to Mr L. A. Speed for his untiring services as projectionist.

Field Meetings were once again of the usual varied character and were in many respects better attended than indoor gatherings. The weather in the main proved an ally and the series of enjoyable events terminated, as in former years, with a successful Fungus Foray. This time the usual greensand haunts were forsaken in favour of the chalk hills and again Dr R. W. G. Dennis was the incomparable leader.

Under its energetic secretary, Mr F. C. Gribble, the Ornithological Section progressed with useful additional surveys, while the affiliated Bedford School Natural History Society continued with further investigations on rooks.

The Botanical Section's activities, through a variety of causes, were unfortunately allowed to flag, but following a special meeting in the autumn new and keener interest has now been aroused. Once again the Council appeals for an increase in active interest and hopes that many useful ideas for improving programmes will be forthcoming.

Finally, and by no means the least important, on behalf of all members, the Council wishes to record its indebtedness to all persons and corporate bodies who, by their generousities, have enabled the Society to realise a further year of achievement.

HON. GENERAL SECRETARY

PROCEEDINGS 1951

Indoor Meetings

38TH ORDINARY MEETING, 11th January 1951, Luton. "Talking of Butterflies", by L. Hugh Newman, F.R.E.S. Attendance 50. *Chairman*: Mr K. E. West.

39TH ORDINARY MEETING, 25th January 1951, Bedford. "Problem of Plant Distribution in Bedfordshire", by Dr J. G. Dony. Attendance 30. *Chairman*: Mr F. G. R. Soper.

40TH ORDINARY MEETING, 8th February 1951, Luton. "Insect Travellers", by Dr C. G. Johnson. Attendance 25. *Chairman*: Dr H. F. Barnes.

4TH ANNUAL GENERAL MEETING, 22nd February 1951, Bedford. The Society's Chairman, Mr Keith Piercy, presided over a gathering of 56 members and opened the proceedings by calling on the Hon. General Secretary to read the minutes of the previous Annual General Meeting. These were followed by the Secretary's Annual Report for 1950 which showed an encouraging influx of new members and a healthy attendance at both indoor and outdoor meetings. It was with regret that he had to report the death of the Society's oldest member, Col. R. R. B. Orlebar. Two new appointments had been made during the year, those of Dr H. F. Barnes to become Hon. Membership Secretary and Mr L. A. Speed to fill the post of Hon. Programme Secretary. The outstanding feature of the year had been the 2nd Bedfordshire Ornithological Conference.

In presenting his Financial Statement the Hon. Treasurer showed a balance in hand of £39 5s. 7d. though to offset this there was an outstanding account for hire of coaches (£25 8s. 6d.). He hoped that the Council would keep a careful watch to see that these coach trips did not strain unduly the finances of the Society and he appealed to the many members in arrears of subscription to assist the Society by more prompt payment of their dues. Both reports were adopted and Messrs. H. A. S. Key and W. H. Bonnett were thanked for their services.

Reports on the activities of the Ornithological and Botanical Sections were received from Mr F. C. Gribble and Mr A. W. Guppy respectively.

Then came the election of officers. The news that His Grace the Duke of Bedford had consented to accept a further term as President was warmly applauded and the other retiring officers were re-elected *en bloc* unanimously.

Ten nominations had been received for the same number of vacant seats on the Council and on a show of hands all were elected. The Officers and Council of the Society for the year were announced as follows:—*President*: His Grace the Duke of Bedford; *Chairman*: Mr Keith Piercy; *Hon. Gen. Secretary*: Mr Henry A. S. Key; *Hon. Treasurer*: Mr W. H. Bonnett; *Hon. Editor*: Mr Ray Palmer; *Council*: Dr H. F. Barnes, Dr J. G. Dony, Messrs. J. S. Dunn, F. C. Gribble, A. W. Guppy, B. R. Laurence, Miss E. Proctor, Messrs. F. G. R. Soper, B. W. West and K. E. West.

In "Any other business" Dr J. G. Dony gave interesting details of the work of the Nature Reserves Committee. The evening concluded with a show of films, the projector being operated by Mr L. A. Speed.

41ST ORDINARY MEETING, 1st March 1951, Bedford. "The Mammals, Reptiles and Amphibians of Bedfordshire", by Ray Palmer, F.R.E.S. Attendance 60. *Chairman*: Mr F. G. R. Soper.

42ND ORDINARY MEETING, 15th March 1951, Luton. "About Birds", by Dr G. A. Metcalfe. Attendance 80. *Chairman*: Dr J. G. Dony.

43RD ORDINARY MEETING, 11th October 1951, Bedford. "Plant Galls", by Dr H. F. Barnes. Attendance 26. *Chairman*: Mr F. G. R. Soper.

44TH ORDINARY MEETING (first joint meeting with the Bedford Camera Club), 13th November 1951, Bedford. "Birds on Rocky and Shingly Coasts", by John Chear, F.L.S., F.R.P.S. Attendance exceeded 100. *Chairman*: Dr G. A. Metcalfe.

45TH ORDINARY MEETING, 22nd November 1951, Luton. "Insects and Human Guinea Pigs", by Dr C. G. Johnson. Attendance 18. *Chairman*: Mr Keith Piercy.

46TH ORDINARY MEETING, 6th December 1951, Bedford. "Bedfordshire Flowers and their Habitats", by W. Durant. Attendance 27. *Chairman*: Mr A. W. Guppy.

47TH ORDINARY MEETING, 20th December 1951, Luton. "Natural History and Landscapes with a Camera", by P. S. Milne, B.Sc. Attendance 18. *Chairman*: Dr J. G. Dony.

Field Meetings

SUNDAY, 21ST JANUARY 1951, AMPHILL TO LIDLINGTON. *Leader*: Mr F. C. Gribble. A party of sixteen members enjoyed a walk through Ampthill Park and over the railway tunnel to Lidlington. It was interesting to note the large amount of Mistletoe growing in a wood at the foot of the park. A few flights of Mallard were seen and a few Bullfinches at the back of Millbrook Church and many Pheasants in the woods near Lidlington.

SUNDAY, 18TH MARCH 1951, KENT MARSHES. *Leader*: Mr H. A. W. Southon. Twenty-five members made a coach trip to the Kent marshes, two members of the London Natural History Society being picked up *en route*. The party started its walk at Cliffe Cement Works where Common Snipe were seen in the workings—we were told that occasional pairs of Little Ringed Plover breed here in the summer. A Cormorant was seen on another flooded pit. Some difficulty was found in negotiating the partly flooded marshes, but eventually the sea was reached and several species of Duck were seen on the mud revealed by low water in the Thames Estuary. The return route in pouring rain was via Halston Marshes through the large heronry to High Halston.

SUNDAY, 29TH APRIL 1951, WOODS IN CLOPHILL AREA. *Leader*: Mr F. C. Gribble. This was mainly an ornithological meeting; forty-two members were present. A number of Tree Pipits, several species of Tits and Finches, a Wood Lark and two Grasshopper Warblers were seen and the Nightingale was heard whilst the party was lunching at 1 o'clock. A dead Water Shrew was found having been carried by some predator from the stream lower in the village. A Barking Deer was seen in Maulden Wood and a Common Lizard in the cutting. Heavy rain which made observation difficult fell in the afternoon.

SUNDAY, 13TH MAY 1951, CHICKSANDS WOOD. *Leader*: Mr K. E. West. This was a joint meeting with the Letchworth Naturalists' Society, seventeen people, including three from Letchworth, being present. The weather was fine at the start but gradually deteriorated into rain by about 3.30 p.m. when the party broke up. This wood is dominant Oak; mainly Hornbeam scrub, occasional large Hornbeams, some Ash and Chestnut and one grand avenue of Conifers with an admixture of all the usual shrubs, Spindle and Dogwood being plentiful. Primrose, Bluebell, Early Orchid, Red Campion, Cherry, Crab-apple, Ferns and Bramble in great variety as well as many other items of botanical interest were found.

MONDAY, 14TH MAY 1951, VARIOUS AREAS IN THE N. AND S. OF BEDFORDSHIRE. *Organiser*: Mr F. C. Gribble. A series of observers was organised to watch for Waders, but very little was seen at any point. A Spotted Redshank at Willington and an immature Herring Gull and several Redshank at Stewartby were seen, but no passage was noted from Leighton Buzzard, Felmersham, Bromham and Southill.

SUNDAY, 27TH MAY 1951, WALBERSWICK, SUFFOLK. *Leader*: Mr F. G. R. Soper. Twenty-four members visited the coast by coach, the torrential rain overnight was discouraging but it had cleared up by the time we left Bedford and remained fine. A brief stop at Breckland was rewarded by views of Stone Curlew, Woodstart and Wood Lark. At Walberswick the beach with its Waders, Little Tern and Ringed Plovers attracted some, whilst the rest kept to the marshes where Bittern, Bearded Tits, etc., were seen. The botanists had not nearly exhausted the possibilities of the area by the time the coach was due to leave.

SUNDAY, 3RD JUNE 1951, RIVER WALKS. *Organiser:* Mr F. C. Gribble. River walks along the Ivel and Ousel were organised in extremely sunny weather. A party walking from Clifton to Biggleswade saw a Common Sandpiper near Langford, a few Sedge Warblers and Reed Buntings at intervals along the stream and a pair of Reed Warblers near Broom. A few Sedge Warblers and Reed Buntings were seen between Tempsford and Biggleswade. The main part of the river Ousel was worked, but the only bird life particularly attached to this were a few Reed Buntings—odd Yellow Wagtails were occasionally seen.

SUNDAY, 17TH JUNE 1951, KINGS WOOD, HEATH AND REACH. *Leader:* Mr K. E. West. Twenty-one members were present at this meeting. Birds and insects were plentiful but nothing of special interest was found.

WEDNESDAY, 21ST JUNE 1951, HAWNES PARK. *Leader:* Dr J. G. Dony. Hawnes Park and Wilsted Wood were at their best at this time of the year. Nothing of special interest was found. Eleven members and eight senior girls from Hawnes School were present.

SUNDAY, 1ST JULY 1951, BLAKENEY POINT, NORFOLK. *Leader:* Mr F. G. R. Soper. This was an ornithological meeting, twenty members travelling to the coast by coach. The day was fine and hot. After a study of the marshes at Cley, the party walked to Blakeney Point and returned by boat to Morston. Many of the Common Terns had young, but the small colony of Sandwich Terns was the highlight of the day. Oystercatchers, Black-Headed Gulls, Sheld-Duck and Redshank were seen in large numbers.

SUNDAY, 8TH JULY 1951, WARDEN HILL TO HEXTON. *Leader:* Mr S. W. Rodell. This was intended to be of ornithological interest. Five members met at "Warden Tavern" and started off over the Warden Hills, but as the weather turned to torrential rain the meeting was abandoned.

SATURDAY, 14TH JULY 1951, ASPLEY HEATH. *Leader:* Dr J. G. Dony. Sixteen members were present and an enjoyable afternoon was spent on the county boundary to the west of Aspley Heath. New stations were found for many heath plants but the enjoyment of some of the senior members was spoilt by some juniors who seemed completely out of control.

SATURDAY, 21ST JULY 1951, BURDELYS MANOR FARM, STAGSDEN. *Leader:* Mr B. B. West. This meeting, intended for moth sugaring, had to be abandoned due to absence of a leader.

MONDAY, 6TH AUGUST 1951, WICKEN FEN, CAMBRIDGE. *Leader:* Mr K. E. West. The weather was very unpromising causing only eleven members to attend, nevertheless a general tour of the fen was made before lunch. The usual flora was noted. The morning being dull very few insects were on the wing and the birds few and ordinary. After lunch the torrential rain brought the excursion to an early end.

SUNDAY, 2ND SEPTEMBER 1951, WHIPSDADE ZOO. *Leader:* Mr P. S. Bates. Thirty-one members enjoyed an interesting afternoon. Many parts not normally open to the general public were visited under the guidance of Overseer P. S. Bates.

SUNDAY, 23RD SEPTEMBER 1951, NORTHAMPTON SEWAGE FARM. *Leader:* Mr H. A. S. Key. This was an ornithological meeting, about twenty members being present in fine sunny weather. A preliminary walk round the sewage farm was disappointing as few species of interest could be found. Later a good selection of Waders was discovered, these included Ruff, Greenshank, Redshank, Green Sandpiper, Ringed Plover, Lapwing, etc., in company with Black-Headed Gulls, Mallard and Teal.

SUNDAY, 7TH OCTOBER 1951, FUNGUS FORAY. *Leader:* Dr R. W. G. Dennis. This meeting was well attended and is fully reported elsewhere in this JOURNAL.

SUNDAY, 9TH DECEMBER 1951, TOTTERNHOE. *Leader:* Mr S. W. Rodell. This ornithological ramble was attended by fifteen members in very cold and windy weather. The route was from "The Riffe Volunteer" along Green Lane to Totternhoe Knoll, then down the hill to a wood on Marshy land to Sewell and Dunstable. Gulls, Tits, Fieldfares, Teal, Chaffinches, Robins and Wrens were seen.

Botanical Section

Owing to the increased number of field meetings of general botanical interest, and the rather poor support given to the special meetings of the Section during the previous season, it was decided to limit the activities to a Botanical Exhibition. This was held in the Nature Room, 4 The Avenue, on the evening of Monday, 25th June, at which a large collection of specimens had been assembled. These were identified and described by Mr Durant and the Botanical Secretary. About fifteen members were present.

It is hoped that increased support will be forthcoming during the field meetings this season for the botanical side of the Society's interests; special attention will be paid to the subject of identification of species. Another Botanical Exhibition has been arranged, and it is hoped that members will bring along as much material as possible for display and identification.

A. W. GUPPY

The 1951 Fungus Foray

This was held on Sunday, 7th October on the Barton Hills, when we were again fortunate to have as our leader Dr R. W. G. Dennis of Kew.

This was our first foray to be held on the chalk hills; in the four previous years visits having been made to various areas on the greensand. As a result of this, many species not recorded on the previous occasions were found.

In spite of the fact that it was not a good season for fungi, 71 species were identified. A complete list of which is given below.

Amanita echinocephala Vitt.; *Amanita solitaria* (Bull.) Fr.; *Anellaria separata* (L.) Karst.; *Armillaria mellea* (Vahl) Fr.; *Auricularia auricula-judae* (L.) Schroet.; *Auricularia mesenterica* (Dicks.) Fr.; *Bolbitius vitellinus* (Pers.) Fr.; *Boletus variegatus* (Swartz) Fr.; *Boletus viscidus* (L.) Fr.; *Clitocybe cerussata* Fr.; *Clitocybe dealbata* (Sow.) Fr.; *Clitocybe infundibuliformis* (Schaeff.) Fr.; *Clitocybe inornata* (Sow.) Fr.; *Collybia radicata* (Rehl.) Berk.; *Coprinus atramentarius* (Bull.) Fr.; *Coprinus micaceus* (Bull.) Fr.; *Coprinus niveus* (Pers.) Fr.; *Coprinus plicatilis* (Curt.) Fr.; *Cortinarius cinnamomeus* (L.) Fr.; *Cortinarius punctatus* (Pers.) Fr.; *Dacryomyces deliquescens* (Bull.) Duby.; *Daldinia concentrica* (Bolton ex Fr.) Ces. and de Not.; *Geaster fimbriatus* Fr.; *Geaster limbatus* Fr.; *Geaster triplex* Jungh.; *Galera pilosella* (Pers. ex Fr.) sensu Kühner; *Gomphidium glutinosum* (Schaeff.) Fr.; *Hebeloma crustuliniforme* (Bull.) Fr.; *Hebeloma mesophaeum* Fr.; *Helvella crispa* Fr.; *Hygrophorus niveus* (Scop.) Fr.; *Inocybe corydalina* Quel.; *Inocybe fastigiata* (Schaeff.) Fr.; *Lachnea scutellata* L.; *Lactarius blennius* Fr.; *Lepiota cristata* (A. and S.) Fr.; *Leptonia euchlora* (Lasch.) Fr.; *Lycoperdon echinatum* Pers.; *Lycoperdon perlatum* Pers.; *Marasmius peronatus* (Bolt.) Fr.; *Mycena hiemalis* (Fr.); *Mycena polygramma* (Bull.) Fr.; *Omphalia hydrogramma* (Bull.) Fr.; *Panaeolus campanulatus* (L.) Fr.; *Panaeolus sphinctrinus* Fr.; *Pholiota blattaria* Fr.; *Pholiota marginata* (Batsch) Fr.; *Pholiota togularis* (Fr.) Sensu Kühner.; *Pleurotus palmatus* (Bull.) Fr.; *Pluteus cervinus* (Schaeff.) Fr.; *Pluteus cinereo-fuscus* Lange; *Pluteus phleophorus* (Ditm.) Fr.; *Polyporus fragilis* Fr.; *Polyporus stipticus* (Pers.) Fr.; *Polystictus versicolor* (L.) Fr.; *Psathyra spadiceo-grisea* (Schaeff.) Fr.; *Psathyrella disseminata* (Pers.) Fr.; *Psathyrella gracilis* Fr.; *Psathyrella subatomata* Lange; *Russula emetica* (Schaeff.) Fr.; *Scleroderma verrucosum* (Vaill.) Pers. *Stereum hirsutum* (Willd.) Fr.; *Stereum purpureum* (Pers.) Fr.; *Stropharia inuncta* Fr.; *Tricholoma carneum* (Bull.) Fr.; *Tricholoma chrysites* (Jungh.) Gillet; *Tricholoma melaleucum* (Pers.) Fr.; *Tricholoma nudum* (Bull.) Fr.; *Tricholoma terreum* (Schaeff.) Fr.; *Xylaria hypoxylon* (L. ex Fr.) Grev.; *Xylaria polymorpha* (Pers. ex Fr.) Grev.

PAMELA SOPER

Ornithological Section

The programme for the year commenced with a successful field meeting in January at Ampthill. Led by the Secretary a party of sixteen walked to Liddington across the fields; among the birds seen were several Bullfinches and three flights of Mallard. This was followed by an indoor lecture at Bedford in February when the subject chosen was Grebes and Divers. During March a further meeting was held in Luton, where a highly appreciative audience of over one hundred members and friends watched an exhibition of films by Dr G. A. Metcalfe. These included birds of mountain, stream, woodland and sea coast in many parts of the British Isles.

To start the summer season an indoor meeting was held in Bedford to discuss the families "Chats and Shrikes" and their distribution in the county, also field work for the coming months. In April over forty members met at Clophill for a walk in the woods. Among the many interesting species seen were a Wood Lark, Grasshopper Warblers and Tree Pipits. A watch for Waders and Terns was held during May in several scattered localities in both the north and the south of the County, followed in June by a further series of river walks. This year the Rivers Ousel and Ivel were given more attention, the most interesting result being the possible nesting of the Grey Wagtail on the latter. In July a ramble over the Warden Hills, near Luton, had unfortunately to be abandoned owing to heavy rain. The weather was more kind however when the section next met at Northampton Sewage Farm where many interesting Waders were seen, including Little Stint, Greenshank, Ruff and Wood Sandpiper.

Continuing the discussion of the various families of birds at the first winter meeting at Bedford in October the subject chosen was "Thrushes". After a short talk on the individual species comprising the group and their habits, illustrated by paintings and eggs, the meeting was thrown open to discussion. This was quickly forthcoming and many interesting personal observations were related.

No ordinary meeting was held in November but a highly successful 3rd Bedfordshire Ornithological Conference was held on the last Sunday of the month (see below).

To complete the year a party of fourteen members braved the weather to enjoy a walk from Dunstable to Totternhoe. Unfortunately a strong icy wind was sweeping the countryside, much to the detriment of the bird life of the area, most of which had apparently been driven to more sheltered spots.

Summing up the activities of the year, the indoor talks, discussions and the field meetings were well attended, especially the latter. In concluding the committee wish to thank all members for their support and trust this will continue to grow in the coming year.

F. C. GRIBBLE

Third Bedfordshire Ornithological Conference

SUNDAY, 25TH NOVEMBER 1951

This annual gathering of ornithologists from Bedfordshire and its five neighbouring counties was again held in the County Headquarters of the St John Ambulance Brigade Headquarters in Bedford. Over 160 delegates were present when Mr W. E. K. Piercy opened the proceedings by introducing the speakers, Mr G. H. Yeates and Dr Bruce Campbell, Secretary of the British Trust for Ornithology.

Mr Yeates addressed the meeting first, his talk being titled "Two Summers in Iceland". After describing the country and its position in relation to the distribution of birds, he told of his experiences there during the summers of 1948 and 1949. The first was noted for exceptionally hard weather with late, heavy snowfalls. Consequently little in the way of bird photography could be attempted as nesting was very much delayed. However photographs of Purple Sandpiper and Whooper Swan were obtained.

The following year was more successful and the main object of the visit, the photographing of the Great Northern Diver at the nest, was attained. The slides shown by the speaker of this species nesting on Lake Thingvallavatn held the whole audience enthralled. Among the many other species included in Mr Yeates' address were Grey Lag Goose, Golden Plover, Arctic Skuas, Snow Bunting and several slides of arctic flowers. During the whole time the speaker discussed the photographs in such a stimulating manner that one could almost imagine they were actually present at their taking. A prolonged round of applause followed the speaker's concluding remarks and many interesting questions followed.

After an informal lunch Dr Bruce Campbell first spoke on the aims and objects of the British Trust for Ornithology and appealed for increased interest and support. He then went on to his main lecture on "The Pied Flycatcher". After describing the bird and illustrating his remarks with slides Dr Campbell dealt with its distribution in the British Isles and particularly the Forest of Dean where he had made a special study of this species. Following this he dealt with its nesting and feeding habits and showed how experiments with nesting boxes with glass observation panels had greatly enlarged the known details of both these actions. Disease was also spoken of by the speaker who said young birds in the area studied had died in the boxes before fledging for no apparent reason. Whether or not this was because of over population due to provision of unnatural nesting sites had not been proved. The migration of the Pied Flycatcher through Portugal to Africa was illustrated by maps showing recoveries of ringed birds and the speaker also told of the return to the same breeding grounds of both young and old birds. Several questions and observations followed the speaker's concluding remarks and he was loudly applauded by the highly appreciative audience.

Some discussion then followed on Rook Roosts which, following the last conference, had received great attention in the area. The President of the Bedford School Natural History Society gave details of the work done to date and future plans. To conclude the programme Dr G. A. Metcalfe showed a series of his excellent colour films taken in the Scottish Highlands during the previous summer, giving intimate glimpses into the life of Greenshank, Red Throated Diver, Slavonian Grebe and many other species.

In closing the proceedings Mr F. G. R. Soper thanked the speakers for their very entertaining talks and the audience for their appreciation and support.

F. C. GRIBBLE

Annual General Meeting 1952

The FIFTH ANNUAL GENERAL MEETING was held on Thursday, 28th February 1952, in the Nature Room of the Froebel Training College, The Avenue, Bedford.

Mr Keith Piercy as Chairman of the Society presided over a gathering of fifty members and opened the proceedings by calling on the Hon. General Secretary to read the minutes of the previous Annual General Meeting which were adopted. Mr H. A. S. Key then read the Report of the Council for 1951 (which is printed on page 3 of this Journal). The report which was unanimously adopted was followed by the Hon. Treasurer's Report and Statement of Accounts for the past year.

Mr W. H. Bonnett drew attention to the small amount (£4 14s. 0d.) standing to the Society's credit at the close of the year. The losses incurred by insufficiently supported coach trips had been to a great degree responsible for this and he regretted that such excursions would have to be discontinued during the forthcoming summer. Printing costs, especially those occasioned by the printing of the Journal, had again been heavy but he desired to thank those who by their generous donations to the Publication Fund had eased the situation considerably. There were still far too many members in arrears with their subscriptions and he appealed for prompt attention to this omission. The Society was again indebted to Mr E. Lucas for auditing the accounts. The report was adopted without dissent and the Hon. Treasurer was thanked for his valuable services.

An excellent report on the year's progress of the Ornithological Section was presented by Mr. F. C. Gribble (see p. 8). In a statement on the Botanical Section Mr. A. W. Guppy stated with regret that there had been little activity during the summer but that, as the result of a well attended meeting held during the autumn, there had been a complete reorganisation and the future was very promising.

The election of officers came next. The Chairman announced that His Grace the Duke of Bedford had been pleased to accept the invitation to be President for 1952. Mr Keith Piercy also stated that Council had decided to nominate all the retiring officers and that these had expressed their willingness to serve. The meeting signified its approval. Only nine nominations had been received to fill the ten vacancies on the Council. On a show of hands Messrs. J. S. Dunn, W. Durant, F. C. Gribble, A. W. Guppy, Miss E. Proctor, Messrs. S. W. Rodell, F. G. R. Soper, B. B. West and K. E. West were elected unanimsously.

Mr L. A. Speed, as Hon. Programme Secretary, then read out a draft of the proposed field meetings for the coming summer and from the animated discussion which ensued many useful suggestions were forthcoming.

The main business of the evening being concluded several members gave illustrated lecturettes which aroused keen interest. The speakers and subjects were: Mr Keith Piercy—"Some North American Birds"; Dr H. F. Barnes—"Dutch Bulb Fields" and "The Fairy Shrimp"; Mr Ray Palmer—"The Birds of the Bass Rock"; and Mr A. W. Guppy—"Comparisons of Rainfall in the nineteenth and twentieth century".

The Weather of 1951

By A. W. GUPPY

Another cool and wet year has to be recorded, with rainfalls and temperatures everywhere very comparable with those of 1950. Once again, there was only one brief spell of what is regarded as typical summer weather, and it must be very unusual to have a year in which the temperature reached 80° on one day only. This compares with 5 such days in 1950 and 19 in 1949.

January began with two days of snow and sleet, followed by a fortnight of wet and showery conditions, the second half being dry, cold and foggy. February and March were wet and chilly, and this continued into April. The third week of April saw a brief spell of 3 warm days, with temperatures up to 70°, but thereafter there was a return to unseasonable cold, with snow on the last day of the month. May was particularly disappointing; on only one day did the temperature reach 70°, and no fewer than 17 days failed to reach even 60°. However there was an abrupt change for the better during the first week of June, which was brilliantly fine and sunny, though without great heat. The month was comparatively dry.

July brought more seasonable temperatures, with the hottest day of the year on the 21st and close, humid and thundery weather at the end, continuing until the 3rd August. The summer really finished at this date; the rest of August and the whole of September were cool and showery, and it was not until October that fine weather was enjoyed, though with much fog and low day maxima. The wettest period of the year began on 28th October and persisted throughout November, many stations recording 26 to 28 successive wet days. Unlike 1950, December was without any excessive cold weather.

TEMPERATURE

The average temperatures for the various months are here tabulated, and the average compared with that for the previous year. It will be seen that this was nearly 0.5° less than for 1950, mainly due to the first six months of the year all being colder than their 1950 counterparts.

January	38.16	July	62.69
February	38.59	August	59.76
March	38.52	September	57.37
April	45.01	October	48.19
May	50.79	November	46.10
June	57.87	December	40.21
Average for the whole year		48.61	
(compared with 49.09 in 1950)			

The hottest day was the 21st July when the temperature reached 80° .

There were no days during the year on which the temperature failed to reach freezing-point, but there were two days—29th January and 11th December—on which this figure was not exceeded.

Night frosts occurred on 45 nights, the latest being 29th April, the earliest 11th October. The coldest night was that of 10th to 11th December, with 23° minimum. March had 10 air frosts, and this is responsible for the low average temperature for the month. On the other hand, November had only two.

RAIN AND SNOW

The year was definitely a wet one, most stations having a rainfall about 4 inches above their averages. This excess was nearly entirely accounted for by the 3 months, February, March and April, normally the 3 driest months of the year. November, too, was unusually wet, and the rainfall on the 5th was the heaviest day's total, apart from thunderstorms, of any in the year. The longest wet spell has already been mentioned; the longest dry one was from 27th May to 8th June—13 days. There was consequently no official "drought" during the year, a period of 14 successive days without measurable rain.

Snow fell on 7 days, but was comparatively slight in amount and not persistent.

THUNDERSTORMS

Thunder was heard on 8 occasions, but there was only one heavy storm—that of the early morning of 31st July. The rainfall at Bromham was 1.5 inches, and this appears to have been the heaviest fall, Bedford and Kempston recording 0.97 and 0.95 inches respectively.

WIND

There was only one day on which the wind exceeded force 8 on the Beaufort scale; this was 4th February, a very wet and squally day on which the barometer reached the remarkably low reading of 28.01 inches. For the three days 4th to 6th February inclusive the barometer remained below 29 inches.

RAINFALL FOR 1951

	Ampthill	Aspley Guise	Bedford	Bromham	Cardington	Carlton	Cranfield	Great Barford	Kempston	Silsoe
January ...	3.12	2.77	2.55	2.43	2.02	2.93	2.21	2.01	2.30	2.29
February ...	4.01	3.57	3.14	2.84	3.10	3.44	3.06	2.90	3.04	3.93
March ...	3.15	3.22	3.07	2.98	2.83	3.47	2.76	3.03	2.80	2.92
April ...	2.74	3.28	3.14	2.79	2.85	2.76	2.82	2.65	2.90	2.57
May ...	2.37	2.48	2.28	2.04	2.09	2.51	2.51	1.72	2.03	2.06
June ...	0.65	0.885	0.82	0.64	0.73	1.08	0.80	1.33	0.67	0.83
July ...	1.25	1.78	1.65	2.01	1.28	0.98	1.63	0.99	1.58	1.34
August ...	4.23	3.575	2.79	2.27	3.30	3.14	2.93	4.14	2.73	4.02
September ...	2.14	1.97	1.78	1.51	1.18	2.43	1.65	1.44	1.56	1.98
October ...	1.20	0.97	0.89	0.99	0.86	0.89	1.16	0.87	1.06	1.16
November ...	4.52	4.60	4.00	4.11	3.43	4.53	3.90	3.75	4.04	3.71
December ...	1.54	1.69	1.35	1.29	1.27	1.88	1.18	1.35	1.26	1.26
TOTAL ...	30.92	30.79	27.46	25.90	24.94	30.04	26.61	26.18	25.97	28.07

Ampthill (Mr Horne)

Aspley Guise (Mr Young)

Bedford (Mr Lock)

Bromham (the writer)

Cardington Aerodrome (per Mr Speed)

Carlton (Col. Battcock)

Cranfield (Air Ministry Daily Weather Report)

Great Barford (Mr Whitchurch)

Kempston (Mr Payne)

Silsoe (N.I.A.E., Wrest Park, per Mr Ryall)



NETTING FISH AT LONGHOLME, BEDFORD

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An Ideal Fish Breeding Ground

By F. G. R. SOPER

Longholme was originally a grassy meadow between two arms of the Ouse, artificially flooded each winter to provide skating, but some 30 years ago the Corporation decided to keep it permanently flooded to form a children's boating pool. In so doing they provided an ideal fish breeding ground. With an average depth of two feet or less the water warms quickly in the spring, the soil is rich, and there is a rapid development of luxuriant weed growth teeming with caddis, water flea, shrimp, and other forms of life, while mussels, an important article of diet to the larger Cyprinidae, abound everywhere. Pollution is almost entirely absent and the pool is of course untouched by those destructive spring-time floods that so often sweep away spawn in the main river.

The presence of sizeable fish some years after the pool was established attracted the attention of anglers. The size of the pool and its shallowness prevented normal angling having any appreciable effect on its fish population and, when in 1947 the Fishery Board were anxious to secure fish to restock sections of the river that had been depleted by pollution, I asked the Corporation for permission to net the pool. This was readily given and netting took place early in 1948. The results surpassed expectations. In fact critics maintained that the pool would take many years to recover, but just two years later it was netted again with even better results. Two more years have elapsed and it has been netted for the third time. The fish were as plentiful as ever and their average weight was higher, suggesting that the thinning of stocks by the two previous nettings had been beneficial. Altogether some 200,000 fish have been removed in the three operations.

The results have been interesting. All the fish have been healthy and there has been a complete absence of disease. Roach have predominated but this is hardly surprising as they are the commonest fish in the Ouse. There were a number over a pound in weight. Next and quite understandably so came tench, a species which always prefers still water. Many over 4 lb. in weight were taken and their colouring was superb. In deep muddy pools tench are often a dark olive hue, but here the shallow sunlit water had made them assume a rich golden colour. Bream were larger and more numerous in 1952 than when the pool was first netted four years ago. Perch, a common Ouse fish which usually thrive well in lakes, proved less abundant than expected but there were some fine pike, which effectively check overcrowding. There was an understandable absence of those stream-loving species, dace, chub and gudgeon, although all three abound in the adjacent river. The 1948 netting produced some loach, stone loach and a bullhead but I have seen none since, neither have I ever seen an eel. There must be eels in the pool. Whether they are buried too deep in the mud at that time of the winter or whether they escape through the meshes of the net I do not know.

Twenty-five years ago, a friend and I had access to two lakes in the County where carp and rudd abounded. Thinking they would thrive in the still water of the Boating Pool, we brought back several hundreds of both species to form the nucleus of a breeding stock there. Not a single specimen of either has appeared in any of our netting operations. Why they did not thrive in such apparently suitable water and where they disappeared to is still unexplained.

The Ecology of the Bedfordshire Mollusca (*conti.*)

By BERNARD VERDCOURT

3. CHALK HILLS AND BEECH WOODS

The chalk hills of southern Bedfordshire are renowned for their flora but the beech woods are, save for a few interesting orchids, botanically dull. Conchologically, however, a beech wood is probably the most promising of all habitats.

There is still a good expanse of chalk downland in the county but there are very few beech woods. Those remaining have been very disturbed, or the soil leached, and they bear no comparison with the extensive beech woods in Surrey, Gloucestershire or even the neighbouring Buckinghamshire.

The snail fauna of the downs is fairly uniform and consists of three elements—xerophilous lime preferring species, indifferent species, and species preferring moist places. The downs are covered with small bushes. There are small copses, probably remnants of plateau beech woods in various places at the top of the escarpment. The species occurring in four different places are tabulated (Table I).

The following symbols are used in the tables:

- a abundant
- c common
- f frequent
- r rare
- † dead shells in leached copses and hedges
- ‡ occurs

Certain species, notably *Pupilla muscorum*, *Helicella virgata* and *Monacha cantiana*, are found on grass stems and herbage. Some of the colonies of *Helix aspersa* in quite wild habitats have individual facies, such as acuminate shape.

Beech woods are of two sorts—those which occur on flat ground and those which occur on the steep escarpments. The former have a more compact debris of twigs and harder soil, whereas in the latter the soil is looser and more easily burrowable. These two types are sometimes found in one wood and other woods are intermediate. A selection showing their mollusc fauna, so far as it is known, are tabulated in Tables 2 and 3.

Table I—CHALK HILL SNAILS

	Dunstable Downs	Totternhoe Hills	Luton Downs	Streatley to Pegsdon	Remarks
XEROPHILOUS LIME-PREFERRING SPECIES					
<i>Pomatias elegans</i>		†	†	r-a	Burrowing species.
<i>Pupilla muscorum</i>	f			f	
<i>Vallonia costata</i>				f	
<i>Caecilioides acicula</i>	r			f	
<i>Cochlodina laminata</i>			†		
<i>Helicigona lapicida</i>	†	†	†	†	In large colonies.
<i>Helicella virgata</i>	a		†	c	
<i>Helicella itala</i>	f	a	†	a	
<i>Helicella heripensis</i>				r	
INDIFFERENT SPECIES					
<i>Carychium tridentatum</i>				f	On plants, disturbed ground, and hedgerows.
<i>Vallonia excentrica</i>	f			†	
<i>Vertigo pygmaea</i>				†	
<i>Punctum pygmaeum</i>				†	
<i>Arion ater</i>		c			
<i>Arion hortensis</i>		†			
<i>Cochlicopa lubrica</i>	f	f		f	
<i>Clausilia bidentata</i>	†				
<i>Helicella caperata</i>	†			f	
<i>Trichia hispida</i>	f	f	†	f	
<i>Trichia striolata</i>		c		f	
<i>Monacha cantiana</i>		a	c	c	
<i>Helix nemoralis</i>	†	a		†	Quarries, etc.
<i>Helix hortensis</i>	†			†	
<i>Helix aspersa</i>	†	a	†	c	
<i>Retinella miudula</i>		f			
<i>Oxychilus cellarius</i>	†			c	
<i>Vitrea crystallina</i>		r		c	
<i>Vitrina pellucida</i>	†		†		
<i>Agriolimax reticulatus</i>		r			
MOISTURE-LOVING SPECIES					
<i>Arianta arbustorum</i>	c	a		r	Extending up escarpment from gault meadows.

Table 2—FLAT BEECH WOOD SNAILS

	Long Wood Leagrave	Tingley Plantation	Galley Hill Wood	Sharpenhoe Klappers	Barton Hill Copses	Butts Hill Wood	New Mill End	Luton Hoo	Barton Cutting
<i>Pomatias elegans</i> ...							r	†	
<i>Carychium tridentatum</i> ...			r						
<i>Cochlicopa lubrica</i> ...			r			c		r	
<i>Ena obscura</i> ...	f	r	c	f	r	f		r	f
<i>Arion hortensis</i> ...								c	r
<i>Clausilia bidentata</i> ...			c						
<i>Helicella virgata</i> ...	†		†						
<i>Helicella caperata</i> ...	f		†		r	c			
<i>Helicella itala</i> ...	†		†						
<i>Trichia hispida</i> ...	a		c					c	
<i>Trichia striolata</i> ...			r					†	
<i>Monacha cantiana</i> ...	f	f						f	
<i>Helicigona lapicida</i> ...	†								
<i>Helix hortensis</i> ...	f							†	
<i>Helix nemoralis</i> ...			†					†	r
<i>Helix pomatia</i> ...							locally a		
<i>Helix aspersa</i> ...								†	r
<i>Oxychilus lucidum</i> ...								r	
<i>Oxychilus cellarius</i> ...	†		c					f	
<i>Oxychilus helveticum</i> ...								f	
<i>Retinella nitidula</i> ...						c		f	
<i>Vitrea crystallina</i> ...			r						r
<i>Vitrina pellucida</i> ...	f		f			c		f	r
<i>Agriolimax reticulatus</i> ...					†	c		c	

The flat beech woods have rather a characteristic flora of *Sanicula europaea* and *Cephalanthera grandiflora* when undisturbed.

Long wood, Leagrave, has leached soil and an undergrowth of ivy in places. The wood is much disturbed, being on the edge of the urban area. Although most of the present trees may have been planted, it is likely the wood was originally part of a natural flat wood. The woods between this and the Barton escarpment beech woods are not beech woods and probably never have been.

Tingley plantation on the county border near Pegsdon contains many planted beeches but some are very old and the part of the wood further back from the road is natural. Parts of the plantation are degenerating into a hawthorn scrub.

Galley Hill wood is a typical flat wood at the top of Warden Hills. *Cephalanthera* is abundant: the snail fauna is quite rich for so small a wood.

Sharpenhoe Klappers consist of one large and two small woods—all flat disturbed beech woods.

Barton Hill copses are small remnants of an extensive plateau beech wood which extended along the top of the escarpment. They are overgrown with hawthorn scrub and ivy. Examples can be found at map references 535478 and 557488. The roadside verges have a similar fauna to the woods, and on the 3rd of November 1946, the following were found on dead leaves and hogweed close to 557488 copse:

<i>Ena obscura</i>	abundant
<i>Trichia hispida</i>	abundant
<i>Agriolimax reticulatus</i>	frequent
<i>Acanthinula aculeata</i>	one under <i>Hypnum</i>
<i>Monacha cantiana</i>	frequent

Butts Hill wood is just within the Hertfordshire boundary but so much a part of the area that it should be mentioned. It was once a beech wood. The front part is now *Pinus*, *Acer* and a few beech, the ground flora being ivy. *Helix hortensis* occurs and shells of *Clausilia bidentata* and *Retinella nitidula* were found. The rear portion is gently sloping and planted with spruce of moderate size. Under the ground debris, however, the original fauna still survives.

Luton Hoo and New Mill End were once covered with an area of flat beech wood but most of this has been felled and is reverting to *Rubus*—*Pteridium* scrub, and replanting with conifers—a fate which awaits all our native woodlands at the hands of authorities blind to the beauty of the beech woods—is in full swing.

To the east of the old Harpenden Road, slithers of beech wood remain, and living specimens of *Pomatias elegans* persist. *Helix pomatia* is common on an open railway embankment, but though it has been reported from Luton Hoo several times, the present colony may not be truly native. Further slithers of beech wood exist in the Hoo proper, bordering the A6 road. In little hollows, containing moist leaves and debris, a fauna of nine species survives. Other beech wood remnants

Table 3—SNAILS OF ESCARPMENT AND HILL BEECH WOODS

	Hexton Cross Roads	Long Wood Studham	Tottern- hoe Beech Hangers	Markham Hill Beech Wood	Barton Cutting G	Barton Cutting F	Barton Cutting Proper	Leete Wood Barton	Palm Wood Luton
<i>Pomatias elegans</i> ...		†		c	r (shells c)	†	†	r (shells a)	r
<i>Carychium tridentatum</i> ...		a	f	r	r		f		
<i>Caecilioides acicula</i> ...									
<i>Cochlicopa lubrica</i> ...				r	r			r	
<i>Azeca goodallii</i> ...								r	
<i>Acanthinula aculeata</i> ...		r			r				
<i>Punctum pygmaeum</i> ...		r	r						
<i>Gomiodiscus rotundatus</i> ...	f	a	r	a	a	a	a	a	
<i>Arion hortensis</i> ...		f			f			r	
<i>Arion circumscriptus</i> ...		f			f				
<i>Arion rufus</i> (white variety)									f (1948)
<i>Clausilia bidentata</i> ...	c	r	r	f	a	c		c	
<i>Cochlodina laminata</i> ...	c	f	r		f			f	
<i>Ena obscura</i> ...		r		r	f			r	
<i>Helicella virgata</i> ...	a					†	†		
<i>Helicella caperata</i> ...	f	r				r		r	
<i>Helicella itala</i> ...				c		†	†	†	
<i>Trichia hispida</i> ...			f	r	r				
<i>Trichia striolata</i> ...	f	a	f			f	†	f	
<i>Monacha cantiana</i> ...	f					a	c	f	
<i>Helicigona lapicida</i> ...		†	†		†			†	†
<i>Helix hortensis</i> ...				c		r	f	†	
<i>Helix nemoralis</i> ...	r			c	r		f	†	
<i>Helix pomatia</i> ...						†			
<i>Helix aspersa</i> ...							f	†	
<i>Retinella nitidula</i> ...	f	f	r	f	a	f	f	†	
<i>Retinella pura</i> ...		r						†	
<i>Oxychilus alliarius</i> ...		r		r					
<i>Oxychilus cellarius</i> ...	r	f	r	a	f	r	f	f	
<i>Oxychilus helveticum</i> ...		f		f					
<i>Vitrea crystallina</i> ...		f	r	a	f		‡	‡	
<i>Eucomilus fulvus</i> ...		r							
<i>Vitrina pellucida</i> ...		f		f	f			r	
<i>Limax marginatus</i> ...								r	
<i>Milax gracilis</i> ...		f							
<i>Agriolimax agrestis</i> ...		f							

wood edges

remain in the centre of the Hoo. Certain areas by the river Lea have become nettle beds and waste ground inhabitants are present: *Monacha cantiana* (abundant), *Helix hortensis*, *H. nemoralis*, *H. aspersa*, *Trichia striolata* and *Oxychilus lucidum*.

Beech woods with moderate slopes are not uncommon.

Palm Wood, Luton, is in the last stages of destruction but is a good example.

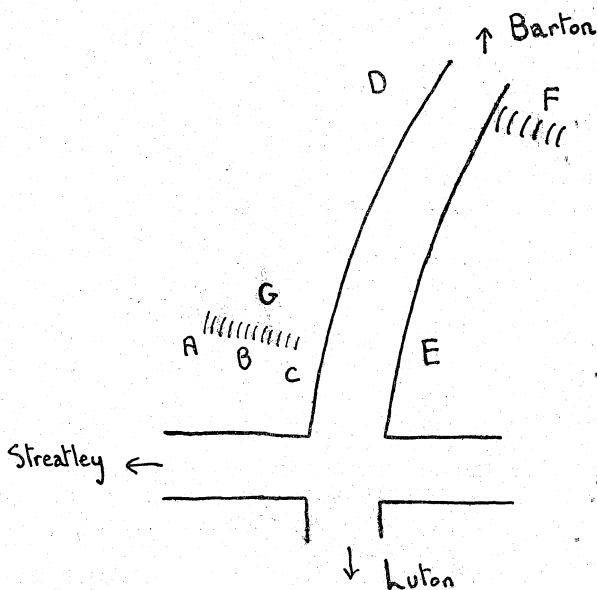
Long Wood, Studham, is another good example and until recently must have been relatively undisturbed, although conifers and exotics are present. Felling operations were under way in 1948. The fauna is extensive and interesting.

All the other woods mentioned are true escarpment beech woods.

At Hexton cross roads there is a strip of woodland which combines the features of a steep slope leading to a flat strip parallel to the road. This is an open wood now and certain non-woodland elements have penetrated.

Totternhoe Beech Hangers consist of two very open and sparse woods. In one, the soil is leached and in the other ivy covers the ground. A certain amount of scrub occurs on the hill tops and *Ena obscura* occurs in these but has not been found in the steep woods.

Markham Hills beech wood is a good example of an escarpment wood and clothes the two sides of a closed valley indenting the scarp. *Cochlodina laminata* has not been found there even after a good many visits.



Leete Wood, Barton, is the steepest escarpment wood in the county. The top part is flat and contains the typical *Cephalanthera* flora. Some trees have been felled and horsechestnuts planted. The very steep slope continues down to a strip of pasture bordering the stream from Barton Springs. At the base of the slope elder scrub with ash and larches occurs, and the ground is thickly littered with a debris of logs and sticks. The ground flora is mostly *Urtica*, *Mercurialis*, *Daldinia concentrica*, and *Hirneola*.

Barton Cutting exhibits several types of beech wood, which are indicated in the sketch. The escarpment Wood G lies between the flat wood B bordered by a line of beeches A-C and the low scrubby chalk marl ground at D. This wood contains much elder scrub together with the moss *Brachythecium rutabulum* growing densely on the ground debris. B has a typical ground flora and is well known for its *Epipactis*. The actual cutting (E) is covered with mossy disturbed elder scrub, together with much open ground. F is a small valley with beech-elder association and large lumps of cracked lower chalk lying about.

The flat beech woods are characterised by *Ena obscura* and *Helicella caperata*, and the steep ones by *Goniodiscus rotundatus*, *Pomatias elegans*, and *Cochlodina*.

None of the Bedfordshire woods is inhabited by the abundance of snails to be found in other counties where trees are thickly populated with *Helicigona lapicida* and *Cochlodina laminata*. Rarities, such as *Epa montana*, have been extinct in Bedfordshire since bronze-age times and even *Helicigona* is probably now extinct.

The Sawflies of Flitwick Moor

By V. H. CHAMBERS

For the purpose of this survey collecting has only been carried out on the fields likely, from their flora, state of drainage and degree of human interference, to have the most interesting fauna. These comprise fields numbered 53, 55, 309, 310, 311 and 312 on the 6-inch O.S. maps, all of which wholly, or in part, retain their marsh or even fen character; other fields such as 201, 202, 314, 315 and 321 (Folly Wood) or the streams running through them have been visited but are not mentioned unless they are localities for records of special interest, as in most cases they are little more than rough pastures of minor ecological interest. The treatment is not to discuss the fauna of each field in turn but to deal with the species in the main under headings of their host plants. Only in the cases of the *Spiraea* on 311, 312 and 55 (in part) and of *Betula* on field 309 can these be regarded as the dominants of true plant associations, the *Salix* and *Populus* being limited to single trees or clumps of trees. It is true that the Folly Wood is a mature alder carr and that alder carr is in process of formation upon field 55, but in the former case the trees are too high for faunal studies.

A total of about 143 species of sawfly has been taken upon Flitwick Moor thus defined, or about one half of the known county fauna. There

are probably a few additional common species that I have not recorded, such as *Tenthredo temula* Scop. and *T. mesomelas* L. which almost certainly occur but which add nothing of further interest to the general picture. Additional rarities may turn up in the future as the area is obviously of unusual interest.

(a) Species attached to *Betula*. The main area of birch occurs in field 309 from which the top soil has been removed and shallow peat diggings made at various times. There are fully grown trees at the end adjacent to Folly Wood, although not as old as the now decaying and partly felled trees in the latter area. Younger trees towards the end facing 310 have grown up since 1930, in which year, the exposed peat surface was devoid of vegetation. Still younger birch scrub is found in 310.

Strong-flying species that can spread readily like *Pamphilius varius* Lep. and *P. pallipes* Zett. have been found throughout 309 and 310, especially in the latter where larvae were frequent, even on the youngest trees, during 1948. Of the clumsy *Arge*, both *A. ustulata* L. and *A. fuscipes* Fall.—whose larvae also feed upon *Salix*—are frequently found. Four leaf-mining species occur in 309, *Scolioneura betuleti* Klug (the most abundant), the tiny *Fenusa pusilla* Lep., *Messa nana* Klug and *Phyllotoma nemorata* Fall., the last appearing to be rare. Of the Nematinae, *Hemichroa alni* L. is always to be found, its solitary green larva feeding at first in the centre of a leaf, whereas the gregarious *H. crocea* Geoffr., a species subject to violent fluctuations in numbers, was found as a few colonies in 1947. It has not been seen since in any other part of the county although very abundant in 1946. Other species with conspicuous, gregarious larvae are *Croesus latipes* Vill. (black, colonies found most years), *Pteronidea collina* Cam. (blue-bronze) and *P. caddarensis* Cam. (pale blue, black and yellow), this last being quite rare. Species with solitary larvae to be found any year are *Dineura viridorsata* Retz., *Priophorus varipes* Lep. (also on hawthorn), *Pteronidea oligospila* Forst., *P. dispar* Brischke and *Pristiphora melanocarpa* Hart., while rarer species are *Pteronidea viridescens* Cam., *P. bergmanni* Dahl., *Nematinus acuminatus* Thoms. and *Pristiphora quercus* Hart. (brick-red larvae with ivory and black spots).

(b) *Salix* spp. The commonest willows are *S. caprea* L. and *S. atrocinerea* Brot. (55, 309, 310, 311) with isolated *S. fragilis* L. by the watercourses (55, 310, 311), very few *S. viminalis* L. and hybrids of the last with *S. caprea* in field 55. New and vigorous growths of the first two species have also arisen in recent years upon the fresh peat workings in field 314. Apart from the rare *Pamphilius gyllenhali* Dahl. taken as larvae on *S. atrocinerea* (309) during 1949 and *Rhogogaster chlorosoma* Bens. (309, 311), the willow species taken all belong to the sub-family Nematinae. Abundant and widely-distributed gall-makers are *Euura saliceti* Fall., *Pontania leucosticta* Hart. (309), *P. leucapsis* Tisch. (311), all on *S. atrocinerea*; and *E. atra* Jur. and *P. proxima* Lep. on crack willow. Adults have been bred from larvae of *Amauronematus viduatus* Zett. and *A. leucolaenus* Zadd. on *S. caprea* (309) and *A. histrio* Lep. taken on field 55. The conspicuous, gregarious larvae of *Pteronidea miliaris* Panz. (309, *S. caprea*), *P. pavidata* Lep. and *P. melanaspis* Hart.

(both species 309, 311, *S. caprea*, *S. fragilis*), so abundant during 1946–8, have become quite rare in recent years. The solitary larva of *Pteronidea hypoxantha* Forst. has been taken on *S. viminalis* x *caprea* (55); of *P. curtispina* Thoms. and *P. oligospila* Forst. upon the same hybrid, the latter also on crack willow (312). *Holcocneme crassa* Fall. is also taken occasionally on crack willow.

(c) Alders are found mainly on the banks of watercourses between fields 309 and 314, 310 and 311, 311 and 312, on the banks of the river Flitt 312, 314 and 64, and as carr in the wetter parts of 55. The larvae of *Nematinus fuscipennis* Lep., *N. luteus* Panz. and *N. willigkiae* v. Stein are frequently found, especially between 311 and 312, as is the curious, flat, green, scale-like larva of *Platycampus luridiventris* Fall., closely appressed to the undersurface of the leaf. Both *Croesus varus* Vill. and *Pteronidea polyspila* Forst. are rare and most readily found as the larvae. Two species have larvae covered with white powder or meal: these are the pretty *Eriocampa ovata* L. found throughout the Moor and *Monsoma pulverata* Retz., only taken rarely in field 312. Two leaf-miners *Fenusia dohrni* Tisch. and *Phyllotoma vagans* Fall. are sometimes numerous and the handsome *Pamphilius vafer* L. has been taken once only near Folly Wood. All these sawflies are only to be found in the larval stage on alder; in addition, *Hemichroa alni* L.—also taken on birch—has been recorded from this host.

(d) *Populus tremula* L. and *Populus* spp. Small thickets of aspen, frequently disturbed by felling, are found on 311 and at the margin of 309, with scattered trees on 310. These are of especial interest as native aspen woods in the county are few and small in area. All three aspen species of *Pamphilius*, *histrion* Latr., *betulae* L. and *latifrons* Fall.—all of which have rarely been taken in Britain—were found as larvae and adults in 1948. *Rhogogaster dryas* Bens.—a new, recently described species always found associated with this tree although the larva is unknown—is numerous on 309, 311; the as yet undistinguished larvae of the distinct species *Pteronidea fahraei* Thoms. and *P. nigricornis* Lep. are readily found in June and July in the same thickets as are adults of *Amauronematus puniceus* Christ. in early spring. Two rare leaf-miners *Phyllotoma ochropoda* Klug and *Messa glaucopsis* Kon. occur and the palisade sawfly, *Stauronema compressicornis* F. is frequent, as on other poplars.

I consider that the existence of this rich fauna, and more especially of the tiny and very rarely found *Messa glaucopsis*—which could not be introduced artificially and is most unlikely to fly far—is strong evidence for the aspens being native and a long-established element of the flora of Flitwick Moor.

Other poplar sawflies are present. The few lombardy poplars planted by the river Flitt cannot, of course, be examined closely, but larvae of *Pristiphora conjugata* Dahl. have been taken on their lowest branches. There are a few small trees of *Populus nigra* var. *betulifolia* (Pursh) Torrey in 55 which have a most interesting fauna. Apart from the larvae of the common species *Pteronidea melanaspis* and *P. hypoxantha*, those of *Stauronema compressicornis*, *Holcocneme coeruleocarpa* Hart. and *Priophorus viminalis* Fall. have been found and bred at various times. Of greater interest is the record of *Protemphytus perla* Klug—

another rare species and not previously found upon this host-plant—the larvae of which were numerous in the summers of 1946–8.

(e) *Spiraea ulmaria*. This is dominant in the greater part of fields 55, 311, 312, parts of 310 and 53, and occurs elsewhere. In the early spring before the new growth of meadow-sweet has attained more than a few inches, *Blennocampa geniculata* Hart., *B. tenuicornis* Klug, *Empria alector* Bens. and *E. tridens* Kon., all black sawflies of small size, are to be found abundantly in these areas. Other species of *Empria*, such as *baltica* Conde, *pumila* Kon., and *excisa* Thoms. and *Blennocampa confusa* Kon., known or suspected to feed as larvae upon this plant, are less frequent. *Emphytus calceatus* Klug (311), *Protemphytus tener* Fall. (55) and *Arge ciliaris* L. are rarer.

(f) *Rubus* and *Rosa*. Principally on the drier parts, there are good growths of *Rubus* sp. (blackberry), *Rubus idaeus* L. (309, 311) and *Rosa* sp. The raspberry species *Priophorus tener* Zadd and *Taxonus agrorum* Fall. occur on 309; the larvae and adults of *Arge coerulescens* Geoffr. on blackberry in Folly Wood and 309, while the common *A. cyanocrocea* Forst., only recently established as feeding on this plant is, however, frequently found upon the tops of Umbelliferae. Of the rose species, *Emphytus cinctus* L. is numerous and *Sterictiphora geminata* Gm. and *Ardis sulcata* Cam. have been taken as single examples in the wet fields 311 and 312.

(g) An important miscellaneous group of species comprises those of rare or comparatively rare occurrence, attached to specific plants or plant associations found in marshes, and which can therefore be regarded as species characteristic of Flitwick Moor. More or less extensive areas of *Juncus* are found on 310 and 55, where *Dolerus madidus* Klug and *Eutomostethus luteiventris* Klug occur. Upon the *Equisetum* in 55 are found *Loderus vestigialis* Klug, *Dolerus palustris* L. (rare), *D. aericeps* Thoms. and *D. bimaculatus* Geoffr. (55, 311), the last abundantly in 1947, an interesting discovery. The handsome *Hartigia linearis* Schrank—which must be attached to *Spiraea* in addition to the plants usually quoted—occurs in 201 (reclaimed meadow), 311 and 312. The iris sawfly, *Rhadimoceraea micans* Klug, occurs upon the limited stands of its host-plant on 309, 312 and 55. At one time field 55 must have been a *Carex paniculata* swamp as witnessed by the dead tussocks still standing on the dry parts. Living tussocks remain in the swamps and its specific sawfly, *Eutomostethus punctatus* Kon., survives with it. The two species *Ametastegia glabrata* Fall. and *A. equiseti* Fall. attached to *Rumex*, etc., have been taken on the dry areas of 310 and upon 309 near the stream respectively. The remaining species are listed as follows: *Tenthredo mandibularis* F., a rare sawfly conspicuous as adult and larva, on *Petasites* by the river Flitt; *T. scophulariae* L. occasionally found on figwort on 309 and 310; *Athalia scutellariae* Cam., specific to skullcap (53); *Eutomostethus gagathinus* Klug, a rare species, whose larva is unknown, once on the meadow 315; *Pteronidea ribesii* Scop. a common species found upon naturalised red currant (311, 312); and *Pristiphora denudata* Kon., another little-known sawfly taken settled upon various trees (311, 312).

(h) On the dry areas or margins adjoining pathways and cultivated fields the trees and hedgerows support a number of species worth listing separately. Upon oak (309, 310, 311) there are *Profenusa pygmaea* Klug, *Caliroa annulipes* Klug, *Mesoneura opaca* F. (309), *Janus luteipes* Lep. and *J. femoratus* Curt; upon hawthorn *Trichiosoma lucorum* L. (rare, 311), *Pamphilus sylvaticus* L. (rare, 55), *Caliroa limacina* Retz., *Dineura stilata* Klug and the abundant *Prionophorus eradiatus* Hart. and *Pristiphora ruficornis* Oliv.; *Nematus lucidus* Panz. (201) and the elder species, *Macrophya ribis* Schr. and *M. albicincta* Fall., upon the small scrub of the host-plant by the river Flitt (55).

(i) Finally there is a large number of generally distributed or abundant species, not characteristic of the Moor, that are likely to be found anywhere as their larvae are polyphagous or feed upon small common herbs or grasses. Those attached to grasses and sedges are *Macrophya duodecim-punctata* L., *Dolerus haematodes* Schr., *D. nitens* Zadd., *D. asper* Zadd., *D. picipes* Klug, *D. nigratus* Mull., *D. niger* L., *D. aeneus* Hart., *D. rugosulus* D. T., *Eutomostethus ephippium* Panz., *Selandria serva* F., and two or three species of *Pachynematus*, including *P. clitellatus* Lep. The remaining species recorded are *Tenthredo atra* L., *T. livida* L., *T. arcuata* Forst., *T. perkinsi* Mor., *Rhogogaster punctulata* Klug, *Aglaostigma aucuparia* Klug, *A. fulvipes* Scop., (*Galium*, abundant by the river Flitt), *Tenthredopsis nassata* L., *Pachyprotasis rapae* L., *Emphytus calceatus* Klug, *Monophadnus pallescens* Gm., *Halidamia affinis* Fall. (*Galium*), *Blennocampa confusa* Kon., *Stethomostus fuliginosus* Schr. (river Flitt), *Athalia lineolata* Lep., *A. cordata* Lep., *A. glabricollis* Thoms., *Melisandra morio* F. (larva unknown), *Pseudodineura fuscula* Klug (rare on *Ranunculus repens* L., 201) and *Pristiphora pallidiventrifera* Fall. (55).

Plant Galls

By H. F. BARNES

What are plant galls? Connold (1909), stated that they are "vegetable productions and are the result of irritation upon the tissues brought about by the presence of the causer". Swanton (1912), another well-known English authority on plant galls, wrote "a plant gall may be defined as an abnormal growth induced by the irritation of an animal or fungus parasite". Felt (1940), the American entomologist, described galls as "abnormal vegetable growths resulting from the work of insects, usually immature, and other organisms". It is thus obvious that the plant makes the gall, while the animal or other organism induces it.

Plant galls may be conspicuous outgrowths such as the well-known Oak Apples and Marble galls; the Robin's Pincushion on the stems of rose trees and the spiny pea galls on the leaves; the bean-like swellings on willow leaves and the witches' brooms on birch; the nail-like red outgrowths on the leaves of lime, sycamore and maple. Or they may be obvious swellings and twisting of the stems such as those often seen

on willow and bramble. Galls also occur on roots, for instance those caused by the weevil on cabbage roots. Others take the form of folded and swollen leaflets like those frequently seen on rose and ash. Or they may be swollen buds ("big bud" of black currant, a mite gall) or flowers or fruitlets (pears attacked by a gall midge) which to the uninitiated give the appearance of rather early and well-developed normal growth, yet if opened will reveal abnormality. In other cases there is no outward appearance of gall formation; the reproductive organs of many grass inflorescences are seen to be galled when dissected. In fact there is every gradation in form and almost every part of plants is liable to be galled. A cardinal point in gall formation is that the feeding of the causative-organism must be so gauged as to stimulate growth without killing too many plant cells.

While some trees such as the oak and willow are outstanding because of the variety of the different galls occurring on them, galls are to be found on flowering-plants, annual or perennial, belonging to many, if not most, families. In addition a few have been recorded from algae, mosses, lichens and even fungi.

The number of galls on single leaves is sometimes astounding; up to a dozen marble galls and as many as 600 or more smaller galls of another Cynipid having been recorded from individual oak leaves. Mite-galls are also to be found in very large numbers on limited areas of leaf surface.

Galls are remarkably constant in form and for this reason it is often possible to identify the organism inducing them by the appearance of the galls alone. But this does not guarantee that the organisms reared from them will in fact be the ones that are responsible for their development. This is because of the parasites and hyperparasites; the commensals and inquilines, which are only too ready to take advantage of a readily available and protected food supply; and others taking temporary shelter in the galls. The breeding of the fauna of galls is an interesting side-line in the study of galls.

It was formerly thought that one gall-inducer always caused the same gall. While this is usually the case some insects, e.g., some gall wasps, have regular alternate generations, the one producing for example a leaf gall, the other a root gall. Other insects, e.g., certain gall midges, lay their eggs on whatever part of the plant is available at the time always choosing of course young rapidly growing parts, thus producing several types of galls. For example, one willow gall midge will gall male catkins, cause terminal rosettes on the shoots and also cause lateral buds to become swollen. Another gall midge will cause crinkled leaves and swollen flowers, which remain closed, on cabbages.

It was also thought that one gall insect would only gall one species or perhaps several closely allied species of plants. But now it is known that the host plant range is much wider than was formerly suspected, especially among the gall midges.

But what are the organisms that induce plant galls? Members of five insect orders (Diptera, Hymenoptera, Hemiptera-Homoptera, Coleoptera and Lepidoptera in this order) are chiefly responsible. Mite-induced galls come next in the number of different kinds followed

by those caused by the presence of eelworms. There are also bacterial, virus, fungal and mycetozoan plant galls. Considering the insects, the gall midges or Cecidomyiidae (Diptera) and the gall wasps or Cynipidae (Hymenoptera) are especially noteworthy in this respect, while among the Hemiptera-Homoptera the plant lice or Aphididae and the jumping plant lice or Psyllidae deserve mention.

The numbers of plant galls recorded in Great Britain has increased enormously since Albert Muller made the first catalogue in 1872. He recorded a total of 91 caused by Diptera (36), Hymenoptera (36), Hemiptera-Homoptera (8), Coleoptera (9) and Lepidoptera (2). The second list by S. L. Mosley in 1898 enumerated 197 and includes some mite- and eelworm-galls, while E. T. Connold in 1901 described 425. E. W. Swanton (1912), catalogued nearly 900 galls in his *British Plant Galls* (Methuen) which remains the standard textbook of British cecidology though sadly out-of-date. The proportion of the causers in this list is as follows: Diptera 248, Hymenoptera 136, Hemiptera-Homoptera 117, Coleoptera 91, Lepidoptera 37, Acari (mites) 76, Nematode (eelworms) 25, Fungi and Mycetozoa 145. Since Swanton's day no comprehensive book on British plant galls has been published, though there are more up-to-date books dealing with European plant galls and so are very useful in identifying British specimens. But there is a great need for an English book because so many additional galls have been added to the British list. For example, R. S. Bagnall and J. W. H. Harrison in 1918 listed over 400 gall midges alone. Since then many others have been discovered and today the list is over 600 for this family alone.

It seems curious that little attention has been paid to plant galls in Bedfordshire which has been so rich in naturalists. The field botanists must continually be seeing galls but apparently they have not recorded them, yet surely those that love plants should be worried when their growth becomes abnormal. The entomologists and zoologists should be just as interested in the insects and other animals that induce plant galls as in those that just eat the plants; in addition there is the fascination of discovering all the parasitic insects which attack those that are primarily responsible for the galls, the hyperparasites that attack the parasites, not to mention the commensals, the inquilines and the casuals in occupation of the galls. The mycologist also will find fungi responsible for gall formation. The general naturalist must frequently have noticed plant galls because of their almost infinite variety of shape and colour.

Reports of Recorders

BOTANY

As much work was done in the field as in previous years but there is less of novelty to record. It is possible that for a few years the study of the native flora in the county is almost exhausted. It was a great joy to the recorder to see, in company with C. C. Foss and Peter Shrimpton, Bladderwort (*Utricularia vulgaris* L.) flowering in a pool about six miles from Bedford. Vegetative

material had been found by him in the same place in 1950 but the species was uncertain. It is about sixty years since it has been known to flower in the county. A more important discovery was by the recorder of *Carex strigosa* Huds. on the county boundary near Potsgrove. There has always been some doubt as to the validity of the only previous record by Abbot (1798). The recorder also found a rare hybrid sedge *C. distans* x *C. lepidocarpa* at Totternhoe. H. Cole continued good work by finding Dusky Cranesbill (*Geranium phaeum* L.), for which we had only a few records, in a hedge at East Hyde. Its status is comparable with a new naturalised species for the county *Geranium Endressi* Gay shown to the recorder from a shrubbery at Flitwick Manor. Ray Palmer found a new weed, *Claytonia alsinoides* Sims. for the county in his garden at Aspley Guise. It will be interesting if this species, so frequent in some parts of northern England, becomes established in the county. The crop of wool aliens was not as profitable as it was in 1949 and 1950 but about twelve new species were added.

J. G. DONY

BIRDS

Most of the occurrences in 1951 were quite normal though as in other years there were notable visits by the more unusual species including a passage of Pied Flycatchers in May. The outstanding incidents were when a Sea Eagle attempted to prey on poultry at Biddenham and the recovery of a Gannet at Renhold. The temporary though considerable Starling roost at Elstow was a memorable sight.

During the year yet another species was added to the County list and it is to be regretted that the efforts on the part of the new visitor, the Little Ringed Plover, to breed were unsuccessful.

The various gravel workings have contributed considerably during recent years both to the spread of certain species, which find there an ideal habitat, and to the recording of passage migrants on account of the suitable feeding grounds they provide. Unfortunately for the ornithologist many of these sites are being rapidly filled in with refuse and soil in the interests of land reclamation. However, it is probable that for some years to come there will be sizeable pools of water in these localities at various seasons owing to the lowering of the land level and so further records may be anticipated. By the end of 1951 most of the large bed of reed-mace at Willington which housed the Hirundine roost had been bulldozed away.

Apart from the usual slight floods, the weather throughout the year was average and there were no abnormal influxes of the rarer species of Wildfowl. Certain of the spring migrants arrived a little earlier than usual, more particularly the Wheatear and Swift, while the Nightingale was slightly later than is normal.

Bedford Corporation Sewage Farm still continues as a Mecca for many species and it was here that I witnessed on one occasion in the space of a few minutes Chaffinches, Starlings, Pied Wagtails and Great Tits all hovering above the water in the half-filled settling tanks to pick insects and other food from the surface of the effluent.

Although it is heartening to find that more observers than ever have submitted reports during the year, I regret that it is still necessary for me to draw attention to certain deficiencies. It is apparent that many observers still fail to jot down the essential details of their observations within a reasonable period and because of this valuable records have again been lost. Prompt attention to this minor detail will give a marked improvement in collective recording to the mutual advantage of all. There is as before still too great a tendency to ignore the more common species and I would emphasise that, in order to obtain a balanced knowledge of our avifauna, all observations however seemingly trivial are most welcome. It is on this note that I desire to record the gratitude of the Society to all those whose co-operation has ensured the standard of this further report.

Abbreviations of Observers' names: P.S.B.=P. S. Bates; B.S.=Bedford School Natural History Society; H.C.=Harry Cole; E.G.E.=E. G. Eeles; D.W.E.=D. W. Elliott; F.C.G.=F. C. Gribble; R.P.=Ray Palmer; C.S.P.=C. S. Payne; W.E.K.P.=W. E. K. Piercy; G.P.=Gordon Plummer; Rec.=Recorder of Birds; S.W.R.=S. W. Rodell; H.B.S.=H. B. Sargent; W.G.S.=W. G. Sharpe; F.G.R.S.=F. G. R. Soper; C.F.T.=C. F. Tebbutt and M.O.=More than four observers.

HOODED CROW (*Corvus cornix*)—One flew over Southill Park, 10th February; one at Willington gravel workings, 25th February; four at Dunstable Sewage Farm, 17th March; five there, 24th November (B.S.; H.C.; F.C.G. and W.E.K.P.).

CARRION CROW (*Corvus corone*)—Evidence of still further increase in nesting, particularly in North Beds. A pair at Garside Pit, Leighton Buzzard, hovering over the water with claws dangling and heads down, were observed to drop into water at least the full length of the tarsus. They pecked rapidly with their beaks and beat their wings at each plunge but were not actually seen to take anything from the water (E.G.E. and F.C.G.).

ROOK (*Corvus frugilegus*)—Three fully fledged young (one sitting out of nest), Sidegate Spinney, Stagsden, 21st April (F.C.G.).

JACKDAW (*Corvus monedula*), **MAGPIE** (*Pica pica*) and **JAY** (*Garrulus glandarius*)—Reported from most areas to be still widely distributed and in about the usual numbers.

STARLING (*Sturnus vulgaris*)—An abnormally large roost developed in a thorn thicket at Medbury Farm, Elstow, during the latter part of November. It was composed of large parties of immigrants which flew in nightly from feeding areas as far apart as Stagsden, Turvey, Milton Ernest and Willington. These flights were noted and reported by many observers and from conversations with owners of neighbouring properties the Recorder and F. C. Gribble were able to estimate the approximate population of the roost from areas used as concentrated ground assemblies prior to the final in-fighting. The numbers must have been not less than a quarter of a million birds and probably greatly exceeded this. The chatter of the birds at the roost was so great that it could be heard nearly half a mile away in Elstow village. After a fortnight the roost, then much fouled, suddenly broke up and after five days not a bird remained. Most of the birds departed from the county but a large number re-occupied the considerable roost used in recent years near Everton.

GREENFINCH (*Chloris chloris*) and **GOLDFINCH** (*Carduelis carduelis*)—Much the same numbers as in 1950.

SISKIN (*Carduelis spinus*)—Flock of about fifty feeding on alders near Southill Lake, 18th February (Rec.).

LINNET (*Carduelis cannabina*)—Flock of over two hundred seen with about as many Tree-Sparrows, Bedford Sewage Farm, 7th January.

BULLFINCH (*Pyrrhula pyrrhula*)—Similar observations to those in 1950.

COMMON CROSSBILL (*Loxia curvirostra*)—Heard at Whipnade, 2nd September, where small flocks were seen over the end of the year (P.S.B. and R.P.).

CHAFFINCH (*Fringilla cœlebs*)—Normal status.

BRAMBLING (*Fringilla montifringilla*)—Small number reported at Bedford Sewage Farm in December 1950 stayed till March, last bird seen on 11th. Five at Willington gravel workings, 25th February. First winter arrivals at Clapham and Bedford Sewage Farm, 28th October; small number with finches and buntings at Whipnade in latter part of year and in the Flitwick-Eversholt area (M.O.).

CORN-BUNTING (*Emberiza calandra*)—Ten pairs reported from the Blows Down area, Dunstable. Distribution in both North and South Beds. much as usual.

YELLOW-BUNTING (*Emberiza citrinella*), **REED-BUNTING** (*Emberiza schœniclus*) and **HOUSE-SPARROW** (*Passer domesticus*)—Normal status.

TREE-SPARROW (*Passer montanus*)—Large flock at Bedford Sewage Farm in early months of year reached a peak (about 300 birds) on 7th January (F.C.G.).

WOOD-LARK (*Lullula arborea*)—Male singing at Clophill, 29th April (F.C.G.).

SKY-LARK (*Alauda arvensis*)—Normal status.

TREE-PIBIT (*Anthus trivialis*)—First arrival heard at Flitwick, 22nd April (F.C.G.).

MEADOW-PIBIT (*Anthus pratensis*)—Usual status.

YELLOW WAGTAIL (*Motacilla flava flavissima*)—First arrival, 5th April, Bedford Sewage Farm, where numbers reached a peak (about 70 birds), 18th April. Last emigrants at Henlow, 7th October, and Bedford Sewage Farm, 13th October (B.S.; E.C.E. and F.C.G.).



UNUSUAL NESTING SITE OF GREAT TIT

In top section of beehive (cover removed to show nest)
Burdelys Manor, Stagsden, 1951

(Photograph by Henry A. S. Key)

GREY WAGTAIL (*Motacilla cinerea*)—Small numbers (mostly single males) reported along the Ouse and Ivel as well as at East Hyde and Dunstable Sewage Farm during the winter months. A pair appeared attached to the stretch between Biggleswade and Langford Lock on 31st May but no nest could be found. There was a greater probability of nesting at Houghton Regis chalk pit where on 10th July a pair was seen with four young ones (M.O.).

PIED WAGTAIL (*Motacilla alba yarrellii*)—Normal status; sparsely distributed as a breeding species, mainly along the river valleys, with a marked increase in numbers in all areas during winter months, the various Sewage Farms being especially favoured. About forty at Bedford Sewage Farm, 18th February (M.O.).

WHITE WAGTAIL (*Motacilla alba alba*)—One male at Willington gravel workings, 30th April. All characters noted (F.C.G.).

TREE-CREEPER (*Certhia familiaris*), NUTHATCH (*Sitta europaea*), GREAT TIT (*Parus major*) and BLUE TIT (*Parus caeruleus*)—Normal status.

COAL TIT (*Parus ater*)—Only one report received, Bedford, 23rd February (B.S.). Obviously an overlooked species which normally occurs in wooded areas, especially those of the Greensand range, more particularly in winter months.

MARSH TIT (*Parus palustris*) and LONG-TAILED TIT (*Aegithalos caudatus*)—Remarks in last report again apply to these species.

RED-BACKED SHRIKE (*Lanius collurio*)—Reported from five areas in the Luton-Dunstable region and from the Pegsdon district. Two broods of young successfully reared. Dead male picked up at Wilstead, 18th July (H.C.; F.C.G. and F.G.R.S.).

SPOTTED FLYCATCHER (*Muscicapa striata*)—First arrivals seen 5th May at Chicksands. Large number in same locality, evidently on passage, 17th August (S. Dobson).

PIED FLYCATCHER (*Muscicapa hypoleuca*)—Pair at Whipsnade, 2nd May, (P.S.B.); male at Bromham Park, 17th May, and another at Kempston about a fortnight earlier (S. M. Skinner).

GOLDCREST (*Regulus regulus*)—Normal distribution. Party of about twenty seen mobbing a Little Owl (*Athene noctua*) at Bromham during evening, 25th October (Rec.).

CHIFFCHAFF (*Phylloscopus collybita*)—First arrivals at Flitwick, 18th March, and Caddington, 20th March (W.G.S. and H.B.S.).

A small warbler of *Phylloscopus* type was seen high up in larch trees at Southill Lake, 16th December, in company with tits with which it was carefully compared (E.G.E. and F.C.G.).

WILLOW-WARBLER (*Phylloscopus trochilus*)—First arrivals, Flitwick, 24th March (W.G.S.).

GRASSHOPPER-WARBLER (*Locustella naevia*)—First heard, Clophill, 25th April (F.G.R.S.). Reported from new locality, Chicksands, 19th-26th May (S. Dobson).

REED-WARBLER (*Acrocephalus scirpaceus*)—Arrivals obviously overlooked until some time after the birds had taken up their territories judging by the few late reports received. Last birds seen, Bedford Sewage Farm, 11th September (F.C.G.).

SEDGE-WARBLER (*Acrocephalus schenobæmus*)—First arrival, Bedford, 18th April (E.G.E.). Late emigrants, East Hyde, 19th September and Willington gravel workings, 20th September (H.C. and F.C.G.).

GARDEN-WARBLER (*Sylvia borin*)—First heard, Whipsnade, 2nd May and Chicksands, 3rd May (P.S.B. and S. Dobson).

BLACKCAP (*Sylvia atricapilla*)—First heard at both Whipsnade and Chicksands, 18th April (P.S.B. and S. Dobson).

WHITETHROAT (*Sylvia communis*)—First heard, Tingrith, 17th April and Bedford on following day (B.S. and W.G.S.).

LESSER WHITETHROAT (*Sylvia curruca*)—First heard, Aspley Guise, 28th April (R.P.).

FIELDFARE (*Turdus pilaris*)—Last passages northwards seen Chiltern Green, 4th May; Bedford Sewage Farm, 5th May; and over Whipsnade; 7th May. First winter arrivals: a small flock seen, Whipsnade, 25th August. Large mixed flock of about five hundred birds with Redwings (*Turdus musicus*), Bedford Sewage Farm, 4th February (M.O.).

REDWING (*Turdus musicus*)—Last emigrant, Bedford Sewage Farm, 15th April. First winter arrivals, Eversholt, 10th October. A large mixed roost of this species with Fieldfares, totalling many thousands of birds, occurred during winter months in a wood in the Eversholt area. It is hoped to give further particulars of this in a future issue after more detailed study (F.C.G. and W.G.S.).

MISTLE-THRUSH (*Turdus viscivorus*) and **SONG-THRUSH** (*Turdus ericetorum*)—Normal status.

BLACKBIRD (*Turdus merula*)—Normal status. Several reports received of small winter roosts, mainly consisting of cock birds. (M.O.).

WHEATEAR (*Oenanthe aenanthæ*)—Many reports received. Earlier arrivals were chiefly males. Spring passage: (March) one, Luton, 23rd; (April) one, Oakley and one, Stagsden, 5th; seven, Shillington, 7th–8th; two Hammer Hill; 8th; one, Deacon Hill, 12th; four, Bedford Sewage Farm, 13th; one, Willington, 15th; two, Carlton, 16th; two, Totternhoe, 19th–29th; one, Chicksands, 22nd; one, Whipsnade, 26th and one, Willington, 28th; (May) one, Stagsden, 3rd. No evidence of breeding in any area. Autumn return passage: (August) one, Bedford Sewage Farm, 5th; one, Chicksands, 16th; one, Turvey, 27th and up to nine, Southill, 23rd–30th; (September) a pair, Woburn, 1st (M.O.).

WHINCHAT (*Saxicola rubetra*)—First arrivals (male), Bedford Sewage Farm, 22nd April and pair at Eversholt, 24th April. Seen on chalk hills and at Stewarty Pit during summer, but breeding not proved in these areas. Last emigrant seen East Hyde and Chiltern Green, 23rd September (M.O.).

STONECHAT (*Saxicola torquata*)—Pair at Great Barford, 6th January (H.C.). (1950 record: one, Chicksands, 8th November (S. Dobson)).

REDSTART (*Phoenicurus phoenicurus*)—First arrival, Leighton Buzzard, 16th April (E.G.E. and F.C.G.). Last emigrant, Deacon Hill, 8th September (H.C.). Usual sparse distribution of breeding birds along Greensand range reported from most areas during season.

NIGHTINGALE (*Luscinia megarhyncha*)—First heard, Stagsden, 24th April (D.W.E.). A cock bird was heard singing during the night from 3rd June, throughout the month in gardens at the rear of Rothsay Gardens, Bedford. Evidence of breeding in this built-up area was not confirmed.

ROBIN (*Erithacus rubecula*), **HEDGE-SPARROW** (*Prunella modularis*) and **WREN** (*Troglodytes troglodytes*)—Normal status.

SWALLOW (*Hirundo rustica*)—First arrival seen flying over Goldington Green, 20th March (G. A. Metcalfe). This authoritative record repeats the best previous record of 1947. No others were seen till 8th April when small numbers occurred at Bedford Sewage Farm and Biggleswade. Large passage over Kensworth Gorse and Woburn–Battlesden area, 16th April. An all-white specimen was seen at Renhold on 8th September. Last emigrants, Bedford Sewage Farm, 15th October (M.O.).

“Hirundine roost?”—During the latter half of August a large number of Swallows and Sand-Martins roosted in reed-mace at Willington pits. On the 16th between 2,000 and 2,500 were flying round just before dark; these were mainly martins. A week later however the birds were mainly swallows, a very high proportion being young birds. They “hawked” over the area until almost dark and then pitched into the reed-mace to roost.

HOUSE-MARTIN (*Delichon urbica*)—First arrivals, Bedford Sewage Farm and Woburn, 16th April. Last emigrant, Bedford, 6th November. Peculiar roosting behaviour noted at Oakley (see page 36).

SAND-MARTIN (*Riparia riparia*)—First arrivals at Bedford Sewage Farm and Tingrith, 8th April. Large numbers of Hirundines, totalling several hundreds, mainly Sand-Martins and Swallows, passed over the Woburn–Battlesden area on 16th April. See also under “Hirundine roost”. Last emigrant, East Hyde, 23rd September (H.C.; F.C.G. and R.P.).

SWIFT (*Apus apus*)—Early arrival, Bedford Sewage Farm, 21st April. No others were observed till 2nd May when reports were received of passages over Oakley, Chicksands and Luton. Between this date and 5th further passages were observed over Bedford Sewage Farm and Stagsden. A party of ten late emigrants passed over Bedford, 17th October (M.O.).

NIGHTJAR (*Caprimulgus europæus*)—First heard, Tingrith, 10th May (W.G.S.).

KINGFISHER (*Alcedo atthis*), GREEN WOODPECKER (*Picus viridis pluvius*), GT. SPOTTED WOODPECKER (*Dryobates major*) and LESSER SPOTTED WOODPECKER (*Dryobates minor*)—Normal status.

CUCKOO (*Cuculus canorus*)—First birds heard, Clophill, 13th April; Bedford, 14th; Whipsnade, 15th and Biggleswade, 16th (M.O.). One late emigrant seen at Wrest Park, 7th October (J. S. Dunn).

LITTLE OWL (*Athene noctua*)—Normal status.

LONG-EARED OWL (*Asio otus*)—First nest for a number of years found in the Flitwick—Millbrook area, 22nd May. Nest contained three young (W.G.S.).

TAWNY OWL (*Strix aluco*) and BARN-OWL (*Tyto alba*)—Normal status.

HOBBY (*Falco subbuteo*)—One pair observed on several occasions in Mid-Beds. from 18th May onwards. Breeding not proved (W.G.S.).

KESTREL (*Falco tinnunculus*)—Normal status.

COMMON BUZZARD (*Buteo buteo*)—One in Colesden-Bushmead area during January (C.F.T.); one at Toddington, 20th August (W.G.S.).

SPARROW-HAWK (*Accipiter nisus*)—Normal status.

WHITE-TAILED EAGLE (*Haliaeetus albicilla*)—The occurrence of this bird was the strangest record of the year and the following is a brief account of the event. Hearing a noise among her own and her neighbours' poultry on 1st May, Mrs. H. E. Christian of "Attwood", Bromham Road, Biddenham, opened her back door and walked down the garden to investigate. The cause of the disturbance was evident for in her own words:

"A large dark bird, with a body nearly a yard long and a wing span of over six feet was gliding along above the poultry pens. (The houses here are widely separated with large gardens which let on to open fields adjoining the River Ouse.) The whole colouring was dark brown or blackish with no prominent patches or markings of lighter shade and the extremities of the wings (primaries) were spread like fingers. The wings too were brown. Other prominent features were a large pale and very hooked beak and yellow talons drawn up."

"Instinctively I picked up a clod of earth and hurled it at the bird which swooped and, thinking that I was about to be attacked, I flung myself on the ground picking myself up some seconds later. The cries of the bird were very angry and sounded harsh and rasping. As the bird turned upwards I saw a greenish-mauvish sheen on the feathers and it was then that I noticed that it had a shortish tail with a broad and unrelieved white patch at the end, the rest being dark. Gradually the bird flapped away and slowly gaining height disappeared over Bromham Church."

Shaken by her experience the informant, after recovering, visited several neighbouring houses only to discover that their occupants were out and that apparently no other person had witnessed the occurrence.

The Recorder interrogated Mrs Christian on 3rd and satisfied himself as to the genuineness of her observations, learning among other things that although she did not profess a knowledge of birds she was familiar with the Common Buzzard having lived in Wales and said that the bird in question completely dwarfed that species. She further recognised the species from illustrations supplied. It would seem therefore to have been an immature Sea Eagle which had wandered across the valley of the River Ouse and had been attracted by the spacious poultry pens with their plentiful supply of prey. (An almost similar occurrence took place at Cardington in April 1863.)

[HONEY-BUZZARD (*Pernis apivorus*)]—A bird believed to be of this species was seen to be soaring high above Barton on 19th May by Mr G. J. Collier. There was no perceptible movement of its broad wings (the primaries being extended) and after about twenty circuits it glided off towards Pegsden. The slightly spread tail was fairly short in comparison with the wing span and did not appear as "fan-shaped". On consulting Vol. 3 of the "Handbook" Mr Collier felt that the Honey-Buzzard was the nearest species to his observations and he supplied a sketch of the bird in flight. He remarked that the description of the wings and tail of the Common Buzzard did not fit those he saw.

COMMON HERON (*Ardea cinerea*)—See page 34.

BITTERN (*Botaurus stellaris*)—One seen on several occasions throughout January on River Ouse at Eaton Socon (C.F.T.). One near Oakley Bridge in August (repeating similar occurrence of several recent years) (M. H. Crummie).

BEWICK'S SWAN (*Cygnus bewickii*)—Sixteen visited one of the Woburn Park ponds, 13th March (the Duke of Bedford).

MUTE SWAN (*Cygnus olor*)—Becoming very common at all seasons in the vicinity of Bedford town. More than seventy were on the short stretch of the river between Longholme and Prebend Street in the winter months and at least half that number remained during the summer, mainly immature and non-breeding birds.

GEESE (*Anser* sp. ?)—Four at Biddenham, 17th February. A small party flew into the riverside meadows near Bedford Sewage Farm one foggy morning in late November (Staff of Sewage Works).

SHELD-DUCK (*Tadorna tadorna*)—Two at Tingrith, 17th April (W.G.S.)

MALLARD (*Anas platyrhynchos*)—Largest parties reported during the year were as follows: almost a hundred, Kempston Hardwick, 18th May; about a hundred, Southill Lake, 11th August; about two hundred, Stewartby clay pit, 17th November; and gatherings of more than a hundred at Bedford Sewage Farm during the autumn. A mixed party of several hundred duck, consisting mainly of Mallard and Teal with a few Wigeon, was seen on flood water at the last named station on 7th January (M.O.). Two interesting nest sites were reported, one about thirty-feet above ground in a rick at Stagsden, 14th April, while at Burdelys Manor Farm in the same parish two ducks' nests were discovered on 26th April, both in the same crown of a pollarded willow. The ducks, one sitting on eleven eggs and the other on twelve, were only separated by a limb of the tree and at a distance of not more than two feet apart. They, with their drakes, took part in evening flights together and both clutches were successfully hatched (D.W.E. and Rec.).

TEAL (*Anas crecca*)—Almost a hundred at Kempston Hardwick, 3rd January (B.S.). Peak numbers, about two hundred, at Bedford Sewage Farm, 25th March; similar number, 30th December. Small parties reported from other usual areas during winter months.

GARGANEY (*Anas querquedula*)—Up to two males at Cople gravel pits, 21st April to 8th May; a pair at Fenlake gravel pits, 21st April; male at Bedford Sewage Farm, 22nd April. All disappeared and none was seen later in the season (F.C.G. and Rec.).

WIGEON (*Anas penelope*)—Largest flock, over eighty birds, seen at Kempston Church End, 16th January (C.S.P.). A few were reported from other usual localities during winter months.

PINTAIL (*Anas acuta*)—Female, Biddenham, 11th February; pair at Bedford Sewage Farm, 23rd March (Rec.).

SHOVELER (*Spatula clypeata*)—Up to three birds present at Bedford Sewage Farm, males at first but a pair with another male later, 25th March to 28th April; pair also at Willington gravel workings from 14th–20th May. No proof of breeding in either area.

COMMON POCHARD (*Aythya ferina*)—Largest party (c. 200) at Southill, 13th–30th January (W.E.K.P.); a few also reported from several other pools during the winter. One at Battlesden on 3rd June.

TUFTED DUCK (*Aythya fuligula*)—Largest party (c. 50) at Woburn, 16th April; small numbers reported during winter from most usual localities. Five, Battlesden, 3rd June. Pair nested at Felmersham gravel pits where duck seen with three young, 7th July (M.O.).

GOLDENEYE (*Bucephala clangula*)—Up to three at Southill Lake, 3rd November till 29th December (F.C.G. and W.E.K.P.).

GOOSANDER (*Mergus merganser*)—Male, Bedford Sewage Farm, 7th January (Rec.).

CORMORANT (*Phalacrocorax carbo*)—Juvenile, Kempston Hardwick, 18th October (C.S.P.).

GANNET (*Sula bassana*)—Exhausted bird picked up at "Highfield", Renhold, 20th September, by G. A. Metcalfe who kept and fed it for several days until it recovered and eventually released it at Hunstanton on 27th September, when it flew out to sea. It was ringed by F. C. Gribble and photographed by the Recorder (G. A. Metcalfe).

GREAT-CRESTED GREBE (*Podiceps cristatus*)—Increase in breeding. See page 35.

LITTLE GREBE (*Podiceps ruficollis*)—Well distributed. Ten, Southill Lake, 26th December (Rec. and F.C.G.).

WOOD PIGEON (*Columba palumbus*)—Flock of over five hundred at Stagsden, 25th December (Rec., F.C.G. and D.W.E.).

STOCK DOVE (*Columba oenas*)—Pair nested in machinery of combine-harvester, Stagsden, 1st June (Rec.).

TURTLE DOVE (*Streptopelia turtur*)—First arrival seen, Stagsden, 22nd April (D.W.E.). Flock of about one hundred at Pegsdon, 21st July (F.C.G.).

COMMON CURLEW (*Numenius arquata*)—Passage over Luton after dark, 12th and 27th March. One over Clapham, 16th April, and one, Willington, 28th August (M.O.).

WHIMBREL (*Numenius phaeopus*)—One called as it flew southwards after dark over Bromham, 19th August (Rec.).

WOODCOCK (*Scolopax rusticola*)—Many pairs bred as usual along Greensand range (W.G.S.).

COMMON SNIPE (*Capella gallinago*)—"Drumming" first heard at Bedford Sewage Farm, 8th April. Larger flocks than is normal, at times exceeding two hundred birds, seen in this area during November and December; "drumming" again heard here, 1st December (F.C.G.).

JACK SNIPE (*Lymnocyptes minimus*)—Two, Cople gravel pits, 25th March. First two winter arrivals, Bedford Sewage Farm, 14th October; at least nine there, 4th November (F.C.G. and Rec.).

DUNLIN (*Calidris alpina*)—One, Bedford Sewage Farm, 8th April; up to five, Willington gravel pits, 6th–20th May, and another there, 4th–6th September (E.G.E., F.C.G. and Rec.).

RUFF (*Philomachus pugnax*)—One, Bedford Sewage Farm, 6th May. Four, Dunstable Sewage Farm, 2nd September (F.C.G. and H.C.).

COMMON SANDPIPER (*Actitis hypoleucos*)—Single birds: Bedford, 25th April; Stewartby, 28th April; Willington, 11th May; Langford, 3rd June; Chicksands, 6th–7th August. Four, Dunstable Sewage Farm, 2nd–16th September (M.O.).

WOOD-SANDPIPER (*Tringa glareola*)—Two, Dunstable Sewage Farm, 23rd September (H.C.).

GREEN SANDPIPER (*Tringa ochropus*)—None observed during spring passage. Parties of up to five at Cople gravel pits and Bedford Sewage Farm intermittently from 13th July to 30th December. Several, Flitwick Moor, 8th August. One flushed from pond at Bromham, 23rd August (M.O.).

REDSHANK (*Tringa totanus*)—Seen in several areas during breeding season. First arrivals, Bedford Sewage Farm, 11th March. Last bird departed, 17th August (F.C.G.).

SPOTTED REDSHANK (*Tringa erythropus*)—One, Willington gravel pits, 13th–17th May (F.C.G.).

GREENSHANK (*Tringa nebularia*)—One, Willington gravel pits, 10th–12th May (F.C.G.).

RINGED PLOVER (*Charadrius hiaticula*)—Parties of up to six at Willington gravel pits, 6th–11th May; four there, 7th August (F.C.G. and Rec.).

LITTLE RINGED PLOVER (*Charadrius dubius curomicus*)—Addition to the County List. First recorded occurrence of this species which attempted unsuccessfully to breed (F.C.G. and Rec.); see page 34.

GOLDEN PLOVER (*Pluvialis apricaria*)—Flock of several hundred near Clifton, 25th February. First arrivals, sixteen, near Cardington, 20th October. Flock of about one hundred near Clifton, 27th December (M.O.).

LAPWING (*Vanellus vanellus*)—Widely distributed with large flocks during the winter; the largest recorded, one of several hundreds, near Southill, 18th February (Rec.).

STONE-CURLEW (*Burhinus oedipnemus*)—Birds heard calling in one area on 21st July and pair seen later. No proof of breeding (F.C.G. and R.P.).

BLACK TERN (*Chlidonias niger*)—One, Biggleswade, 19th May; one, Felmersham, 2nd June (G.P., W.E.K.P. and D. Soper).

COMMON/ARCTIC TERN (*Sterna hirundo/macrura*)—One, Bedford, 30th April; two, Woburn, 12th May; one, Bedford, 7th July (B.S., W.G.S. and F.G.R.S.).

BLACK-HEADED GULL (*Larus ridibundus*)—Large parties reported from many areas in winter months, the largest being about two hundred strong, Willington gravel pit (feeding on dumped rubbish), 25th February; a smaller number at Luton rubbish tip, 7th January (M.O.).

COMMON GULL (*Larus canus*)—Six, Bedford Sewage Farm, 7th January (Rec.).

HERRING GULL (*Larus argentatus*)—Many reports of small flights over various parts of the county during winter months. Largest parties recorded: about four hundred, Luton rubbish tip, 7th January; about fifty, Willington tips, 25th February (M.O.).

LESSER BLACK-BACKED GULL (*Larus fuscus*)—Six (resting in field), Stagsden, 22nd May (D.W.E.).

GREAT BLACK-BACKED GULL (*Larus marinus*)—One immature bird, Willington pit, 9th September; one, New Mill End (South Beds.), 25th December (H.C. and F.C.G.).

KITTIWAKE (*Rissa tridactyla*)—One picked up dead, Turvey, 22nd March (D.W.E.).

CORN-CRAKE (*Crex crex*)—One seen, Stagsden, 18th August (D.W.E.).

MOORHEN (*Gallinula chloropus*)—Numbers at Bedford Sewage Farm estimated to be about five hundred on several occasions, November–December (F.C.G. and Rec.).

COOT (*Fulica atra*)—Largest winter flock (c. 200), Southill in December (B.S.).

PHEASANT (*Phasianus colchicus*), **COMMON PARTRIDGE** (*Perdix perdix*) and **RED-LEGGED PARTRIDGE** (*Alectoris rufa*)—Normal status.

QUAIL (*Coturnix coturnix*)—One in potato field at Crawley, 5th October (the Duke of Bedford).

HENRY A. S. KEY

Notes and Observations

THE LITTLE RINGED PLOVER IN BEDFORDSHIRE, 1951

Since the Little Ringed Plover established itself in this country as a breeding species some eight years ago and began steadily to increase its range, bird-watchers in Bedfordshire have eagerly awaited its arrival in this county.

On 21st April the writer, accompanied by Mr C. E. Douglas of Reading, disturbed a bird of this species at an area in the north of the county. Only a short view of the bird was obtained, but the typical call note "peeoo-peeoo", with which both observers were familiar, the small size and the lack of a wing bar when in flight revealed its identity. The bird did not return until the evening of the 23rd when it was seen at a range of about ten yards and a full description was obtained. It remained in the area until 27th April.

During the week 4th to the 10th June, a pair of birds returned to the same area and commenced nesting almost immediately. A workman noticed the female bird running away from one spot continually and a quick search revealed a nest with three eggs. Realising it was unusual he reported it on 12th June to a friend, Mr W. G. Sharpe of Flitwick. Next day both visited the nest and reported it to Mr H. A. S. Key who took the accompanying photograph a few days later.

Unfortunately the nest came to grief, the eggs were still present during the evening of the 20th June but had disappeared by 7.20 a.m. next morning. The nest appeared but little disturbed and the only explanation seemed to be that the eggs were taken by vermin or a human collector, no trace being found of them at all. The birds also departed, it being too late to attempt a second nest, returning only for a few hours during the morning of 25th June, after which they were not seen again.

F. C. GRIBBLE

HERONRIES IN BEDFORDSHIRE

In 1928 E. M. Nicholson wrote a detailed report on British heronries and more recently W. B. Alexander has organised an annual census. The number of occupied nests in each known heronry in the county is given below:—



NEST OF LITTLE RINGED PLOVER
North Bedfordshire, 1951

(Photograph by Henry A. S. Key)

	1943	1944	1945	1946	1947	1948	1949	1950	1951
Bromham ...	17	21	16	21	10	7	12	16	14
Southill ...	3	1	4	5	6	11	18	20	
Sandy ...	?	?	?	8	9	9	9	14	7
Goldington ...			1	2	1	1			
Turvey ...				2	1	1			
Tempsford ...						(2)	(2)	(4)	(4)

The figures for Tempsford are estimated. In addition one nest was occupied at Harrold in 1940 or 1941 and another in 1949. It is possible that these figures are incomplete, particularly in the Payenham area. Observers who have any additional records are asked to send them, together with observations made during 1952, to the writer so that the county records may be as accurate as possible. It is preferable that heronries be counted between 15th April and 10th May.

W. E. K. PIERCY

GREAT CRESTED GREBES IN BEDFORDSHIRE

The census of this bird is organised by P. A. D. Hollom. The figures given below are those of adult birds reported from Bedfordshire for the past six years.

	1946	1947	1948	1949	1950	1951
Southill ...	6	2	6	10	12	16
Woburn ...	8	6	6	4	2	4
Battlesden ...	6	2		2		2
Felmersham ...	2				4	4
Tingrith ...				2		
Kempston Hardwick ...			2		2	2
Leighton Buzzard ...						2
Arlesey ...						2

It is possible that these figures are incomplete and observers who have any additional records are asked to send them, together with observations made during 1952, to the writer at Clifton Cottage, Clifton, Bedfordshire. Observations on Great Crested Grebes should be made as near to 7th June as possible.

W. E. K. PIERCY

NEW RECORDS FOR HEPATICS

New county record—*Alicularia scalaris* (Schrad.) Corda. at Heath near Leighton Buzzard, 16th February 1952.

I have also found during February 1952 the rather uncommon liverwort, *Aneura palmata* (Hedw.) Dum., in Buckinghamshire (Coombe Woods, Ivinghoe Hills). This is, according to MacVicar, a subalpine plant growing on wood in peat bogs. Its nearest stations to Buckinghamshire are in North Wales. In Coombe Woods it was growing on a fallen beech stump and forming an extensive covering which resembled superficially a very minute green clavaria. The specimen is now preserved in the Kew herbarium. It might be worth while for Bedfordshire enthusiasts to search for this liverwort.

At Ashridge, Herts., on 25th November 1951 I found *Scapania compacta* (Roth.) Dum. growing on a clay bank in a beech wood and forming large sheets. This find proved to be a new county record. *S. compacta* may well occur in Bedfordshire also.

D. A. REID

NEW BEDFORDSHIRE FUNGI

Three interesting fungi were found on 14th October 1951 growing in a sandpit at Leighton Buzzard, strictly localised to *Salix* spp., chiefly *S. atrocinerea*. Two of them, *Tricholoma cingulatum* (Fr.) Lange and *Flamula Agardhii* (Lund) Fr., are new to the British list, while the third, *Cortinarius urbicus* Fr., had only been recorded once before from Cabalva in 1879 and had been excluded pending confirmatory collections. Specimens of all three species are preserved in the Kew Herbarium.

D. A. REID

DRAGONFLIES

New county record—*Cordulia aenea* L. at Heath and Reach, early July 1951. I also found *Aeshna mixta* Latr. and *Orthetrum cancellatum* L. breeding in the sandpits at Leighton Buzzard. These are new county breeding records.

D. A. REID

DID THIS SQUIRREL THINK THAT WINTER HAD RETURNED?

This morning, 4th April 1952, soon after the exceptionally cold weather of 28th-30th March we watched a grey squirrel burying nuts. It was first seen up a horse-chestnut tree in Rothsay Place snatching off the centre bud of a young shoot and then eating it. The squirrel then leapt down into the garden via the brick wall, pausing to inspect the buds of a fig tree on its way to the ground. After scurrying and skipping about the garden for a few moments it came across a fallen chestnut. The squirrel then sat up and bit a few shreds off the hard brown shell. Then carrying the nut in its teeth the animal moved to an adjacent rose-bed where it dug a small hole, dropped in the nut, pressed it firmly down with its front paws and covered it carefully with loose soil, patting down and smoothing over the soil with great care until the soil surface appeared quite undisturbed. This finding and burying of old fallen nuts was repeated several times, but not once was a second nut buried in the same place as a previous one. On one occasion the squirrel ran with a chestnut up the trunk of an old pollarded lilac and placed it in a cleft between two small branches.

JANET M. and MRS. M. E. BARNES

(The instinct of grey squirrels for collecting and storing acorns, walnuts, chestnuts, hazel nuts, etc., singly in 2-3-inch holes in the soil as you describe is well known. It is most frequently observed during the autumn when there is plenty of food obtainable with the minimum of trouble. This has led to the idea that they are making dumps on which they will feed during the winter. But it has not been authentically proved that they ever return to dig up these buried treasures. This instinct for collecting persists throughout the year for grey squirrels have frequently been known to collect up strawberries, fallen apples and pears, and even tomatoes and pheasants' eggs. You will find much interesting information on this subject in A. D. Middleton's *The Grey Squirrel* (Sidgwick & Jackson Ltd., 1931.)—Ed.

ABSTRACTS OF LITERATURE ON BEDFORDSHIRE NATURAL HISTORY FOR 1951

BEDFORDSHIRE MAGAZINE. Vol. 3, No. 19.

"The Bats of Bedfordshire" by Ray Palmer, pp. 122-126 (illustrated).

General account of the habits and distribution of the species found in the county.

BRITISH BIRDS. Vol. 54 (1951).

(a) "Birds becoming 'caught' in flocks of other species", No. 6, p. 200. Details of observations made at Bedford Sewage Farm by F. C. Gribble.

(b) "Report on bird-ringing for 1950", No. 9, p. 298. A heron ringed at 'Bedford' by Bedford School on 7th May 1950 was recovered at Ireby, Cumberland on 18th October 1950.

(c) "Great Crested Grebe census", No. 11, pp. 361-369. Estimated totals of adult birds present in the breeding seasons for 1931 and 1946-50.

ENTOMOLOGISTS' MONTHLY MAGAZINE. Vol. 87 (1951).

(a) "*Labia minor* L. (Dermaptera, Labiidae) in Bedfordshire" by B. Verd-court, p. 141. Records of the Lesser Earwig from Luton.

(b) "The larva and food plant of *Rhogogaster chambersi* Benson (Hym., Tenthredinidae)" by V. H. Chambers, pp. 202-205. The adult of this species unlike its relatives is not associated with Broom, and the larva is now shown to feed on *Linum catharticum* L. The plant and sawfly were collected at Streatley.

ENTOMOLOGISTS' RECORD. Vol. 63 (1951).

"Diptera (Stratiomyidae and Tipulidae) in Bedfordshire" by B. R. Laurence, pp. 95-97. Nineteen Stratiomyids recorded from Fancott, and forty-nine craneflies from Bedfordshire, of which thirty-nine can be found at Fancott. Type of habitat in which the species are found is also recorded.

THE FIELD. 1951.

(a) "Pike-Perch at Woburn" by the Duke of Bedford, Vol. 197, p. 280.

(b) "House Martins' roosting habits". A. G. Oldfield describes how 14 of these birds roosted in an old nest on his house at Oakley during a cold night in the spring of 1951, Vol. 197, p. 876.

(c) "Hedgehogs and Game Birds". An eye witness account by C. F. Tebbutt of a hedgehog searching for and eating beetles under the eggs in a pheasant's nest but leaving the eggs undamaged, Vol. 198, p. 112.

(d) "Twin Red Deer calves" by the Duke of Bedford. The first time this rare event has ever been recorded at Woburn, Vol. 198, p. 381.

THE STUDY OF THE DISTRIBUTION OF BRITISH PLANTS (Rep. of Conference organised by Bot. Soc. Brit. Is., March–April 1950). 1951.

(a) "Problems of Distribution raised in the Compilation of a County Flora" by J. G. Dony, pp. 69–74. Discusses the division of Bedfordshire into botanical districts made by previous workers, e.g., W. Hillhouse and G. C. Druce, and emendations made by the author. Illustrated with four maps of the county showing the Drift Geology, Rainfall, Natural Regions and Botanical Districts based on river drainage.

(b) "The Distribution of *Bunium Bulbocastanum*" by J. G. Dony, pp. 74–76. Two maps showing three ways of mapping the distribution of this species; (i) on a comital basis, (ii) on a grid basis, (iii) by indicating each recorded locality by a dot. Discusses relative virtues of each. (The species is limited in Britain to Cambridgeshire, Hertfordshire, Buckinghamshire and Bedfordshire.) WATSONIA. II (I), June 1951; II (II), November 1951.

(a) "Plant Records", (I), pp. 36–62, contains records of a few Bedfordshire species.

(b) "Distribution of the British Watercress Species" by H. W. Howard and A. G. Lyon, (II), pp. 91–92, gives additional Bedfordshire records.

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Contributions to be considered for publication in the next issue should be submitted by 1st March 1953, and should be sent to

The Honorary Editor,

DR H. F. BARNES,
27 Rothsay Road, Bedford
(Phone: Bedford 2611)

CHANGE OF HONORARY EDITOR

The resignation of Mr Ray Palmer from the Editorship of the Journal was received with the greatest regret by the 1952 Council at its first meeting on 15th March. Dr H. F. Barnes was then appointed to succeed him and Mr A. W. Guppy was elected to the vacancy thus created on the Editorial Committee. Other members remain as before, viz: Mr F. G. R. Soper and the Hon. General Secretary (*ex officio*).