The Reading Naturalist

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THE READING NATURALIST

No.15 for the Year 1961-62

The Journal of
The Reading and District Natural History
Society

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1963

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EDITORIAL

We are very pleased this year to welcome a contribution from the geologists among us, who, in the past, have not often been represented in the Reading "Naturalist", and hope that this paper, from a new generation, will be followed by many more. The absence of an Ornithological Report will be a disappointment to many, but the Honorary Recorder informs us that he receives so few records from members that since, under the reciprocal arrangement with the Reading Ornithological Club, the report of that Society is available to our members at a reduced rate, it seems hardly worth while making a separate report for the "Naturalist".

We offer our grateful thanks to all our contributors, to the Director of the Museum and Art Gallery, Mr. T. L. Gwatkin, for granting production facilities, and to all who have helped with the work of production.

We have pleasure in recording that the prize offered by Major Maxwell Knight for a piece of original field work by a Junior Member of a Society affiliated to the South-Eastern Union of Scientific Societies (a week's study at a Field Centre) has been won by our Member, John Hodgson. He submitted an account of the heathland flora of Reading, and this was published in the South-Eastern Naturalist and Antiquary for 1962. A special prize of a book token was awarded to another of our Members, Peter Usherwood, for a study of a blue tit described as remarkably able and original for one of his years. Unfortunately his paper was lost in the post and so could not be printed. We offer our warmest congratulations to both prize-winners.

NOTICE TO CONTRIBUTORS

Any members with observations of general or topical interest that do not, by their subject or nature, fall within the scope of the Recorders' Reports, are invited to submit them for consideration for the next part of the "Reading Naturalist" before 1st January, 1964. Longer papers would also be welcome, but these should reach the Editor by 15th November at the latest, and prior notice would be helpful. All contributions should be typed, with double spacing, if anyhow possible, but if this is quite impracticable, clearly legible manuscript with widely spaced lines would be appreciated. Members submitting records for the Reports should make sure that scientific names are written plainly or given in block capitals, and it would be of further assistance to the Recorder for Botany, in her very considerable task, if those who can would follow J.E. Dandy's nomenclature and include authors' names.

NATIONAL NATURE WEEK
SATURDAY MAY 18TH - MAY 25TH

As the name implies, the idear of this week is to attract the attention of as many members of the general public as possible to the natural heritage of our countryside. Members of Natural History Societies do not need reminding of the care necessary to preserve these amenities. When your committee were discussing what part Reading Natural History Society should play, they dismissed outings and lectures as likely to attract only those already interested and decided instead on a Nature Trail at Finchampstead Ridges, similar to the one set up by other organizations last year on Coombe Hill. This famous view point is visited by hundreds of people each week-end, and so it was on the second occasion that the Trail was laid. A few notice boards, with brief descriptions of items of natural-history interest, were scattered over the hillside within easy walking distance of each other. A printed leaflet explained the sites in more detail. At the centre, labelled flowers were displayed on a table and a board showed illustrations of the birds likely to be seen during the afternoon. A live slow-worm was a great attraction. The visitors' attention was drawn to the fact that the conservation corps of the Berks., Bucks. and Oxon. Naturalists' Trust was helping to keep this hill from being overgrown with shrubs, to the effect of fire on the natural vegetation and to the geological features that gave the various habitats. Many enquiries were made at the table, and interest was obviously awakened in the minds of many of the picnickers.

We hope for equal success at the Society's Trail at Finchampstead on Sunday, 19th May, 1963. Help will be needed at the site on this day. If you are interested, please get in touch with me at the following address:

Mrs. V.N. Paul, Overdale, Peppard Common, Oxon.

There will be a Natural History display at Reading Museum in the hall outside the Art Gallery throughout National Nature Week.

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Congress of the South-eastern Union of Scientific Societies, 1963

The 68th Annual Congress of the S.E.U.S.S. will be held at Tunbridge Wells on 9th - 12th May, 1963. The President will be Dr. W. S. Bristowe, who will speak on "A Galaxy of Spiders", and the Geology and Botany addresses will be given by Dr. Raymond Casy, of the Geological Survey, and Dr. R. W. James, of the British Museum (Nat. Hist.), respectively. A Young Naturalists' evening will be held on 9th May, and excursions to High Rocks and Bedgebury Pinetum, a geological excursion, and a tour of the town will be arranged.

Further information can be obtained from the Society's Secretary, Mrs. A. Fishlock.

MEETINGS, EXCURSIONS AND ATTENDANCES, 1961-62

Illustrated lectures were given at seven of the evening meetings held during the winter of 1961-62 and of the remaining four meetings, two were given up to films, exhibits and talks presented by Members (attendances 46 and 49), a programme of nature films was shown at another (65), and the fourth was the Annual General Meeting (47), at which Mr. J.F. Newman gave his Presidential Address on "The Natural History of Mosquitoes". The other lecturers, with their subjects, were Miss Valerie Finnis, on "Alpine Flowers" (73); Lady N. Barlow, on "Charles Darwin, the Botanist" (50); Mr. P. Hanney, on "A Naturalist in Africa" (66); Mr. D. Leatherdale on "Cedars, and Other Things, in Lebanon" (47); Professor R.G. Baskett, on "Research Work in Progress at the National Institute of Dairying" (45); Dr. D.R. Crofts, on "Wild Life in Southern Spain" (53); and Professor A. Austin Miller, on "The Natural Vegetation of the United States" (35).

The winter walks, on the first Saturday of each month, were along the Kennet-Avon canal from Burghfield to Reading in November (12); in the Burghfield area in December (7); to Burghfield gravel pit, Theale and the canal in January (8); from Riseley Mill to Eversley in February; and on the Crown lands at Bracknell in March (12+).

The field excursions held during the summer were to Swallowfield Park, by kind permission of Sir Arthur Russell, on April 14th (15); Aston Upthorpe, for pasque flowers, on April 28th (60); Blount's Court, by kind invitation of Dr. D.A. Bell, on May 5th (20); Southlake, for birds, on May 12th and 13th (13 and 10); Mapledurham, for woodlands, on May 26th (13); Leighton Park School, for plants, on June 6th (30); Scott's Farm, Checkendon, for plant galls, on June 16th (26); the riverside between Sonning and Shiplake on June 27th (8); the Kennet between Theale and Aldermaston on July 8th (20); from Tilehurst to Pangbourne on July 18th (12); Heckfield Place, for plants, on July 28th (15); the "Floral Mile", by kind permission of Messrs. Waterer & Crisp, on August 8th (8); Beenham, on August 18th (11); Eversley Bird Sanctuary, by kind permission of Mr. J. Sellick, on August 29th (25); Lockram House, Burghfield, by kind invitation of Mrs. Lukin, on September 8th (18); Bucklebury Common, for plant galls, on September 23rd (15); and Kingwood Common, for the Fungus Foray, on October 13th (45). Eight members accepted a kind invitation from the British Mycological Society to attend their Fungus Foray in Windsor Park, followed by tea and an exhibition of the specimens collected at Royal Holloway College, on October 6th, and spent a thoroughly enjoyable day.

The Young Naturalists' Evening was held at the Town Hall on March 21st and 700 children attended. The panel, who answered questions sent in by pupils from Reading schools, were Dr. Maurice Burton, Professor A.H. Bunting, Professor H.L. Hawkins, Mr. Robert Gillmor and Mr. B.R. Baker, with Mr. Smallcombe acting as Questionmaster. The prizes were presented by the Right Worshipful the Mayor of Reading, after which the film, "Winter Quarters", was shown.

Prizewinners: Susan Brent, Whitley Park Junior School ($10\frac{3}{4}$ years); W. Flockton, Stoneham School (14 years); Diane Gillard, St.Michael's Primary School (10 years); Alison Johnson, Whitley Park Junior School (10 years); Helena Kmiec, Hugh Faringdon R.C. Secondary School ($14\frac{1}{2}$ years); Clifford North, Cintra Secondary School (12 years); Robert Turner, The Grove Secondary School (13 years); Susan Williams, The Abbey Junior School (10 years).

THE BERKSHIRE, BUCKINGHAMSHIRE AND OXFORDSHIRE NATURALISTS' TRUST

Meetings held in 1962

Berkshire received the Trust on 17th March when the Annual General Meeting was held at Reading University. Lord Hurcomb, President of the Council for Nature, was the guest speaker, and the President of the Trust, Air-Marshal Sir Robert Saundby, took the Chair. It was encouraging to see the Reading & District Natural History Society well represented.

On 15th December, our President, Dr. E.V. Watson, took the Chair at a Trust public meeting held in the Art Gallery at Reading Museum. Sir Robert Saundby gave an illustrated talk on "Butterflies and Moths in Berkshire" and Mr. Richard Fitter spoke on recent work of the Trust.

It is very much the policy of Trust Council that meetings shall be held at least twice in each county during the year. Only in that way (together with summer field excursions) can a real interest be maintained among the membership, which is spread over three counties. Wantage will be receiving us on 8th March at their Field Club meeting, when Sir Robert Saundby and Mr. Richard Fitter will again be speaking.

On 6th May, the Trust held a field meeting on the Berkshire Downs and had the benefit of the leadership of Mr. W.D. Campbell.

Reports on Berkshire Sites

The Pasque Flower seems always in the news, as well it might be for such a local speciality, and we are pleased to report that Mr. Cross, the owner of the Unhill Bottom locality, is keen that the plants on his ground shall be wardened during the coming spring. We hope that this wardening will receive the practical help of our own botanists and of general naturalists in this Society - Mrs. A.M. Simmonds can give more information as to actual arrangements. The smaller colonies of Pasque Flowers at Aston Upthorpe continue to be well studied by our members, both in the Trust and in this Society (a Society field excursion was held there last April). There is little doubt but that the small enclosure, erected with the very practical assistance of Reading Museum in 1961, is allowing protection to those plants within the wire. The result this year was that, while very few Pasque Flowers were seen outside the fence, the plants were numerous inside it. The cause of the damage outside is still not known, but the fence enabled a number of plants both to flower and to set seed. The ownership of this site has very recently changed hands, and we are pleased to acknowledge the ready cooperation of the new owner.

Following a report that the musk orchids at West Woodhay were being badly trampled by cattle the Trust has come to an agreement with the owner of the Down that half of the area should be fenced off. The unfenced area will form a valuable control, and Dr. Woodell of the Botany School at Oxford will be plant recording on the site as soon as possible after erection of the fence, and again later in the year.

An area on Snelsmore Common has finally been delimited as a reserve area by the Newbury Rural District Council, who has been in rather lengthy negotiations with the Nature Conservancy. This again is evidence of a further safeguard to one of the most interesting plant habitats in our district.

With plans again going ahead for wardening the Military Orchid in Buckinghamshire and the Monkey Orchid in Oxfordshire, andw ith our energetic worker, Mrs. Paul, busily engaged in work at Bix Bottom, it might seem that plants were the only concern of the Trust. However, with all the activities mentioned above, protection is also afforded to the invertebrate fauna of the several sites. More positive work is well on the way in our Oxfordshire section and the Trust is working for a lease on a piece of woodland where the rare Black Hairstreak Butterfly is known to breed.

This year we have been able to circulate our Bulletins to schools in Reading and in Berkshire, and this has only been possible through the ready co-operation of the Education Authorities both in the Borough and in the County.

We have been asked if it would not be possible to give schools lectures on Conservation and for the pupils themselves to see some of the fieldwork carried out in the area. A Conservation Corps is in being in Buckinghamshire, due to the energetic work of the County Secretary, Mrs. Cowdy; not only has she arranged parties to work on Buckinghamshire sites, but has also taken her "two by twos" and spoken to W.I's, local societies and the like on the work we are trying to do.

We in Berkshire are lagging behind in this type of work; Mrs. Simmonds and Mrs. Paul are true stalwarts, but as in all honorary tasks we are never overwhelmed with helpers. If a member of this Society feels that he or she could help with the educational work of the Trust in Berkshire, the Hon. Local Secretary at Reading Museum can assure them that their assistance would be welcomed.

CHILTERN RESEARCH COMMITTEE

Each year the Committee try to introduce a new enquiry which will widen the field of study of the Natural History of the Chilterns. Mr. Leeke, a member of Reading Natural History Society, has undertaken the survey of the Muntjac deer, and a sheet has been prepared giving the essential features of this mammal and making it easy to recognise, either from its appearance or habits. Already droppings have been found near Caversham Heights which show that at least one Muntjac was in the area since Christmas. If you are interested in this enquiry, both Mr. Leeke and Mrs. Paul have the necessary documents.

In the Beechwoods Survey, we are trying a new scheme this year to encourage those of us who find statistical details rather frightening. Cards, similar to those used in the Cambridge Mapping scheme, but with only the names of plants that grow in Beechwoods, are being printed. A separate card is used for each wood, and the names of plants found are crossed out. If you live near to a wood on the Chilterns, or if you visit one occasionally, then take one of these cards with you. An accompanying sheet will give the English names of plants with the abbreviated Latin names at the side to correspond with those on the card.

Unfortunately, most of the records sent in so far have been from a few keen individuals. Most of the Surveys are still open, and any information which you may have will be welcomed. Here is a list of the enquiries:

(1) Juniper Survey
(2) The Woodlark and Woodwarbler
(3) The Clifden Blue and its food-plant, Hippocrepis
(4) Drift Deposits
(5) Distribution of Iberis amara
(6) Distribution of Orchids
(7) The Nuthatch and Woodpeckers
(8) Reptiles and Amphibians
(9) Muntjac Enquiry
(10) Beechwood Survey

You must surely be interested in one of these. Leaflets are available by post from Mrs. V. N. Paul, Overdale, Peppard Common, Oxon. (Stamped addressed envelope, please).

PUBLICATIONS RECEIVED

Journal of the North Gloucestershire Naturalists' Society.

North Gloucestershire Naturalists' Society. Ornithological Report for 1961.

Journal of the Henley Grammar School Field Club.

Middle-Thames Naturalist.

South-Eastern Naturalist and Antiquary.

The First Hundred Years. A Centenary History of the Bristol Naturalists' Society 1862 - 1962. By F. Coles Phillips. Proc. Bristol Nat.Soc. 30 (3A) 1961, pp. 181 - 214. 1962.

Weather Records in 1962

Data supplied by A.E. Moon

The data refer to Reading University Meteorological Station. A "rain day" is a day on which rainfall exceeds 0.01 in. The averages for temperature refer to the period 1921-50, those for the amount of precipitation and number of rain days to 1916-50, and those for sunshine to 1921-50. For the designation of frost and ground frost days see Weather Records in 1961.

STATION - READING UNIVERSITY HEIGHT ABOVE SEA LEVEL - 148 FT.

1962

		JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	YEAR
MEAN DAILY TEMPERATURE °F	MAX.	45.6	45.8	45.6	54.7	58.4	68.2	68.6	67.5	63.7	59.6	47.8	40.5	55.5
	MIN.	34.6	35.1	31.3	40.0	44.5	48.7	53.2	52.3	48.6	44.6	37.7	30.3	41.8
	MEAN	40.1	40.5	38.5	47.3	51.5	58.5	60.9	59.9	56.1	52.1	42.7	35.4	48.7
EXTREME TEMPERATURES °F	E.MAX.	54	53	58	69	64	78	75	74	76	68	57	55	78
	DATE	24,26	12,16,18	29	25,26	8	9	2,9,24	1	2	7,8	2	15	June 9
	E.MIN	14	27	23	34	33	36	45	44	39	32	27	19	14
	DATE	1	26,27	15,25	14	1	2	7	9	22	27	16,20	26	Jan. 1
	E.GRASS MIN.	6	18	11	23	20	29	36	35	31	23	17	11	6
	DATE	2	9,11,15	15,17,18,25	14	1	1	7,8	9	22	27	16	26	Jan. 2
DAYS WITH	FROST	8	9	17	0	0	0	0	0	0	1	7	19	61
	GROUND FROST	21	20	26	17	9	4	0	0	3	10	14	27	151
SUNSHINE HOURS	SUM	62.4	71.2	120.2	141.5	145.5	249.1	116.8	156.8	141.1	106.4	32.6	73.3	1416.9
	% POSS.	24	25	33	34	30	51	23	35	37	32	11	30	32
	DAILY MEAN	2.01	2.54	3.88	4.72	4.69	8.30	3.77	5.06	4.70	3.43	1.09	2.36	3.88
PRECIPITATION INS.	AMOUNT	3.56	0.25	1.24	1.57	1.69	0.12	1.72	3.07	2.91	1.16	2.63	2.52	22.44
	RAIN DAYS	21	9	10	16	18	6	14	13	14	9	15	14	159
	MAX. RAIN IN 1 DAY	0.76	0.09	0.60	0.24	0.37	0.06	0.87	1.40	0.68	0.49	0.54	0.53	1.40
	DATE	21	12	28	4	27	9	26	6	29	25	1	8	Aug. 6
	LONGEST RUN OF CONSECUTIVE RAIN DAYS	10	2	4	10	7	2	5	3	6	4	5	4	62
	LONGEST RUN OF CONSECUTIVE DRY DAYS	4	9	12	7	4	11	8	4	9	19	5	6	98
	SNOW OR SLEET DAYS	2	4	8	0	0	0	0	0	0	0	3	7	24
	DAYS SNOW LYING	6	0	0	0	0	0	0	0	0	0	0	6	12
VISIBILITY	FOG AT 0900 GMT	3	3	2	0	0	0	0	0	0	6	3	6	23
THUNDERSTORM ACTIVITY	DAYS OF THUNDER	0	0	0	1	3	1	6	1	1	0	2	0	15
	DAYS OF HAIL	2	1	2	4	2	0	0	0	0	0	0	1	12
AVERAGES MEAN DAILY TEMPERATURE °F	MAX.	45.2	46.3	51.8	56.9	63.7	69.2	72.3	71.5	66.8	58.8	50.2	45.7	58.2
	MIN.	34.3	34.5	36.1	40.1	44.8	50.5	54.1	53.4	49.9	43.8	38.3	35.3	42.9
	MEAN	39.8	40.4	44.0	48.5	54.3	59.9	63.2	62.5	58.3	51.3	44.3	40.5	50.6
PRECIPITATION	AMOUNT	2.41	1.78	1.69	1.90	1.86	1.61	2.53	2.20	2.10	2.60	2.74	2.30	25.72
	RAIN DAYS	17	13	13	14	13	11	13	13	13	15	15	17	167
SUNSHINE	SUM.	52.7	70.0	120.9	156.0	195.3	210.0	192.2	182.9	138.0	105.4	63.0	46.5	1532.9
	DAILY MEAN	1.7	2.5	3.9	5.2	6.3	7.0	6.2	5.9	4.6	3.4	2.1	1.5	4.20

THE NATURAL HISTORY OF MOSQUITOES

A condensed version of the Presidential Address, November 1961
By J.F. Newman, B.Sc., F.R.E.S.

The mosquitoes as a group have been very extensively studied owing to their great importance as carriers of malaria and other diseases. Recently, for example, a whole large volume has been published on one species of mosquito alone, Aedes aegypti. It is not, however, the economic and public-health aspects of the mosquito which I wish to dwell on, but rather to consider things from the mosquito's point of view.

The mosquitoes belong to the order Diptera, the two-winged flies. The Diptera are subdivided into three large groups which differ in various ways, perhaps most noticeably in the structure of their antennae. The mosquitoes belong to the group Nematocera, which, as the name implies, possess relatively long thread-like antennae made up of a large number of small segments. This group includes the families Tipulidae (crane-flies), Chironomidae (midges), and the Culicidae, the latter being the mosquito family. The mosquitoes are divided into two large groups: the Anophelini, which includes all those of importance as malaria carriers, and the Culicini, which, although they do not carry malaria, are important in carrying other diseases such as yellow fever and filariasis.

The mosquitoes are widely distributed around the world, the greatest number of species being found in South America and other tropical regions. In the British Isles about thirty species occur. The largest number of individual mosquitoes, although of relatively few species, occur in the colder parts of the world, such as Alaska and Siberia. In the Hudson's Bay district of Canada, biting rates of 200 per minute have been recorded on an exposed human arm. The size of mosquitoes is in general greater in the colder parts of the world, and many of the important malaria carriers of the tropics are very small insects.

The eggs of mosquitoes are laid on, or near to, water. They may be simple, equipped with floats, or cemented together to form rafts, as in the case of Culex pipiens, the common gnat of our garden water-butts. The eggs of the genus Aedes are interesting. They are laid in damp depressions in the ground, where they remain unhatched until the hollow becomes flooded with water, when hatching takes place almost immediately. Aedes aegypti will readily lay eggs on damp filter-paper, particularly if it is dark in colour. The eggs can be dried and stored for long periods, e.g. 4-6 months, but will hatch within a few minutes of being flooded with water. In these eggs the embryonic development of the larva takes place within a few days of the egg's being laid, and the fully developed larva remains quiescent in the eggshell until flooding takes place. A proportion of the eggs, however, do not hatch at a first flooding, but will hatch if the eggs are again dried and later re-immersed. This mechanism, the details of which are not understood, has survival value for the species in locations where a hollow may be flooded but may dry up before sufficient time has elapsed for the larvae to complete their development.

Hatching takes place by the opening of a cap at one end of the egg, the cap being cut by a tooth on the head of the larva. The larvae are air-breathing, the tracheal system opening through paired spiracles located at the tail of the larva, which is extended into a long siphon in the case of the Culicini. Anopheline

larvae, without long siphons, spend most of their time at, and feed mainly in, the surface film of the water, in which they support themselves by water-repellent palmate hairs on each abdominal segment. Culicine larvae characteristically hang head down in the water with just the tip of the siphon in the surface film. They often feed in the surface film as well as below the surface. The larvae of the Culicine genus Taeniorhynchus have specialised siphons which are inserted into the air-spaces of submerged aquatic plants, so that the larvae can complete their development without contact with the water surface. There are four larval stages followed by an active comma-shaped pupa. The pupa darkens with age, and eventually comes to the surface, splits along the back, and the adult mosquito steps out and stands on the surface film until it is dry.

Adult female mosquitoes are blood feeders and the mouth-parts are adapted to this end. Penetration of the host's skin is effected by four stylets which carry saw teeth at the ends, and together form a tube along which the blood can be sucked. An outer tube, slotted along the ventral side, forms a sheath for the stylets, and buckles up to remain on the surface of the skin as the stylets penetrate. Male mosquitoes do not suck blood, and the mouth-parts are somewhat reduced.

Having fed, the mosquito rapidly converts the blood meal into a batch of eggs, and in favourable conditions the process may take only a few days. The habitats of mosquito larvae are very varied and the choice is often decided by the adult female's selection of an egg-laying site. This is well illustrated by an Indian species, Anopheles minimus, which is not normally found in rice fields, although the larvae are quite well able to live in such a habitat. The female, in laying eggs, executes a dancing flight over the water, and is unable to do this in the growing rice crop.

With the approach of winter, in the cooler parts of the world, mosquitoes enter hibernation. One of the signs of autumn in Britain is the entry of the common Culex pipiens into cool basements and other rooms of houses, where they rest on the walls. In this species hibernation takes place in the adult, the blood meals taken in the autumn being converted not into eggs but into stored food reserves in the fat-body. Whether or not a particular insect hibernates is determined in the larval or pupal stages and the precise conditions which trigger the change in various species offer an interesting field for investigation. In other insects it has been shown that both temperature and length of day are of importance. In other species of mosquitoes hibernation may occur in the egg or in the larva, and again little is known of the mechanisms involved.

The Recorder's Report for Entomology,

1961 - 62

By B. R. Baker.

Order Dictyoptera (Cockroaches)

Ectobius lapponicus (L.) Dusky Native Cockroach

This species, one of our three truly native cockroaches, was reported present in some numbers in the marsh at Pamber Forest, Hants., on 16th June (T. Potts,

Bradfield College). On 30th June, the occasion of the first field excursion of our Society's Junior Section, E. lapponicus was again noted in the same locality at Pamber. The males were flying actively in the sunshine, and both sexes could be found in numbers by searching among the dry grasses and dead leaf cover.

Order Odonata (Dragon-flies)

The following records all refer to Ascot Place, except those for Agrion virgo (L.) and Cordulegaster boltonii (Don.), and result from the work of Mr. W.H. Bunce. (The habitat is described in the report for 1960-61.)

Coenagrion puellun (L.) Common Coenagrion

First noted on 8th June on the northern stream, increasing in numbers from 9th - 17th June. A few present on 24th July. Females noted ovipositing on submerged pond weed, at times still in tandem with males. Not so prevalent a species on the western stream.

Ischnura elegans (van der Lind.) Common Ischnura

First noted on 6th June. Found on both streams and lake end. Numbers mating at the western end of lake, 17th June, and on northern stream, 9th July.

Erythromma najas (Hans.) Red-Eyed Damsel-fly

First noted on 13th June on western end of lake - pair observed mating on western stream, 17th June. A stronger flier than the other species of damsel-fly and tending to keep well out over the surface of the lake (observations of this species were made with the aid of binoculars). A new record for the Ascot locality.

Enallagna cyathigerum (Charp.) Common Blue Damsel-fly

Pair obtained mating, western stream, 15th June.

Agrion virgo (L.) Demoiselle Agrion

Present in good numbers on the stream in Pamber Forest, 30th June.

Cordulegaster boltonii (Don.) Golden-Ringed Dragon-fly

Nymphs recorded from a gravelly stream near Wellington College on 7th July (A. Price). Adults observed at Pamber Forest on several occasions during July.

Aeshna juncea (L.) Common Aeshna

A male observed at close quarters, 4th October

Aeshna cyanea (Muell.) Southern Aeshna

A single specimen observed hunting around rhodendron clumps, 24th July.

Anax imperator Leach Emperor Dragon-fly

First noted on western stream, 7th July. Later, seen occasionally on both streams and lake end.

Orthetrum cancellatum (L.) Black-Lined Orthetrum

Western stream, 15th June.

Libellula quadrimaculata L. Four-Spotted Libellula

First seen on western stream on 15th June - a very finely marked male. Female ovipositing in water on northern stream, 9th July.

Order Hemiptera (Bugs)

Empicoris baerensprungi (Dohrn) Thread-Legged Bug

A specimen of this rare species was taken from a factory on the Basingstoke Road in late May - it had flown into a lighted room (J. Eeles). These thread-legged bugs bear a close resemblance to gnats or midges, which, with other small insects, form their prey.

Periphyllus testudinatus (Thornton)

Mr. Price supplies the following interesting note: Whilst attending a field meeting of the Society on 23rd September, some very strange insects were discovered on the leaves of field maple in the School Field on Yattendon Farm, Bucklebury. They were subsequently identified by Dr. Hinton of Bristol University as the aestivating sexupara of the aphid, Periphyllus testudinatus Thornton. The same insect was later found at Field Farm, Burghfield, on 14th October, and in Palmer Park, Reading, on the same date. It has been suggested that its unusual form is connected with the need for water conservation.

Order Lepidoptera (Butterflies and Moths)

Migrant species

It has been a poor season for immigrant species with the exception of Laphygma exigua (Hb.) Small Mottled Willow. Several of these were recorded at Medmenham and Henley during May, and a single specimen was taken at Woolhampton on 17th August.

Resident species

Melanargia galathea (L.) Marbled White Butterfly.

This attractive butterfly, which occurs in several well defined colonies in our district, was noted on the Upper Icknield Way near Aston Rowant on 28th July (E.M. Nelmes).

A. paphia (L.) var. valezina. Silver-Washed Fritillary, variety valezina

Two specimens of this fine variety were observed in Pamber Forest, one on 29th July and one on 5th August.

Apatura iris (L.) Purple Emperor

It is a well known fact that male Purple Emperors are at times attracted down from their normal haunts, high around the tops of oaks, to baits of decaying animal matter. The Recorder witnessed an instance of this unsavoury habit on 22nd July at Pamber Forest where a grey squirrel upon the game keepers' gibbet was receiving the attentions of one of these fine butterflies. This gibbet had been well supplied with corpses all summer by the energetic keepers and on 14th July was festooned with 65 squirrels, jays, magpies, jackdaws and rooks. On 29th July the keepers informed us that they had just seen a butterfly, similar to the one for

which we were searching, on a smaller gibbet in another part of the Forest. They led us to the spot, but this time it was Limenitis camilla (L.), White Admiral which was disporting itself upon a dead jay.

Cupido minimus (Fuess.) Small Blue

A colony of this species, our smallest British butterfly, was reported on the Berkshire Downs between East Ilsley and the Pasque Flower valley at Aston Upthorpe, 17th June (L.E. Cobb).

Trisateles emortualis (Schiff.) The Olive Crescent

Undoubtedly the highlight of the year's lepidoptera records is provided by the rediscovery of the Olive Crescent in Britain after a gap of over 100 years. The rediscovery was made up in the Chilterns by our member, T.J. Homer, T.W. Harman and others of an 'entomologists' syndicate'. Until July 1962 there were only three authentic British records for this species, the most recent being that of H. Binks of Stonor, Henley-on-Thames, who recorded a specimen in 1859 (the other 2 British records are Brighton 1858 and Epping Forest, 1859). Five emortualis were recorded by the above mentioned group in mid-July 1962 and the way is now open for a field investigation of the life history of this very rare resident.

Ptilophora plumigera (Schiff). Plumed Prominent

Another Chiltern speciality, this species has been recorded in two new areas this year; Medmenham and Henley, both on the night of 9th November, and on other dates at Medmenham, (T.W. Harman and T.J. Homer).

Oria musculosa (Hb.) Brighton Wainscot

Further evidence of the spread northwards of this species from its main centre of the wheat-growing areas on Salisbury Plain is given by the occurrence of a single specimen at Henley on 17th August (T.J. Homer) and one at an earlier date at Medmenham (T.W. Harman).

Cirrhia ocellaris (Borkh.) Pale Lemon Sallow

A good example of successful local work is the discovery of larvae of this uncommon species upon black poplars near Medmenham. We in Reading had always travelled to the Weybridge, Surrey, area for this species, but Mr. Harman has shown to us once again how little we know the possibilities within our own district.

Lithophane semibrunnea (Haworth) Tawny Pinion

Medmenham, 24th October, 9th November; (T.W. Harman); Henley, 25th October and 9th October. (T.J. Homer).

Cucullia verbasci (L.) Mullein Shark

On the occasion of the Society's excursion along the Kennet bank to Aldermaston on 8th July, several of the strikingly coloured larvae of this species were noted feeding on figwort (Mrs. W.E. Fulford). This was an enlightening discovery and explains the presence of the moth, which has several times been recorded at Woolhampton, in an area where the more usual foodplant of mullein appeared absent.

C. lychnitis Ramb. Striped Lychnis

An abundance of larvae of this species feeding upon black mullein was noted in early August along the Fair Mile near Henley (T.J. Homer).

Acasis viretata (Hb.) Yellow-Barred Brindle

Beechwoods near Medmenham, 28th August (T.J. Homer).

Calocalpe undulata (L.) Scalloped Shell

A single example to mercury vapour light at Pamber Forest, 27th July (T.J. Homer).

Aegeria spheciformis (Schiff.) White-Barred Clearwing

Several attempts were made at Pamber Forest in early June to try to discover the early stages of this species which lives for two years within the stems of alder. When approaching full growth, usually in early June, the larva makes its way to the outer tissues of the alder stem leaving only a thin skin covering the larval tunnel. Pupation then takes place in the tunnel. Many stems showed evidence of bird attack, the caps having been punctured (by a trial and effort method as witnessed by the many beak stabs) and the stems in many instances split and the pupae removed. It is useless to spend time in an area where these signs are evident, one can but try elsewhere. After two unsuccessful excursions for this species an apparently 'bird free' area was found on 14th June and only diligence and a strong saw was needed to procure some pupae. The resulting moths hatched with no difficulty during the following week, and on 24th June we had the pleasure of releasing some bred females at Pamber and seeing the sudden appearance of males over the bushes on to which the female clearwings had flown. Once pairing has taken place the swarm of unpaired males rapidly disperse.

Order Coleoptera (Beetles)

An instance of an accidental import was notified to us on 25th September when living beetles were discovered within West African obeche, then stored in a yard at Newbury (Mr. Pursglove, Reading Technical College). The species proved to be Bostrychoplites cornutus Oliv., a beetle often accidentally imported but unable to breed in this country.

Prionocyphon serricornis Muell. (Helodidae)

Larvae of this rare species were found in a rot hole in a beech tree at Conebury Woods, Goring, Oxon, on 8th April by Mr. J.H. Cole. Rot holes form typical habitats for larvae of this species. An attempt was made to breed them through, but although surviving for several months, they finally died before able to pupate (A. Price).

Agabus chalconatus Panz.

24 specimens of this water beetle, most of them teneral, were found in a gravelly stream at Pamber Forest on 27th June. The normal habitat of this species is in a Sphagnum bog; due to the drought the bog had dried up and this is apossible explanation of the unusual habitat in which the specimens were discovered (A. Price).

Luperus longicornis F.

This Chrysomelid was found to be very abundant at Pamber Forest on 27th June, when

beating birch. The beetles flew very readily from the beating tray (A. Price), (Corrigenda. Reading Naturalist No. 14, 1962, p.17.

Coelambus impressopunctatus Schaller) For "Dimorphic males and females", read "Dimorphic females".

Order Hymenoptera (Bees, Ants and Wasps)

A nicely preserved queen nest of Vespula vulgaris (L.), Common Wasp, was brought to the Museum in late August (Mrs. A. Fishlock). Nests of this species can be detected from those of the closely allied Vespula germanica (F.), German Wasp, by the 'paper' colour - yellow colour for vulgaris and grey for germanica.

Order Diptera (True Flies)

Phalocrocera replicata L. (Tipulidae)

A larva of this species was found in the old bathing pool at Woolmer, North Hampshire, on 1st April, 1962. There is a close resemblance between the larva and the Sphagnum in which it lives (A. Price).

Chironomid Midges

The Museum received an interesting enquiry on 15th July from a resident at Theale - "..... a ragged clump of elm trees and on many evenings I have observed what at first sight looks like a puff of smoke rising from the topmost branches, and waving in the light of the sinking sun. Closer examination (without climbing the trees) shows that these puffs are really swarms of insects, which seem too substantial for gnats....."

After one or two telephone calls, to ensure that the 'show' might be on, a visit was paid to Theale about 8.30 p.m. on 23rd July. The 'smoke' duly appeared and became denser as dusk approached - it was coiling high over the elms and therefore impossible to determine the insects from the ground. A 3-joint pole was fixed to a kite net and one of the elms was scaled. It only needed one swing of the net high into the spiralling throng to fill it with countless Chironomid midges.

It was easy to believe the several reports of fire brigades being called out on the Continent for similarly caused 'fires'.

(There are 389 known species of these non-biting midges and these large mating swarms may consist of more than one species - in the daytime the insects rest in sheltered situations).

The Recorder wishes to thank all those members and friends mentioned in the report - also the Director of Reading Museum & Art Gallery, Mr. T.L. Gwatkin, for the full use of museum records.

The Recorder's Report for Botany, 1961-62

By K.I. Butler

The nomenclature followed is almost entirely that of J.E. Dandy (1958) in "List of British Vascular Plants". Other works consulted are A.R. Clapham, T.G. Tutin & E.F. Warburg (1962), "A Flora of the British Isles", 2nd ed.; C.E. Hubbard (1954), "Grasses"; and D. McClintock (1957), "Pocket Guide to Wild Flowers, Supplement."

In the year 1896, George Claridge Druce wrote "The Flora of Berkshire", and not many years afterwards, in 1900, "The Flowering Plants, Ferns, etc., of the Country Round Reading" was published by the Reading Natural History Society. The revision of Druce's Flora was perhaps too ambitious an undertaking for the Society to embark upon, but it has always had the hope of revising its own local Flora, and records have been kept since 1936 with that end in view. The botanists are therefore delighted with a project of Dr. H. Bowen, who over a period of ten years is undertaking a revision of "The Flora of Berkshire" and has enlisted the help of local societies. Records will be collected from each 5-km grid square in the county. A division of the county has been made, and Reading Natural History Society is working all squares east of 50 and west of 80 . During the past year, several of our members have been concentrating their efforts on this work. In 1959, the radius of the area covered for botanical recordings was extended from 10 to a rough 20 miles from Reading. In view of the Flora revision, it now seems advisable to include the whole of Berkshire.

Botanical Reports have been received of some of the Society's Field Excursions.

ASTON UPTHORPE DOWNS, April 14th. More than 50 members and friends gathered in this secluded Juniper valley on a dull and chilly afternoon. About 35 square yards of steep chalk slope were enclosed in March 1961 in order to investigate the failure of Pulsatilla vulgaris Mill. (Pasque Flower) to flower. Several plants bore rich purple blossoms, and there was promise of more to follow. There was also a smaller number of plants scattered on the slope outside, and flowers were appearing on these, but many buds had been nipped off just above the bracts by some wild creature. Very few other species were, as yet, in flower, but some members noted Saxifraga tridactylites L. (Rue-leaved Saxifrage), Erophila verna (L.) Chevall. (Whitlow Grass) and Myosotis ramosissima Rochel (Early Forget-me-not) growing on anthills, also the still tightly-closed dark blue buds of Polygala calcarea F. W. Schultz (Chalk Milkwort) (Mrs. A.M. Simmonds). This slope was also visited by some members on August 2nd, when the following plants were seen: Anacamptis pyramidalis (L.) Rich. (Pyramidal Orchid), Campanula glomerata L. (Clustered Campanula), Thymus drucei Ronn. (Wild Thyme), Pimpinella Saxifraga L. (Burnet Saxifrage), Iberis amara L. (Candytuft), Nepeta cataria L. (Cat-mint) and Atropa belladonna L. (Deadly Nightshade).

LEIGHTON PARK SCHOOL, June 6th. Led by the Headmaster, Mr. J. Ounsted, the party walked for a short distance outside the grounds to admire a stretch of ancient hedgerow. Hedges, which have been such a delightful and characteristic feature of English landscape for 200 years, are fast disappearing in many parts of the country, so it was most gratifying to know that one such still exists on a main road within the Borough of Reading. Here were such typical hedgerow shrubs as

Ligustrum vulgare L. (Privet), Ilex aquifolium L. (Holly), Ulex europaeus L. and Crataegus monogyna Jacq. (Hawthorn), and on the bank below were many species of common hedgerow plants, e.g. Chaerophyllum temulentum L. (Rough Chervil), Anthriscus sylvestris (L.) Hoffm. (Cow Parsley), Teucrium scorodonia L. (Wood Sage), Vicia augustifolia L. (Common Vetch), Stellaria neglecta Weihe (Greater Chickweed), distinguished from S. media (L.) Vill. by its ten stamens, Melica uniflora Retz. (Wood Melick) and Ornithogalum umbellatum L. (Star of Bethlehem), which had no doubt escaped picking on account of its habit of keeping its starry flowers closed for much of the day. Inside the extensive grounds (originally two estates) there are vestiges of old woodland containing many fine timber trees, and here Mr. Ounsted showed us Festuca heterophylla Lam. (Grandmother's Hair), which at first glance resembles Poa nemoralis L. (Wood Poa), and which, with P. chaixii Vill., was introduced into parkland in the latter half of the last century. A small area of scrubland which had once been a pond was seen as an interesting example of the process of reversion to a forest climax. In a patch of rough meadowland plants, were seen of Ophioglossum vulgatum L. (Adder's Tongue), and in the wetter ground Mentha aquatica L. var. citrata (L.) Koch, and the leaves of Mentha pulegium L. (Pennyroyal). On the closely mown lawn and gravel terraces near the buildings, many plants, such as Trifolium micranthum Viv. (Slender Trefoil), are being allowed to maintain their status. (Mrs. Simmonds).

HECKFIELD PLACE, July 28th. The more interesting plants seen were Mimulus guttatus DC. (Monkey-flower) and M. moschatus Doug. ex Lindl. (Musk) growing together, Hydrocotyle vulgaris L. (Pennywort), Acorus calamus L. (Sweet Flag) and Achillea ptarmica L. (Sneezewort). Leaves of Alchemilla were thought to be A. vestita (Buser) Raunk.

BEENHAM, August 18th. Many excursions have been made in the past to Beenham with the purpose of admiring the spring flowers, especially the wild Daffodils, Narcissus pseudonarcissus L. This year it made a welcome change to visit the same wood in August and to see a veritable forest of Equisetum telmateia Ehrh. (Great Horse Tail).

On November 2nd 1961, Mrs. Simmonds saw 120 plants in bloom and, as a contrast, less than 50 a month later on December 5th. Evidence of a late spring in 1962 is given by Miss E. M. Nelmes with records of Tussilago farfara L. (Coltsfoot) still in bloom at Upper Basildon and Viola odorata L. (Sweet Violet) at North Stoke on May 5th and by Mrs. Simmonds with records of Viola riviniana Reichb. (Common Violet) very abundant in woods at Bix as late as May 13th.

Inroads of civilisation continue to take toll of many of our local wild plants. As Mrs. Simmonds mentioned in "A Botanist's Lament", last year - Coleman's Moor, once the home of such a varied flora, is already under weigh as a 'new town'. Much of the Bulmershe Estate, where formerly many interesting plants were recorded, is being developed as part of Reading's overspill. Turritis glabra L. (Tower Mustard), which has for many years flourished on the roadside skirting Woodley Aerodrome, will no doubt be lost when the widening of the road takes place. Astragalus glycyphyllos (Milk vetch), recorded by Druce in 1805, from the roadside between Reading and Twyford and rediscovered in 1954, is cut down frequently, and the colony on waste ground nearby has been destroyed. The sluggish stream at "Little John Farm", Reading, discovered by Mrs. V.N. Paul in 1956, is likely to be destroyed in the near future if the plans for an airstrip mature, and with it will go such interesting plants as Utricularia vulgaris L. (Greater Bladderwort),

Hottonia palustris L. (Water Violet), Hydrocharis morsus-ranae L. (Frogbit) - just to mention a few, which, owing to increased drainage are yearly becoming more scarce.

In emphasizing and condoling our losses, we must not overlook our gains. Through the vigilant eye of the Berks, Bucks, and Oxon. Trust and others, several threats to wild plants have been averted. Aceras anthropophorum (L.) Ait.f. (Man Orchid) recorded since 1945 from the Chilterns, near Ipsden, which has barely managed to survive since its home was ravaged by pigs in 1958, may have a new lease of life. The owner has been approached, and is willing to allow steps to be taken to safeguard the plants. Two plants were seen this year, an increase of one on 1961.

Herminium monorchis (L.) R. Br. (Musk Orchid) and other species of Orchidaceae on a chalk slope on West Wooday Downs, Berks, were in danger of being exterminated, through trampling by grazing cattle. The owner has been contacted, and is willing to keep cattle off for a suitable period.

Members of the Trust have wardened two sites of rare orchids in the Chilterns during May and June, to prevent them from being picked by members of the public who do not realise their rarity. These were Orchis militaris L. (Soldier Orchid), and O. simia Lam. (Monkey Orchid), each of which grows only in one other place in the British Isles.

Pulicaria vulgaris Gaertn. (Small Fleabane) was in danger of extermination at Springwater Farm, Hants., owing to drainage of the pond, so plants have been transplanted to a nearby pond.

Leucojum aestivum L. (Loddon Lily) flourished well on an island downstream from Sindlesham Mill until 1957, when a causeway from the river bank was made to the island, and all the flowers were picked. It is now being protected as far as possible by the owners of Sandford Mill.

Crocus purpureus Weston (Purple Crocus) still grows in the field at Upper Inkpen, Berks, from where it was first recorded in 1894. The field will be protected, due to the efforts of the Berks., Bucks., and Oxon. Trust.

Last year mention was made of two old localities which have remained completely unspoilt for over 20 years. I was very glad to be able to visit another one this year. In 1939, Helleborus viridis L. (Green Hellebore) was recorded from a hollow bordering a wood near Ashampstead. In the intervening years, the hollow has become overgrown and trees have been felled, but many plants of H. viridis are growing on a scrubby slope. The ground flora of the wood still remains Iris foetidissima L. (Gladdon).

MEMBERS' RECORDS
(An * preceding the name of a plant indicates an alien taxon.)

Ceterach officinarum DC. (Rusty-back Fern). Walls at Wantage, Letcombe Regis, and East Hendred (Dr. H. Bowen).

Ophioglossum vulgatum L. (Adder's Tongue). Sterile blades only, in wood at Clay Hill, Stanford Dingley (Miss K. Butler).

Helleborus foetidus L. (Bear's-foot, Stinking Hellebore). Medmenham (Mrs.Simmonds); Streatley Hill, and one or two plants near Tomb Farm, Basildon (Miss Nelmes).

Helleborus viridis subsp. occidentalis (Reut.) Schiffn. (Green Hellebore). Mongewell Woods (Mrs. Simmonds); Ashampstead woods (Miss Butler); a large dense stand in Mutton Copse, near Streatley, where the plants practically comprised the ground cover (Miss Nelmes).

Ranunculus arvensis L. (Corn Crowfoot). Mrs. Simmonds reports that it appears to be steadily decreasing. One plant only seen this year in a farmyard at Grazeley; one plant in arable field, Nunhide Lane (J. Hodgson).

Ranunculus auricomus L. (Goldilocks). Abundant in several places (Mrs. Simmonds).

Aquilegia vulgaris L. (Columbine). One plant (not flowering) on edge of wood near Tomb Farm, Basildon (Miss L.E. Cobb).

Thalictrum flavum L. (Common Meadow Rue). Flowering abundantly in Kennet Meadows (Mrs. Simmonds).

Papaver hybridum L. (Round Prickly-headed Poppy). Waste ground, Goring (Dr. M. Fishenden).

Papaver dubium L. (Long-headed Poppy). Waste ground, Goring (Dr. Fishenden).

Papaver argemone L. (Long Prickly-headed Poppy). Woodley (Mrs. Simmonds).

Papaver somniferum L. (Opium Poppy). Several plants at Dean's Bottom (Mrs. Simmonds).

Corydalis claviculata (L.) DC. (White Climbing Fumitory). Two new localities: Eversley, Hants. (Mrs. Simmonds); Clay Hill, Stanford Dingley (Miss Butler).

* Corydalis lutea (L.) DC.(Yellow Fumitory). Naturalised in several places at Purley Park and Whitchurch (Mrs. Simmonds).

* Brassica rapa L. (Turnip). This species is becoming increasingly common, especially on the river bank at Pangbourne and on some of the islands (Mrs.Simmonds).

* Lepidium sativum L. (Garden Cress). One plant on disturbed ground, Heath Road, Tilehurst (J. Hodgson).

Lepidium heterophyllum Benth. Well established for several years on the R.D.C. Tip at Woodley (Mrs. Simmonds).

Lepidium heterophyllum ssp. smithii Hook. By the railway bank between Grove and Denchworth, Berks. (Dr. Bowen).

Coronopus didymus (L.) Sm. (Lesser Swine Cress). Appears to be increasing inland, and found at Woodley (Ham River Gravel Pits), Coleman's Moor Road, and at Reading (Mrs. Simmonds); waste ground in some quantity by the Bath Road, Calcot (J.Hodgson).

Iberis amara L. (Candytuft). Growing in masses forming a broad carpet covering the ground along the Upper Icknield Way, Aston Rowant, following clearing (Miss Nelmes).

Teesdalia nudicaulis (L.) R. Br. (Shepherd's Cress). Railway bank near Little Sandhurst (Mrs. P. Hawkins).

* Bunias orientalis L. Well established in chalk grassland in several places in Berkshire - e.g. Lollingdon Hill, near Challow and near A.E.R.E., Harwell (Dr. Bowen).

Erophila verna (L.) Chevall (Whitlow Grass). Abundant on gravel terrace at Swallowfield Park; nursery garden at Yattendon (Mrs. Simmonds).

* Rorippa austriaca (Crantz.) Bess. (Austrian Yellow Cress). Established for about twenty years in a paddock at Wallingford (Lady Severn).

Viola odorata L. (Sweet Violet). Plentiful at Swallowfield Park (Mrs. Simmonds); bank near Ashampstead Common (Miss Butler).

Viola riviniana Reichb. (Common Violet). Very abundant in woods at Bix, Oxon., late blooming on May 13th (Mrs. Simmonds).

Viola palustris palustris L. (Marsh Violet). Hundreds in bloom at Ufton Nervet (Mrs. Simmonds).

Polygala calcarea F. Schultz (Chalk Milkwort). Letcombe Castle (Mrs. Simmonds).

Hypericum androsaemum (L.) (Tutsan). A few isolated plants in Beale's Copse, Tilehurst and one large plant flowering at the Tilehurst end of Sulham Wood (J. Hodgson).

Hypericum humifusum L. (Trailing St. John's Wort). Several plants on a lawn in Warborough Avenue, Tilehurst; several plants with a single plant of Carex pilulifera L. in a leached woodland at Sulham Wood (J. Hodgson).

Silene noctiflora L. (Night-flowering Campion). Field near Streatley, Berks., a new record (Dr. Fishenden); seen again in a field at Goring (Dr. Gishenden).

Stellaria neglecta Weihe (Greater Chickweed). Shinfield Road, Reading (R.D.N.H.S. meeting).

Moenchia erecta (L.) Gaertn, Mey & Scherb. (Upright Chickweed). Recorded from three old localities - Padworth Common (Mrs. Simmonds); Finchampstead Ridges and Greenham Common (Dr. Bowen).

Sagina ciliata Fr. (Ciliate Pearlwort). Boxford Common; Steventon Churchyard (Dr. Bowen).

* Chenopodium bonus-henricus L. (Good King Henry). Nuffield, Oxon. (Mrs. Paul)

* Chenopodium hybridum L. (Sowbane). Mrs. Paul reports its complete absence from Henley Rubbish Tip, after an abundance there last year; three plants found by roadside at Marcham, Berks. (Mrs. Paul).

Chenopodium polyspermum L. (All-seed.) Growing with Chenopodium rubrum (Red Goosefoot) in an abandoned timberyard, Reading (Mrs. Simmonds).

Three casual species of Chenopodium were found by Mrs. Hodgson at Reading Tip and determined by Dr. J.P.M. Brenan. * C. berlandieri Moq., one plant; C. x variabile Aellen, abundant; * C. opulifolium Schrad. ex Koch & Ziz, two plants.

* Geranium endressii Gay. In wood near Nettlebed (Mr. A. Balfour).

* Impatiens capensis Meerb. (Orange Balsam). Spreading up the Loddon, and plentiful at Sandford Bridge and Sindlesham Mill (Mrs. Simmonds); spreading along the Thames and seen near Oxford, Culham, and Cholsey (Dr. Bowen).

* Impatiens parviflora DC. (Small Balsam). Nettlebed, Oxon. (Mrs. Paul).

Medicago arabica (L.) Huds. (Spotted Medick). Arable field, between Theale and Aldermaston (Mrs. Simmonds).

Trifolium subterraneum L. (Subterranean Trefoil). By the railway near Grove, Berks., with T. striatum L., on soil imported about a century ago (Dr. Bowen).

Trifolium fragiferum L. (Strawberry Clover). Salt meadow, Marcham, Berks, (Mrs. Simmonds).

Lathyrus nissolia L. (Grass Vetchling). A few plants on a chalk slope at Collins End (Mrs. Simmonds).

Potentilla argentea L. (Hoary Cinquefoil). Near Loddon Bridge, Woodley, about 25 plants (Mrs. W.E. Fulford). This is probably one of Druce's old records.

* Potentilla intermedia L. Naturalised in an old sandpit near Frilford, Berks. (Dr. Bowen).

Geum rivale L. (Water Avens). Kennet Meadows (Mrs. Simmonds).

Alchemilla vestita (Buser) Raunk. (Lady's Mantle). Woodland rise, near Ashdown Park (Dr. Bowen).

* Sanguisorba canadensis L. On steep slope overgrown with Bramble, Henley, Oxon. (Mrs. E. Hodgson).

Sorbus torminalis (L.) Crantz (Wild Service). The three trees observed some years ago in a hedge at Winnersh are flourishing and bore flowers and fruit this year (Mrs. Simmonds); Bottom Wood, near Hardwick (Mrs. Simmonds); wood, Long Lane, Tilehurst (Miss J. Watson).

Saxifraga tridactylites L. (Rue-leaved Saxifrage). Many plants on brick wall at Grazeley, an old record (Mrs. Simmonds).

Saxifrage granulata L. (Meadow Saxifrage). Very plentiful in Bucklebury Churchyard, and in hedge near Frilsham (Miss Butler).

Ribes nigrum L. (Black Currant). Several plants in a gulley, Wokefield Common (Mrs. Simmonds).

Peplis portula L. (Water Purslane). Abundant in damp ground at edge of Woodley Aerodrome, but habitat likely to be destroyed (Mrs. Simmonds).

* Epilobium adenocaulon Hausskn. Now widespread in South Berks. e.g. Boxford Common, Padworth (Dr. Bowen).

Myriophyllum alterniflorum DC. (Alternate-flowered Water Milfoil). South Lake, Woodley (Mrs. Simmonds).

Callitriche platycarpa Kütz. Much the commonest species in Berks., but confused with other species in the past (Dr. Bowen).

Torilis nodosa (L.) Gaertn. (Knotted Hedge Parsley). Several plants at Englefield Park, near the Lake (Mrs. Hodgson).

* Smyrnium olusatrum L. (Alexanders). Large patch at Bradfield (Miss Nelmes).

Apium graveolens L. (Wild Celery). Salt meadow, Marcham (Mrs. Simmonds).

Oenanthe lachenalii C.C. Gmel. (Parsley Water Dropwort). Salt meadow at Marcham (Mrs. Simmonds).

Foeniculum vulgare Mill. (Fennel). Many plants on railway siding near Reading West Station (Mrs. Hodgson).

Polygonum bistorta L. (Bistort). Shown to Mrs. Simmonds and The Recorder growing sparingly near the Thames at Winterbrook, near Wallingford, by Lady Severn, who has known it here for the last 25 years; by the Pang, Stanford Dingley.

* Rumex christatus DC. Well established, Reading Tip (Mrs. Hodgson).

Rumex crispus x cristatus One plant at Reading Tip (Mrs. Hodgson). Det. J.E. Lousley.

Rumex pulcher L. (Fiddle Dock). Frequent in Cholsey village (Dr. Bowen).

Rumex maritimus L. (Golden Dock). After disappearing last year, had appeared again at Ruscombe. (Mrs. Simmonds).

Betula pubescens Ehrh. (Birch). Aldermaston, and Wokefield Common (Mrs.Simmonds).

Carpinus betulus L. (Hornbeam) and Fagus sylvatica L. (Beech). Both flowered and fruited abundantly this year (Mrs. Simmonds).

Pyrola minor L. (Common Wintergreen). First recorded in 1952, still grows by Bush Wood, Newnham Hill (Miss Butler).

* Lysimachia punctata L. One plant well away from house on verge, Little Heath, Tilehurst (Mrs. Hodgson).

Anagallis arvensis ssp. arvensis L. The blue-flowered form was present on disturbed ground on the Thames-side Tip, Reading (J. Hodgson).

Blackstonia perfoliata (L.) Huds. (Yellow-wort). Grass chalkland near Streatley, Lollingdon Hill (Dr. Bowen).

Gentiana pneumonanthe L. (Marsh Gentian). Numbers on Hook Common have been decreasing in recent years, but this year have greatly increased, due probably to burning of heather and dwarf gorse, which were overcrowding the habitat.

Gentianella germanica Willd. (Börner) (Chiltern Gentian). Large patch at Bix Bottom, Oxon., and four plants at Rotherfield Greys (Mrs. Paul).

* Pulmonaria officinalis L. (Lungwort), and Myosotis sylvatica Hoffm. (Wood Forget-me-not), both growing in a wood at Woodcote (Miss Butler). Det. Dr. A.G. Erith.

Cuscuta europaea L. (Large Dodder). On Urtica dioica L. (Nettle) and other plants by the river at Goring (Dr. Fishendon); on Nettle near the Thames at Cholsey (Dr. Bowen).

Cuscuta epithymum (L.) (Common Dodder). On Potentilla erecta (L.) Räusch at Silchester, and on Ulex minor Roth at Hook Common (Mrs. Simmonds).

Atropa belladonna L. (Deadly Nightshade). Near Lambourn Church, Wantage Rubbish Tip, and Streatley Golf Course (Dr. Bowen).

Hyoscyamus niger L. (Henbane). By rabbit scrape at Ashdown Park (Dr. Bowen).

* Datura stramonium L. (Thornapple). Whiteknight's Park, Reading. (Mrs. V.A. Phillips).

Verbascum x semialbum (Chaub). This hybrid of V. nigrum L. and V. thapsus L. was found at Bix Bottom by Mrs. Simmonds, and an entirely different form of the hybrid is recorded by Mrs. Paul from Fingest, Bucks.

Veronica polita Fr. (Grey Speedwell). Arable field near Beedon (Mrs. Simmonds).

* Veronica filiformis sm. In Ashampstead Churchyard (Miss Nelmes).

Orobanche elatior Sutton (Tall Broomrape). Several plants, Nunhide Lane, Sulham (Mrs. Hodgson).

Mentha longifolia (L.) Huds. (Horse Mint). Waste ground, Theale (Mrs.Simmonds)

Calamintha ascendens Jord. (Common Calamint). Near Goring Station, Oxon., East Hagbourne, Berks. (Miss Butler).

Prunella lacinata (L.) L. (Cut-leaved Self-heal). A new record, Nuney Green, Oxon. (Mrs. Simmonds).

Galeopsis augustifolia Ehrh. ex Hoffm. (Narrow-leaved Hemp-Nettle). Two plants, Streatley Road, Wantage; two or three plants on disturbed ground on The Ridgeway (Mrs. Simmonds, who observes that the species seems to be getting uncommon).

Nepeta cataria L. (Cat-mint). Roadside near Marcham (Dr. Bowen).

Campanula rapunculoides L. (Creeping Campanula). On a piece of disturbed ground at Henley Grammar School, and not observed there in previous years (Mrs. Paul)

Campanula glomerata L. (Clustered Bellflower). Very plentiful on chalk, Berkshire Downs (Mrs. Simmonds).

Jasione montana L. (Sheep's bit). Railway bank, Lower Sandhurst, near Crowthorne (Mrs. Simmonds).

Galium tricornutum Dandy (Corn Bedstraw). A few plants near Wayland's Smithy, Uffington (Dr. Bowen).

* Galinsoga parviflora Cav. (Gallant Soldier). Troublesome weed in nursery garden, Hurst (Mrs. Simmonds).

* Galinsoga ciliata (Raf.) Blake. Persisting in farmyard at Harpsden, Oxon. (Mrs. Simmonds); abundant weed in Whiteknight's Park, Reading (Mrs. Phillips); two plants in ditch, Little Heath Road, Tilehurst (Mrs. Hodgson).

Senecio sylvaticus L. (Wood Groundsel) and Senecio viscosus L. (Stinking Groundsel), roadside weeds at Woodley (Mrs. Simmonds).

Doronicum pardalianches L. (Great Leopard's-bane). Peppard (Mr. Balfour).

Inula helenium L. (Elecampane). Roadside near Challow, Berks. (Dr. Bowen).

Pulicaria vulgaris Gaertn. (Small Fleabane). Has survived at Springwater Farm, Hants. Some plants have been transplanted in an effort to save the species from extermination in the locality (Mrs. Simmonds).

Cirsium dissectum (L.) Hill (Meadow Thistle). One plant only at Coleman's Moor (Mrs. Fulford).

Cirsium eriophorum (L.) Scop. (Woolly-headed Thistle). One plant on The Ridgeway, west of White Horse Hill (Mrs. Simmonds).

Gnaphalium sylvaticum L. (Wood Cudweed). Several plants on building site, Tilehurst (Mrs. Hodgson).

Artemisia absinthum L. (Wormwood). One plant on Reading Thames-side Tip (J.Hodgson)

Serratula tinctoria L. (Saw-wort). Several plants in the valley leading to the Aston Upthorpe Downs, Berks. (Mrs. Simmonds).

* Cicerbita macrophylla (Willd.) Wallr. (Blue Sow-Thistle). Roadside near Streatley (Dr. Bowen).

* Hieracium aurantiacum L. A beautiful patch on Hook Common (Mrs. Paul).

Potamogeton nodosus Poir. (Loddon Pondweed). First recorded by Prof. T. Harris in 1959, was seen again in the Loddon near Stanford End Mill, Riseley, by Miss Butler, and in the Loddon near "Land's End", Hurst, by Mrs. Simmonds. This species is easily recognised by its beautiful net-veined submerged leaves, which are quite different from those of any other British species.

Zannichellia palustris L. (Horned Pondweed). Didcot gravel pits; Hagbourn Moor, and near Marcham, Berks. (Dr. Bowen).

Ornithogalum umbellatum L. (Star of Bethlehem). Bank near Goring Station (Mrs. Simmonds); wood, Woodcote (Miss Butler).

Allium ursinum L. (Ramsons). A large colony in Botton Wood, near Hardwick (Mrs. Simmonds); Lynch Wood, Lambourne (Dr. Bowen, who comments that it is remarkably rare in Berkshire).

Paris quadrifolia L. (Herb Paris). Small oak wood near Baydon, Berks. (Dr. Bowen).

Juncus compressus Jacq. (Round-fruited Rush). Meadow near R. Ock, Charney Bassett (Dr. Bowen); on grassy banks round edge of Cranemoor Lake, Englefield (J. Hodgson).

Galanthus nivalis L. (Snowdrop). Many plants in Great House Wood, near Bradfield, Berks. (Miss Butler).

Narcissus pseudonarcissus L. (Wild Daffodil). Abundance of plants in wood near Beenham Church, and in wood along Ardlers Lane, near Bradfield (Mrs. Simmonds).

Crocus purpureus Weston (Purple Crocus). In its old locality at Inkpen, where it is likely to remain protected due to the efforts of the Berks., Bucks. and Oxon. Trust (Mrs. Simmonds).

Cephalanthera damasonium (Mill.) Druce (White Helleborine). Tomb Farm, Upper Basildon (Mrs. Simmonds).

Epipactis purpurata Sm. On bank, Ipsden Heath, and at Bix Bottom (Mrs. Paul).

Spiranthes spiralis (L.) Chevall. (Autumn Lady's Tresses). Still flourishing on lawn of Dr. N.B. Eales, Kingwood Common. At least 30 blooms seen on 6th September (Miss Butler).

Listera ovata(L.) R. Br. (Twayblade). In hundreds along the edge of Shirburn Wood, near Watlington, Oxon. (Miss Nelmes).

Neottia nidus-avis (L.) Rich. (Bird's Nest Orchid). Near Bix (Mrs. Simmonds); three plants in Howe Wood, near Cookley Green (Miss Nelmes).

Coeloglossum viride (L.) Hartm. (Frog Orchid). Nuffield Golf Course and Berkshire Downs (Mrs. Simmonds).

Orchis purpurea Huds. (Lady Orchid). This beautiful species, one of the finest of our native orchids and extremely rare outside Kent, has been found in Oxfordshire by Mr. Brian Kemp, and the following is his account of the discovery. "In May, 1961, my brother, Roger, and I discovered quite accidentally a solitary flowering plant of the rare species of wild Orchid, the Lady Orchid (Orchis purpurea). It was growing in an Oxfordshire wood, far away from its normal recorded habitats in Kent. Unfortunately, the spike of flowers was subsequently destroyed by some wild creature before an official identification could be made. This year, the site, which was shown to certain prominent botanists of this Society, was carefully watched from early in the year. Our anticipation was rewarded when the plant again burst into bloom in May. This year, no disaster befell the plant and the beautiful flowers could be seen over a period of five weeks. Dr. Warburg, Dr. Francis Rose and Mr. Summerhayes visited the plant and confirmed our identification. Many photographs have been taken, but the mystery of how and why this plant should suddenly appear in Oxfordshire has not yet been solved."

Scirpus maritimus L. (Sea Club-rush). Abundant round one end of the Lake, Englefield Park, Berks. (Mrs. Hodgson).

Blysmus compressus (L.) Panz. ex Link (Broad Blysmus). Hagbourn Moor, Berks. (Dr. Bowen).

Carex distans L. (Distant Sedge). Abundant on Hagbourn Moor (Dr. Bowen).

Carex lepidocarpa Tausch. Hagbourn Moor; near Marcham, Berks. (Dr. Bowen).

Carex pallescens L. (Pale Sedge). A few plants in a copse by Hall Place Farm, Tilehurst (J. Hodgson).

Carex pilulifera L. (Pill-headed Sedge). Stoke Row (Mrs. Simmonds).

Carex divulsa Stokes (Grey Sedge). Bottom Wood, near Hardwick (Mrs.Simmonds).

Carex polyphylla Kar. & Kir. (Many-leaved Grey Sedge). Stoke Row (Mrs.Simmonds).

Carex muricata L. (Prickly Sedge). Woodley (Mrs. Simmonds).

Carex curta Gooden (White Sedge). Finchampstead Ridges (Mrs. Simmonds).

Glyceria declinata Breb. Medmenham, Bucks. (Mrs. Paul).

Festulolium loliaceum (Huds.) P. Fourn. Medmenham, Bucks. (Mrs. Paul).

Vulpia myuros (L.) C.C. Gmel. (Rat's Tail Fescue). Old tennis court, South Moreton, Berks. (Dr. Bowen).

Catabrosa aquatica (L.) Beauv. (Water Whorl-grass). Hagbourn Moor; near Marcham (Dr. Bowen).

Brachypodium pinnatum (L.) Beauv. (Heath False-brome). The Ridgeway. Mrs. Simmonds reports that this is her first record from Berkshire; previous records have been from Oxon.

Hordelymus europaeus (L.) Harz. (Wood Barley). Ipsden Heath, Oxon. (Mrs. Paul)

Apera spica-venti (L.) Beauv. (Silky Apera). Hurst; near Little Sandhurst (Mrs. Simmonds).

Casuals at Reading Rubbish Tip (Mrs. Hodgson and J. Hodgson)

* Medicago Vaccaria pyrimidata L., two plants; * Hibiscus trionum L., one plant; * Amaranthus retroflexus L. (Pigweed), one plant; * Guizotia abyssinica (L. f.) Cass., several plants; * Centaurea diluta Aiton, several plants; * Lepidium sativum L. (Garden cress), several plants; * Coriandrum sativum L. (Coriander), several plants; * Nicandra physalodes (L.) Gaertn. (Apple of Peru), several plants; * Rapistrum rugosum (L.) All., several plants; * Fagopyrum esculentum Moench (Buck wheat), several plants; * Linum usitatissimum L. (Cultivated flax), many plants; * Lolium temulentum L. (Darnel), many plants; * Setaria italica (L.) Beauv. (Italian Millet), many plants; * Panicum miliaceum L. (Common Millet), many plants; * Phalaris canariensis L. (Canary grass), many plants; * Echinochloa cruxgalli (L.) (Cockspur), two plants; * Zea mays L. (Maize), two plants.

The Recorder wishes to thank all those who have made this Report possible.

Fungi at Kingwood Common

(Supplementary List)

At the Society's Foray on 13th October 1962, the following species, which have not figured in the lists for 1945-57, 1960 and 1961 published in nos. 12-14 of the Reading Naturalist, were found by members and identified by Dr. F. B. Hora.

Boletus rubellus (chrysenteron var. versicolor).

Flammulina (Collybia) velutipes

Inocybe asterospora - wrongly recorded in 1960 as I. asterophora

Psathyrella squamata

Tricholoma argyraceum

General Observations

Well Shrimps

On 11th June 1962, two species of the Crustacean genus, Niphargus, N. kochianus Bate and N. fontanus Bate, were found in a well, 35 ft. deep, in the chalk at Hackney Bottom, Hampstead Norris, Berks. One further species, N. aquilex Schiodte, was found in the gravel of the springs that feed the River Pang at Hampstead Norris station.

A. Price

Pseudoscorpiones of the Henley area

Mr. W.J. Eeles has been studying this group, consisting of small predatory arthropods about 5 mm. long, armed with poisonous fangs and crab-like claws, used by some species to cling to the legs of flies and so obtain free transport. He has taken the following species in some numbers from beech litter at Lambridge Wood, Henley:-

Neobisium muscorum (Leach)

Roncus lubricus L. Koch

Chthonius ischnocheles (Hermann)

Other records would be welcomed.

H. Carter

Vibrissae in the Mustelidae

The vibrissae or whiskers on the snouts and eyebrows of mammals are familiar to many people besides naturalists. They are best developed in nocturnal animals and probably help them to avoid obstacles and gauge the width of holes and runways. Less well known is the presence of vibrissae on the elbows, which doubtless serve a similar purpose.

These have been recorded, as far as I can discover, only in the Grey Squirrel and the Otter; I have recently found them in the Stoat and Weasel also. Badgers and Ferrets, despite their nocturnal and underground habits, appear not to have them. More observations need to be made on living or freshly dead animals of these and other species. Old skins frequently lose their vibrissae, though I have just examined an ancient Red Squirrel which shows them clearly.

H. Carter.

Tree-rafted chalk fragments from the London Clay

By S.H. Eagar, R. Goldring & W.A.S. Sarjeant

Pebbles and pebble-beds are of frequent occurrence in the London Clay, especially towards the inferred shoreline. The bulk of the pebbles are flints and, indeed, amongst the thousands of pebbles encountered in the Enborne Valley borings (Hawkins 1955), ten miles to the west of the site from which the specimens here to be considered originated, only one was of material other than flint - an ellipsoidal piece of sandstone of indeterminate origin. The pebbles seem to have been deposited either under wave or current action, especially towards the shoreline, or enclosed within rafted and subsequently waterlogged vegetation.

The specimens that form the subject of this paper were collected from the Upper beds of the London Clay, exposed at the Binfield Brick & Tile Company's pit at Bracknell (849.692) in the spring of 1962. They show numerous pebbles enclosed in what is probably the roots of an indeterminate tree, partially bored by Teredo (shipworm). The pebbles are of special interest because the majority are of chalk. Wood, chalk and flint pebbles were subsequently enclosed with a septarian nodule, and the chalk, being porous, was thoroughly indurated and as a result is now much harder than ordinary chalk. Flint pebbles attached to logs were recorded by Davis (1936) from a nearby pit.

The chalk fragments are cream in colour, angular and irregularly fractured. They range from small fragments to pebbles up to 10 cm. in diameter. Several have small borings on the surface, such as are typical of nodules in the Chalk Rock (Santonian). Flecks of pyrite are distributed through the pebbles. A sample of the chalk was dissolved in hydrochloric acid and the pyrite proved to be secondary infillings of roots, showing that the chalk was once so soft that roots would penetrate it. In a thin section under the microscope, the rock shows large numbers of 'spheres', possibly Oligostegina.(1) Also present are occasional foraminifera, including the biserial form and bicarinate Globotruncana sp. The latter suggests an origin in the Upper Chalk (Lower Campanian ?), which agrees with the associated flints. Occasional fragments of the oyster, Inoceramus, are also present, but virtually no other larger shells. A small sample has been prepared for microplankton study by dissolving the sample first in hydrochloric acid and then in hydrofluoric acid. Work on this is still in progress, but preliminary results show that, although the concentration of dinoflagellates and hystrichospheres(2) is

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(1) Oligosteginae are extremely minute calcareous spheroids, resembling oolites, which have been found in Cretaceous limestones. They are considered by some to be Foraminifera.

(2) Hystrichospherids are microscopic spherical to subspherical bodies, with a well-developed chitinous wall and highly ornamental spines radiating from the central capsule; many forms exhibit a highly reticulate outer surface. They closely resemble the dino-flagellates, with which they may be genetically affiliated. Together with Oligostegina, the Hystrichospherids are microfossils whose biological affinities are uncertain.

proportionately very low, the nature of the assemblage indicates an Upper Cretaceous age. Genera represented include Hystrichosphaeridium, Baltisphaeridium, Cymatiosphaeia, Systematophara and Gymnodinium. Representatives of Hystrichosphaeridium include H. truncigerum, which has not previously been recorded from Britain.

Where have the pebbles come from? The answer to this should be found in the form and fauna of the pebbles. The presence of crypts suggests an origin in a rock band, but the presence of the roots suggests soft chalk.

References

Davis, A. Proceedings of the Geologists Association. 1936.
Hawkins, H.L. Quarterly Journal of the Geological Society 1955.
Jones, D.J. Introduction to Microfossils

Notes of the Micro-Lepidoptera of the Reading District

By H.L. Dolton.

For rearing Micro-Lepidoptera, home-made apparatus of all kinds is always better, and often much cheaper, than purchased articles. Receptacles such as 2 lb jam jars are very useful for rearing larvae, but the sun should not be allowed to shine on them and cause condensation; one's own experience is the best guide to success here. Glass-topped tin boxes of all sizes can be used for ova and young larvae. By far the best material I have found for covering the jam jars or other receptacles is pieces of nylon stocking. Larvae must not be overcrowded, and the food-plant should not be too wet or damp when given to them or mould will develop and kill them. As material in which to pupate, peat (which may be purchased at Woolworth's), sand and leaves mixed in even proportions will suit most larva. A wooden tray, 3 in. deep, filled with the peat-and-sand mixture must be put in the bottom of the larval rearing cage. If it is intended to leave the pupae in the tray until the imagos emerge, some pieces of twig must be put in for them to crawl up in order to dry their wings. Nature should be imitated as nearly as possible, and full notes made of any species one is trying to rear.

When collecting in any locality, it is useful to make a note in a small book kept for the purpose of the names of plants and trees, etc., so that, if they are needed in the future, one knows just where to find them. When any rare plant or shrub is noticed, a special search should be made for any ova or larvae on it. Remember that Entomology, Botany and Geology run together: if keeping a small stock of food-plants in the garden(1), the kind of soil they are taken from should be noted before replanting.

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(1) While commending the devotion of the entomologist who wishes to grow a stock of food-plants for his charges, we must point out that all but four counties in England and five in Wales have by-laws prohibiting the uprooting, without lawful authority, of plants in any place to which the public may have access.

When mounting specimens, whether caught or bred, each must be fully labelled with date and locality, and with a small round extra label bearing the name of the food-plant. If an index-card system or note-book catalogue of mounted specimens is kept, a note of the size of the setting-block and size and colour of the pin used put opposite the name of each species will enable the row of specimens of each species to be kept at the same height on the pin and make for uniformity in the collection.

In concluding these few notes, I would like to say that Entomology as a study makes one satisfied with one's lot and is free to all. If I can help any young student who takes it up, I shall be very pleased to do so.

Spiders of a Reading Garden

By H. Carter

INTRODUCTORY

It is perhaps understandable that spiders as a group should have few adherents among field naturalists. With some notable exceptions, the British species are small and unobtrusively coloured. Worse than this, the very sight of them arouses a positive physical repulsion in some people. The would-be collector may be put off by finding that his specimens must be preserved in fluid, with due precautions against drying up, and identified with the aid of a microscope with which he must determine the position of a nearly invisible hair on the front metatarsus. But this is no concern of the field naturalist, and I hope to show that enough of the commoner species can be identified in the field to make their study of interest.

I have deliberately confined my account (apart from a series of records) to the species which I have found in my own garden, a rather uninviting patch of weeds and gravel 40' long by 25' across with a rich fauna of blight, sparrows and small children, in the hope of encouraging other naturalists similarly situated.

THE STUDY OF SPIDERS IN THE FIELD

Finding spiders is easy (some spiders!) Any hundred yards of hedge from April to October will reveal the webs of at least four species, and as often as not the owner will be in full view in the middle of the web. If not, it is a simple matter to find the guide line and trace it to the spider's retreat, often a curled leaf. Many web-makers prefer less open habitats and must be sought in sheds, garages and unswept corners of the house (if any). Hunting spiders, which make no webs, dart nimbly over open soil or piles of dead leaves. Others lie in wait on the leaves and flowers of plants. The sweep-net and beating-tray will always yield a harvest, but such specimens are divorced from their true context. As a last resort, loose bark, coarse tufts of grass, flat stones and other hiding places may be explored.

Field identification of a rapidly retreating spider is far from easy, and it is necessary, at least until one knows what to expect, to capture the specimens and

identify them in the hand. A drop of ether under a box lid will rapidly immobilise any spider, and if it is removed to fresh air as soon as it succumbs, it will remain motionless for as long as is needful, and subsequently recover. Once able to identify one's finds with confidence, one may proceed to study the numbers, distribution, habits and sex ratios of the various species, remembering that they are likely to vary from year to year and from season to season. Where numbers are concerned, the observer who has become familiar with a habitat in fine weather can prepare himself for a revelation on a still, foggy or rainy morning. Every web is picked out with water drops, and although not a single spider may be visible the vastness of their numbers comes as a shock. Among such a multitude of snares it is a mystery how any winged insect survives. The sex of all but the minutest spiders can be distinguished in the field by looking at its palps. In the female they resemble a pair of miniature legs on each side of the mouth. In the male they are similar but shorter and clubbed, as if wearing boxing gloves, even in immature specimens.

SYSTEMATIC LIST OF SPIDERS TAKEN IN BERKS., OXON. AND READING

For the record, I have included all the species I have taken in the above area. Unless otherwise stated, the locality is my garden in Caversham, and the species is usually then dealt with at further length in the next section.

Dictynidae

Ciniflo similas Blackwall	Caversham Mill; Pincent's Kiln. Under willow and oak bark.

Dysderidae

Dysdera crocota C.L. Koch	Hill's Meadow, in ivy ; Jackson's Lane, in pitfall trap.
Segestria senoculata (L.)	Caversham Mill, under willow bark.

Gnaphosidae

Herpyllus blackwalli (Thorell)	In my bath.

Clubionidae

Clubiona corticalis (Walckenaer)	Caversham Mill, under bark of felled willow
pallidula (Clerck)	Caversham Mill, under bark of felled willow
phragmitis C.L. Koch	Caversham Mill, under bark of felled willow
lutescens Westring	Chiltern Lane, Caversham
compta C.L. Koch	Caversham Mill
subtilis L. Koch	Chiltern Lane, Caversham

Thomisidae

Misumena vatia (Clerck)	Brought to Reading Museum from Woodley.
Xysticus cristatus (Clerck)	Cransford House, Moulsford
Philodromus dispar Walckenaer	Chiltern Lane, Caversham
aureolus (Clerck)	
Tibellus oblongus (Walckenaer)	Langdon Hill, Berkshire Downs

Salticidae

Salticus scenicus (Clerck)	
Heliophanus cupreus (Walckenaer)	Kingsmere, per Mr. A. Price.
Marpissa muscosa (Clerck)	
Sitticus pubescens (F.)	Museum store, Gun Street, Reading

Lycosidae

Lycosa pullata (Clerck)	Deane's Bottom, Berkshire Downs
L. amentata (Clerck)	
L. lugubris (Walckenaer)	College Wood; Greathouse Wood. Among dead leav
L. hortensis Thorell	Pincent's Kiln.
Tarentula pulverulenta (Clerck)	Chiltern Lane, Caversham, on path
Trochosa ruricola (Degeer)	
Pirata piraticus (Clerck)	Fish Pond, Wokefield; Colemansmoor. Near and under water

Pisauridae

Pisaura mirabilis (Clerck)	

Agelenidae

Argyroneta aquatica (Clerck)	River Pang, Bradfield, under water
Agelena labyrinthica (Clerck)	Kingwood Common, on gorse (sight record)
Tegenaria atrica C.L. Koch	
domestica (Clerck)	

Theridiidae

Steatoda bipunctata (L.)	
Theridion sisyphium (Clerck)	Chiltern Lane, Caversham; Burghfield Common. On bushes.
pictum (Walckenaer)	St. Laurence's Churchyard; Caversham Mill. On railings.
denticulatum (Walckenaer)	Shire Hall, Abingdon, in window frame
ovatum (Clerck)	
bimaculatum (L.)	

Tetragnathidae

Pachygnatha clercki Sundervall	Cow Lane, Reading
Tetragnatha obtusa C.L. Koch	Caversham Mill, under bark of felled willow
montana Simon	Chiltern Lane, Caversham

Argiopidae

Meta segmentata (Clerck)	
Araneus diadematus Clerck	
quadratus Clerck	Caversham Mill, orb web on rank riverside vegetation
cornutus Clerck	Cow Lane, Reading; Manor Farm, on door.

sclopetarius Clerck	Caversham Hill; Wallingford. Orb webs on bridges.
umbraticus Clerck	
redii (Scopoli)	Hogtrough Bottom, Berks. Downs, among coarse grass.
cucurbitinus Clerck	English Lane, Stoke Row; Tadley Common. Orb web on low bush

Zygiella x-notata (Clerck)

Linyphiidae

Gongylidium rufipes (Sundevall)
Erigone dentipalpis (Wider)
Meioneta rurestris (C.L. Koch)
Bathyphantes concolor (Wider)
gracilis (Blackwall)
Drapetisca socialis (Sundevall) Berkshire.
Lepthyphantes nebulosus (Sundevall)
leprosus (Ohlert)
Linyphia triangularis (Clerck)
peltata (Wider) Caversham, airborne, retrieved from my jacket.

FIELD CHARACTERS AND HABITS

Thomisidae - Flower Spiders

The members of this family tend to have a rather crab-like appearance, partly due to the fact that their 1st and 4th pairs of legs are not as long as the 2nd and 3rd pairs (the reverse being the case in most spiders), but accentuated by their posture. This is particularly true of the Crab Spiders (sub-family Misumeninae) which are given to walking sideways in typical crab fashion. These sit motionless on leaves and flowers awaiting victims, and are often white or pale green. The sub-family Philodrominae are more active in habit and less crab-like; they are found running among litter and coarse vegetation.

Philodromus aureolus is the commonest species locally, a squat, rusty brown spider up to 5 mm. long when mature. In the sweep net it folds its legs closely to its body and easily escapes notice.

Salticidae - Jumping Spiders

These are small to medium-sized black and white spiders, short-legged and square-fronted with conspicuously large eyes. They are easily recognised in the field by their ability to execute a long jump of several inches to seize prey or escape danger.

Salticus scenicus, the Zebra spider, is easily the commonest of the family, 5 to 7 mm. long with 3 conspicuous oblique white bars across the abdomen. It has a fondness for vertical surfaces exposed to strong sunlight, such as walls and fences.

Marpissa muscosa is colonial but definitely uncommon, and it was a red-letter day when I surprised one under a sheet of corrugated iron. Loose bark is a more usual habitat for this spider, which grows to 8 mm. long and looks like a de luxe edition of the preceding species.

Lycosidae - Wolf Spiders

The members of this family make no webs but capture their prey by speed and agility. They are seen running over bare ground or among dead leaves and sparse vegetation. Their legs are long, but this is seldom noticeable in life as they are kept closely bunched together. All are dark brown, nearly black, with vague paler markings.

In late summer and early autumn the females are seen carrying their silken egg cocoons attached to the spinners at the hinder end of the body.

Lycosa amentata is the commonest, but is not distinguishable in the field from others of the genus. Even under the microscope they are hard to distinguish. All have a similar outline, with the abdomen oblong and rather small. A broad pale stripe, sometimes picked out with white hairs, runs from eyes to waist, and the abdomen bears a series of light and dark V-shaped bars, points foremost. Their lengths vary between 4 and 6 mm. but may reach 8 mm. in a large L. amentata.

Trochosa ruricola and its congeners are larger, ranging from 8 to 15 mm. Like the Lycosae, they are very similar to one another even under the microscope. Their habits are much like those of the preceding genus, but the abdomen is larger and less oblong.

Pisauridae

This family has two British members, one very common.

Pisaura mirabilis is an unusual-looking spider with a long tapering abdomen marked with converging dark and light stripes. It sits in wait for insects on low plants, especially nettles, holding its two long front pairs of legs extended forwards in V-formation. The female carries her egg cocoon under her body, holding herself well off the ground on her long legs as she runs. At a later stage she constructs a silken tent within which the young hatch. For a while she keeps guard over them, and finally tears a hole in the tent through which they escape. This species grows to a length of 13 mm.

Agelenidae - Cobweb Spiders

Apart from the quite untypical Water Spider, Argyroneta, the members of the family most often met with are found inside buildings, but as some of them inhabit my coal shed and garage I have no scruples about including them among the fauna of my garden.

They are ungainly creatures with a clumsy, lolloping gait, their long hairy legs spraddled out around bloated oval bodies, with spinners projecting conspicuously at the rear. These are the builders of the familiar cobweb attached to a silken tubular retreat. (Some other families., e.g. Clubionidae, make rather similar webs.)

Tegenaria atrica, which may be 15 mm. long, is one of the commonest of the Agelenidae. This is the hairy monster which leers at the timid housewife over the edge of the bath, or, flushed from the coal scuttle, makes a wild dash (about 2 m.p.h.) for sanctuary under the sofa.

Tegenaria domestica is also common and very similar in appearance, but only two-thirds the size. I have received a male which was caught by Mr. J. Eeles at Henley while carrying off in its jaws a piece of some fish intended for the cat's supper. This lies outside the normally recorded feeding habits of spiders, but another house spider, Herpyllus blackwalli, has a reputation for attacking dead insects on setting boards (see Bristowe, A Book of Spiders, King Penguin 1947, p.14).

Theridiidae

This family shows a wide diversity of habits and habitats. Like many other spiders, its members have long slender legs and a globular abdomen; many are also conspicuously patterned and coloured. The usual type of web is an open meshwork of apparently aimless strands suspended in a bush or fence to catch flying insects.

Another common type is that constructed by the following species.

Steatoda bipunctata favours dark and dingy sheltered localities, such as my garage, and is, moreover, nocturnal, so that, although common enough, it is seldom seen unless it is looked for. Its general colour is a dark sooty brown with a characteristic greasy or waxy sheen, with patches of a paler colour, referred to in the textbooks as coffee, but to my eye rather resembling the appearance of old frying-pan fat after someone has burnt the bacon. There is also a white line down the back and another round the front edge of the abdomen. The spider makes a silk-lined retreat in a secure crevice, from which triplines radiate irregularly to form a loose cobweb.

Theridion ovatum, the commonest of its genus, spins a tangle web typical of the family, but readily deserts it at the least disturbance and is therefore most often found in a sweep net or on long grass. It varies in colour, but the background is normally a greenish white. The usual pattern is a double row of black dots, but a common variety has two crimson stripes along the back.

Argiopidae

These are the spinners of the familiar cartwheel or orb webs which span open spaces between the branches of trees and hedges. Often the web is destroyed after the ravages of a day's use and a new one constructed overnight, for the tension of the radiating strands is too delicately balanced to allow of makeshift repairs on any extensive scale. The owner spends much of its time in the centre of the web, but from this point there is usually a guide line to a convenient retreat, often in a curled leaf. The pattern of the web affords a clue to the identity of its maker.

Meta segmentata is common but tends to be concentrated in colonies of about five or six individuals. The plane of the web is often sloping, and when it is not so the guide line almost always remains some 15° from the vertical. The body markings vary in colour through shades of pink, orange, green and grey, but are constant in form. The abdomen is pear-shaped, rounded in front and tapering behind, and bears a band of deeper colour which is wide in front, narrows abruptly in the middle and then tapers more gradually backwards.

Araneus diadematus, the Garden Spider, also varies in colour from rusty yellow through foxy brown (the commonest) to a frosted grey-black with no hint of red in it. On the back is a cross formed by two broken white bars, set on a darker stripe. The newly hatched spider is bright yellow with a black triangle at the hind end, the apex pointing backwards, and attains the adult pattern gradually by successive moults. The web is built across an open space, and when a guide line is present it lies close to the plane of the web, seldom more than 10° away. Young spiders, and many full-grown ones, dispense with it, but half-grown individuals generally have one. The spider sits head downwards in the centre of the web, unless it has a guide line and retreat, with its ventral surface towards the most exposed aspect, from which flying prey is most likely to arrive. Usually this is towards the observer. Small specimens drop from the web if disturbed, but the large ones can be poked vigorously without showing any response. Presumably they have some effective defence against predators. Those of middle size may react by vibrating the web and so dissolving into a formless blur. A large female may be 15 mm. long; males are much less.

Araneus umbraticus is a dark brown, flattened spider, bearing a tapering black dorsal stripe with a broken white edging on either side. Older specimens usually hide by day under loose bark or elsewhere. It is often found near water, but recently I have met with several on Caversham Hill. Its maximum size is a little less than in A. diadematus.

Zygiella x-notata is a smaller species; the textbook maximum is 6.5 mm. but females up to 8 mm. are common in Caversham. The abdomen is oval in outline, and the dorsal stripe is similar, with a dark outline and paler centre marked with two dark blotches in the front corners. The spiral portion of the web frequently has a sector missing, and the guide line then runs immediately behind the gap. The books represent this as being the invariable pattern of a Zygiella web, but this is not the case. At the end of September 1962 I examined all the webs I could find of this species up to a total of 74; 32 were as described above, 20 had only a few turns missing from the innermost part of the sector, and 22 formed an unbroken cartwheel. In contrast to A. diadematus, Z. x-notata frequently spins its web against a flat background; for example, it often makes use of the corner of a door or window frame. In such a situation the web is of open-sector or intermediate type. The unbroken orb is more often found in a hedge where there is room behind the web to lead the guide line back at a wide angle, sometimes even to a point below the centre, a feature I have never noted in any other orb web of any species. Its maker is generally a mature female, and earlier in the year, when immature spiders are in the majority, a count might give different results. ¥ Z. x-notata spends most of its time in its retreat; is the missing sector an adaptation to ensure that the guide line is unobstructed when it has to be placed close to the web? This spider is a most successful one if numbers are any guide; it is by far the commonest of the orb weavers in this district.

Linyphiidae - Gossamer Spiders

These are all small, mostly under 4 mm., occasionally as little as 1 mm. in length. They spin sheet webs on grass and bushes, the "Fairy Beds" of the local children. Some have the habit of becoming airborne on a long thread as a quick and easy method of dispersal, and if their haphazard course leads them to a landing

¥ Corresponding figures for the same area on 31/7/63 were 44: 10: 29:

on a human body they are hailed as "Money Spiders." Most of them are dark grey or black, varied with chestnut brown, and they are too small and too much alike to be identified with confidence in the field. There is one common exception, however. This is Linyphia triangularis, 5 - 6 mm. long and even commoner than Z. x-notata. This species has a black dorsal stripe and white stripes along the sides. The black and white areas meet and interlock in an irregular saw-tooth pattern. The sheet web is supported from above by a tangle of near-vertical threads resembling the web of a Theridion, and the spider rests back downwards on the unobstructed underside of the sheet. The males differ conspicuously from the females in possessing a long narrow abdomen and elongated jaws. They can be seen on the edge of the females' webs sending out recognition signals by a jerking movement of the abdomen which no doubt sets up a vibration in the web which the female can recognise as not originating from a captured insect. Having thus established their identity, the males may continue to live with the females on the same web for a considerable time. I have no observations on sharing or otherwise of prey in such circumstances.

FURTHER STUDY

Excellent accounts of the habits and ecology of spiders are to be found in Bristowe's two books, "The Comity of Spiders" and "The World of Spiders". Locket & Millidge's two volumes on "British Spiders", a Ray Society publication, are invaluable for identification.

Wild Flowers in Town

By A.M. Simmonds

Nature is said to abhor a vacuum. She also appears to dislike vacant patches of soil, for the smallest area of disturbed ground is soon colonised by a variety of plants. Narrow ledges on buildings, crevices in old walls and brickwork, and spaces between fences and paving will provide a matrix for the germination and eventual growth of stray seeds.

Many of these urban wild plants are weeds of cultivation and are always associated with man's activities. Some, such as Senecio vulgaris L. (Groundsel), Stellaria media (L.) Vill. (Chickweed) and Taraxacum officinale Weber (Dandelion), have been with us so long that they may have the status of natives. There are others which have been introduced in more recent times, and although they have become successful colonists, are still regarded as aliens.

One of the commonest of these is the Oxford Ragwort, which, despite its unfortunate botanical designation, Senecio squalidus L., is a quite attractive plant. Its profuse shining green leaves and bright yellow daisy-like flowers shine out from many a dull corner. It abounds in waste places, and is one of the first plants to appear on bare ground in Reading. Its liking for railway-banks and sidings is due to the fact that its native home is the volcanic slopes of Etna and Vesuvius, where it is known as Erva de S. Petro (St.Peter's Herb). It is an un-

common plant abroad, and here, in Britain, it is essentially a town plant, seldom being found in rural situations, unless there is a railway near. It has spread from Oxford, where it was introduced into the Botanic Gardens in the late 17th century, travelling by rail (its seeds being carried in the coaches) to many parts of the British Isles. Even so, it was considered a rare plant as late as 1927. During the Second World War the species increased rapidly, for the bombed and burnt sites in towns and cities were an ideal habitat for it. S. squalidus usually begins to flower in March, and after reaching its zenith in late spring continues to bloom intermittently until as late as November. Although usually an annual, it will sometimes develop a woody stock and persist for two or three years. A succession of seedlings are produced throughout the summer months, and these overwinter quite happily to flower the next year.

Another member of the Composite family which seems to have invaded our town this century is Conyza canadensis (L.) Cronq. (Canadian Erigeron), formerly Erigeron canadensis L. Although it was first recorded in Britain in 1690, having come in via Europe, there is no mention of its local occurrence here in the small local Flora published by our Society in 1900. C. canadensis is far from attractive with its spike of numerous small whitish flower-heads, followed by a profusion of seeds, each with its tiny parachute of pappus hairs. Fortunately, only a small percentage of these seeds germinates. This species often occurs as a garden weed, and its similarity in its pre-flowering state to the cultivated species of Solidago (Golden Rod) may account for the plants not being uprooted.

Galinsoga parviflora Cav. (Kew Weed or Gallant Soldier) is a more recent settler in Britain, the first record of its occurrence outside Kew Gardens being in 1861. It has become a persistent weed in local plant nurseries and, with its very similar relative G. ciliata (Raf.) Blake (Shaggy Soldier), is distributed into gardens with bedding-plants. Both species are annuals with small white composite flowers of about five ray florets, and rather nettle-like leaves.

Solanum nigrum L. (Black Nightshade) with its small white flowers similar to those of the potato, to which it is closely related, is a common weed in garden and waste ground. It bears clusters of dull black fruits about the size of small black-currants; these fruits are poisonous and the plants should not be left in gardens frequented by small children.

That terribly persistent weed, Aegopodium podagraria L. (Ground Elder, Goutweed, Bishopsweed), is thought to have been cultivated as a pot-herb in the Middle Ages. It is said to have a tart flavour and to be less dull than spinach! Geoffrey Grigson says it makes spicy and tolerable eating. Although considered an introduction and usually found as a garden or ruderal weed, it may be a native, since it is found in parts of Europe as a constituent of the ground-flora of deciduous forests.

Polygonum cuspidatum Sieb. & Zucc. (Japanese Knotweed) and P. sachalinense F. Schmidt (Giant Knotweed) are two large members of the family Polygonaceae which have escaped from gardens and established themselves in various waste places. They are very similar, being tall coarse plants with panicles of greenish white flowers.

Mercurialis annua L. (Annual Mercury), similar to M. perennis L. (Dog's Mercury), is another urban weed. It has green flowers and is dioecious. It was noticeably abundant in a neglected garden in Southampton Street in 1961.

The abandonment of several timber yards in recent years has created new habitats and a numerous weed-flora has resulted. In one such, 80 species were recorded. In addition to some of the species already mentioned, there were many truly wild flowers, including about a dozen healthy plants of Silene dioica (L.) Clairv. (Red Campion), an uncommon plant locally. As it is often a woodland plant the seeds must have been carried in with timber. Chenopodium polyspermum L. (All-seed) and C. rubrum L. (Red Goosefoot) were present, though only sparingly.

Cymbalaria muralis Gaertn. Mey & Scherb. (Ivy-leaved Toadflax, "Mother-of-Thousands"), a Mediterranean plant introduced into gardens in the 17th century, had escaped as early as 1640. It establishes itself on old walls where there is little or no competition. With its small purplish "toadflax" flowers it is a dainty plant, and has the engaging habit of neatly depositing its seeds in the crevices of its home. Among the many places in Reading where it can be seen are the environs of the Abbey Ruins, the ancient walls of which were once the home of many interesting plants. The stripping from the walls of their mantle of ivy and consequent cleaning up has resulted in a serious decrease in number of plants and some species have disappeared. A few plants of Centranthus ruber (L.) DC. (Red Valerian) and even fewer of Antirrhinum majus L. (Snapdragon) remain. Cheiranthus cheiri L. (Wallflower) is at present maintaining its status on a part which has not been so ruthlessly denuded of ivy, but elsewhere it has almost disappeared. In the nearby Chestnut Walk a few small plants of Anthriscus caucalis Bieb. (Burr Chervil) struggle bravely for a precarious existence. This uncommon Umbellifer was known there in 1900.

Chrysanthemum parthenium (L.) Bernh. (Feverfew) grows nearby and also in some quantity under the adjacent wall of the prison near the rose-garden. This is an old physic herb surviving in hedges, on old walls, and in garden corners. Gerard knew it in similar situations.

Pteridium aquilinum (L.) Kuhn (Bracken) is a plant of the wild which turns up in town. There is a considerable stand in the corner of Ridley's old timber yard adjacent to the Holy Brook in Abbey Street, but the odd plant appears in the most unexpected places. For many years there was a little tuft growing over the doorway of a building (now being demolished) in Broad Street. There is another high up in a corner of the backyard of the Town Hall. In such situations this fern assumes a somewhat trailing habit.

Geranium pratense L. (Meadow Cranesbill) with its large blue flowers may be seen growing at the south end of Vastern Road, on top of the high retaining wall which runs from the Southern Railway bridge back to Forbury Road.

With the prospect of an airstrip soon to be within the Borough (at Little John's Farm), who knows what new species may travel by aeroplane and establish themselves to be added to future lists of our town's wild flowers!

Ref. The Englishman's Flora. Geoffrey Grigson.

SURVEY OF FUNGI AT "LITTLE HUNGERFORD" AND "SOUTHLAKE" AREA, EARLEY, near READING, 1960-61

Compiled by Emile C. Hemken

With acknowledgements to Dr. F.B. Hora and members of the R. & D. N.H.S. for their assistance.

The area lies due north of Earley Station. It is marked "Little Hungerford" on the Ordnance Survey Map and the Map Reference is: Grid 75-76 east, 72-73 north. It is a private estate covering about 150 acres, including South Lake, which is approximately 650 yards long and 150 yards wide and is probably an old gravel pit. The lake is shallow and the bottom is muddy and overgrown with aquatic vegetation, including a fairly large bed of waterlilies. The rest of the ground is sandy gravel covered with a thick layer of loam and in many places it is very damp. The vegetation is mainly mixed woodland consisting of Birch, Beech, Oak, some Chestnut, Conifers of various kinds and a large expanse of Rhodendron, Heather and Bracken. There are some very fine specimens of nearly all these trees, but a lot is scrub, dense self-seeded growth of Beech and Birch, and a lot of dead timber lies about everywhere. It is therefore an ideal habitat for fungi.

I first received permission to visit the place from the owner, Mr. Ben Clark, about three years ago in order to take photographs of birds and animals. I erected several hides for the purpose but the results were rather disappointing. The hides kept being destroyed wantonly by hooligans, and the nest boxes torn down, and in the summer of 1960, struck by the abundance of fungi everywhere, I transferred my attention chiefly to them. Since fungi are not perpetually scared off by the slightest movement by myself or a bit of glass pointing at them, this fresh activity fitted in well with my unofficial capacity of gamekeeper and path cutter, and released me from the discouraging task of having for ever to erect new hides.

On October 21st 1961 I was privileged to have the company of five members of the Reading and District Natural History Society, amongst them Dr. F.B. Hora. Despite rather foul weather, a large variety of fungi were collected and later sorted and identified by Dr. Hora, and I would like to take this opportunity of thanking him for his invaluable assistance on that day and ever since whenever I have asked him for his advice or opinion. It is due to his help that I pluck up enough courage to submit this account and list the specimens so far collected and recorded with sufficient faith in their correct identification. One or two have not yet been positively identified; these are marked with a "?" in the list.

I have tried to take colour photographs wherever possible in the natural habitat. In some cases this was not practicable and photographs were taken at home "on the bench". Some species have missed having their portraits recorded but I intend to rectify this whenever an opportunity occurs. After my short experience in this work I am left wondering if it would not be advisable to have both natural habitat and bench photographs of all of them. I think this might make identification more certain and I would like to have views on this.

For those who are interested I would like to add that many of the photographs were taken on Ferrania Reversal Colour Film and home processed. This is a very cheap way to produce colour transparencies and not at all difficult and I shall be glad to give particulars to anyone who wants to try.

The area surveyed is being "developed". In two or three years time there will be rows of houses and eleven-storey flats.

I would very much like to supplement my survey in the short time left to do it and if anyone is interested I should be very grateful for any help. There are other things than fungi, of course. Entomologists, botanists and ornithologists will find interesting subjects and there are to my knowledge foxes, badgers and other small mammals. Some permanent hides and collapsible hides are available and others could be put up with the necessary help. I can accommodate one or two persons at short notice, for larger parties I have to get permission first. I am usually there on Saturday afternoons and all day on Sundays and I can be contacted at Audley House, Station Road, Earley (next to the Railway Station) or during office hours by telephone: Reading 50330.

Fungi at "Little Hungerford" and "Southlake", 1960-62

c = coloured photographs (24 x 36 mm transparencies)
b = black and white photographs (enlargements + half plate)
H = identified by Dr. Hora

Amanita	citrina (mappa)	cbH
	c. var. alba	cbH
	muscaria	cbH
	rubescens	c H
	porphyria	
Amanitopsis	fulva	c H
	vaginata	c
Boletus	aurantiacus	cbH
	badius	cbH
	b. var. spadiceus	
	bovinus	cb
	chrysenteron	H
	duriusculus	c H
	edulis	cbH
	elegans	c
	erythropus	c H
	felleus	
	luteus	H
	scaber	c H
	subtomentosus	
	testaceoscaber	c H
	variegatus	c H
Calocera	cornea	c
	viscosa	c H
Cantharellus	aurantiacus	cbH
	(Clitocybe aurantiaca)	
	a. var. pallidus	c
	(Clitocybe a. var. pallida)	
	tubaeformis	
	umbonatus	c
Clavaria	cinerea	H
	fistulosa	c
	inaequalis	c
Clitocybe	aurantiaca	cbH
	(Cantharellus aurantiacus)	
	a. var. pallida	c
	(Cantharellus a. var. pallidus	
	clavipes	H
	dealbata	b
	flaccida	c H
	vibecina	bH
	sp. (brumalis ?)	
Collybia	cirrhata	H
	erythropus	c H
	fusipes	H
	maculata	c H
	radicata	c

Coprinus atramentarius		c
	micaceus	H
	plicatilis	c H
Cortinarius	cinnamomeus	cbH
	hemitrichus	H
	largus	c
	pholideus	
	semisanguineus	c H
	sp. (torvus ?)	
Crepidotus	variabilis	c
Cyathus	olla	b
Daldinea concentrica		b
Fistulina	hepatica	c
Flammula	penetrans	bH
Hebeloma crustuliniforme		H
	mesophaeum	H
Hydnum sp.		
Hygrophorus	coccineus	H
	hypothejus	c
	laetus	H
	miniatus	
Hypholoma	fasciculare	cbH
Hypomyces chrysospermum		H
Laccaria	amethystina	
	laccata	c H
Lactarius	blennius	H
	glyciosmus	H
	hepaticus	H
	plumbeus (turpis)	c H
	rufus	cbH
	tabidus	H
	vietus	c H
Lenzites	betulina	cbH
Lycoperdon	echinatum	b
Marasmius	androsaceus	c H
	confluens	H
	oreades	b
	peronatus	c H
	scorodonius	
Mycena	aetites	c
	avanacea	cb
	epipterygia	H
	galericulata	H
	galopus	H
	inclinata	b
Nectria	cinnabarina	b
Nolanea	cetrata	c H
Paxillus atrotomentosus		c
	involutus	cbH
	panuoides	H
Phallus impudicus		c
Pholiota	marginata	cb
Pleurotus	ostreatus	H
Polyporus	betulinus	cbH
	sp.(lacteus ?)	c
	schweinitzii	c H
Polystictus versicolor		cbH
Psathyrella	obtusata	c
	squamosa	H
Russula	atropurpurea	
	azurea	c
	claroflava	bH
	cyanoxantha	c
	drimea	c H
	emetica	c H
	fellea	H
	grisea	H
	fragilis	H
	heterophylla	H
	mariei	H
	nigricans	H
	nitida	H
	ochroleuca	cbH
	venosa	H
	vesca	c
	virescens	c
	xerampelina	c H

Scleroderma	aurantium	cbH
Sparassis	crispa	c H
Stropharia	aeruginosa	cbH
Trametes	gibbosa rubescens	c H
Tricholoma	flavobrunneum fulvum saponaceum	H
Typhula	sp.	

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