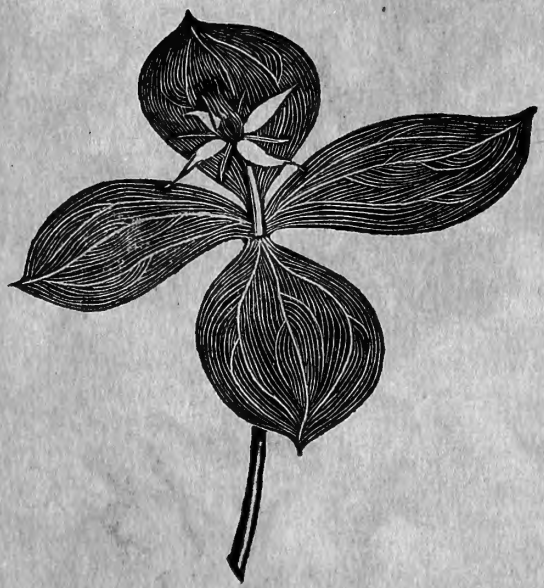
# The Reading Naturalist

No. 6







Published by the Reading and District
Natural History Society
1954

**Price to Non-Members—**
**Two Shillings and Sixpence**

# THE READING NATURALIST

No. 6 for the Year 1953-54

The Journal of

The Reading & District Natural History Society



President:

Walter C. Fishlock, Esq.

Hon. Secretary:

Mrs. A. Hasker,
Clarence Lodge,
93, London Road,
Reading.

Editor:

Enid M. Nelmes,
27, Westbourne Avenue,
Acton, W.3.

## Contents



- - - - - - - -

## Editorial

For Reading naturalists, the outstanding event of 1953 was the discovery that Epipogium aphyllum still persists in its local station, and we are fortunate in having in this issue a first-hand account of the plant by Mr. W.A. Smallcombe, who identified it when it was first found 22 years ago and has again had it under observation on this occasion. We are also indebted to him for the loan of the block for the plate accompanying his article, which was made from a photograph taken by the Staff of Reading Museum and given to him by "The Alpine Plant Magazine". We have been enabled to use it through the generosity of several members who have contributed towards the cost of printing.

Dr. Williams' informative article on grasshoppers should do much to stimulate interest in this compact group, and perhaps may encourage some members to make and record their own observations, and so help to replace the entomologists whose services we have lost during the year.

We offer our grateful thanks to Mr. Parry, who has once more kindly supplied us with meteorological data, and to all our other contributors.

Enid M. Nelmes.

Editor.

## Honorary Recorders

Botany: Miss K.I. Butler, 18 Morgan Road, Reading.

Entomology: B. Baker, 2 St. Saviour's Terrace, Field Road, Reading.

Geology: Prof. H.L. Hawkins, D.Sc., F.R.S., F.G.S., 68 Elmhurst Road, Reading.

Ornithology: E.V. Watson, B.Sc., Ph.D., 15, Ilkley Road, Caversham, Reading.

- - - - - - - -

EPIPOGIUM APHYLLUM

Oxfordshire. September 1953.

Photographed by the "Reading Museum"

# Epipogium aphyllum

By W.A. Smallcombe, B.Sc., F.M.A., F.I.I.C.

This plant, known in English as the Spurred Coral Root or Leafless Epipogium, is generally regarded as the rarest British wild species. The year 1953 brought it into the limelight, owing to a fortunate discovery of a new colony in Buckinghamshire by Dr. R.A. Graham.

Mr. Summerhayes in "Wild Orchids of Britain" (1) says that The first British specimen was discovered in 1854 by Mrs. W. Anderton Smith on the Herefordshire and Worcestershire border at Tedstone Delamere. In 1878 a second plant was found by a lady, near Ludlow and again in 1892 in the same wood. In 1910 a fourth specimen turned up in Ross-on-Wye. This makes four specimens in 57 years !

Except for 13 plants found by Dr. Graham in Buckinghamshire in 1953, the only others have been found in Oxfordshire, during 1924 - 1953, on two sites a few miles apart.

| | | | |
|---|---|---|---|
| June 1924 | - | Several specimens in Oxfordshire woods | - Site I |
| May 1926 | - | One plant (2 flowers on stalk) found by Mr. Wallace Brown. | - " " |
| June 1931 | - | One plant (3 flowers on stalk) found by Miss Vera Smith. (2) | - Site II |
| 1933 | - | Another plant in same wood Miss Vera Smith. | - " " |
| Aug. to Sept. 1953 | - | Two plants in same wood each with single flower Mrs. Paul - née Smith. | - " " |

This makes a total of about 24 plants in 100 years !

So much for the rarity of this interesting plant. Dr. Graham and Mrs. Paul are to be congratulated on their pertinacity in searching and on their ultimate success. The very few colleagues who have been entrusted with the secret of the exact locality have each respected the responsibility and continue to safeguard the growing plants in the dense beech woods.

It might be noted that the 1931 flower spike, which beside the 1926 specimen was the only one picked, is still preserved in spirit in Reading Museum.

Photographs of the 1926 and 1931 flowers were taken by the staff of Reading Museum and it would seem that until 1953 these were the only negatives in existence. Photos in colour and black and white were taken by several people in 1953 and have been reproduced in "The Times" (24/7/53), "The Listener" (29/10/53) and "The Bulletin of the Alpine Garden Society" (March 1954).

Habitat

As far as is known, Epipogium lives in Oxfordshire in rather dense beech woods upon chalky soil. It would seem that a carpet of dead and decaying leaves with a good deal of humidity is essential for its growth, though Dr. Graham tells me that some of his plants were growing directly upon a chalk subsoil with very little humus. As it is a saprophyte, the stem above ground (2) and below is devoid of chlorophyll and is cream to white in colour.

The stem above ground varies in height from about 3" to 6" and is devoid of leaves, but, both above and below ground, it has at intervals pairs of frail brownish scales.

The flowers, of which there may be one, two or three, hang from stem by delicate pedicels and the main stem terminates in a little curved filament with the remains of a thin sheath which encloses each bloom when in bud. The lip and spur are pale cream with a blush of rose, the colour being more marked upon little raised areas. We found no distinguishable scent to the flower. The young flower stalk is bent downwards upon itself (rather like a bracken frond) and this gradually straightens up to burst the enclosing flowersheath. One plant was in flower for a full week.

No pests were observed upon the Oxfordshire plants, but Dr. Graham reports that slugs were causing considerable damage to his colony.

The plant is exceedingly hard to see when growing in its natural habitat and this may partly account for its being so rarely found.

A very careful removal of the dead beech leaves - one by one - from around the plant revealed a long undulating whitish stem which finally led to a coral like mass about an inch in diameter and of a cream colour. The mass was irregularly lobed and radiating from it were several thin stems, the one leading to the flower being thicker than the others. These underground stems extended for about a foot in different directions and were extremely fragile, though one pierced a dead leaf. Having examined the underground system and photographed it, we thought it expedient to examine the exact spot of the 1931 plant which was situated within the decayed stump of a felled beech. To our delight and surprise the plant was still there and apparently quite healthy (1953) though there is no evidence of its having flowered since 1931 !

It is highly possible that individual plants very rarely send up a flowering stem and so can never be seen and are unlikely to be recognised if revealed by accident in moving the dead leaves. To test this we carefully grubbed up some of the beech leaves several feet from the 1953 flower and revealed two new plants without flowers. Can it be that the plant is comparatively abundant under the leaves ? Future careful research may answer this question.

As far as I am aware Epipogium has never been sectioned or subjected to a critical anatomical examination. Its several unusual features may make this investigation worth while if time shows that there are sufficient individual plants to justify the removal of a complete one for this purpose.

I should like to pay tribute to my several colleagues who have been concerned in the care of this treasure and, of course, especially to its finder, Mrs. V. Paul.

Photographs of the flower can be obtained from Reading Museum, but I am afraid it is no use asking to be shown the living plant in situ - sorry.

(1) The coloured plate in this monograph is from our negative of the 1931 Oxfordshire plants.

(2) "Ground" indicates the surface, which in this case is dead beech mast and leaves.

## British Grasshoppers

By L.H. Williams, B.Sc., Ph.D.

### Taxonomy

The old insect order of ORTHOPTERA is now usually divided into two orders: The DICTYOPTERA and the ORTHOPTERA. The latter contains primitive and specialised types including the Cockroaches; Stick and Leaf insects and Praying Mantids.

The DICTYOPTERA are considered to be an offshoot from the primitive Orthopteroid stock, and although many species show high specialisation and adaptation to their mode of life, they have many primitive features. The order has been divided into several families, of which five, the Gryllidae (Crickets); Gryllotalpidae (Mole Crickets); Tettigoniidae (Long-horned Grasshoppers); Tetrigidae (Grouse Locusts); and Acrididae (Short-horned Grasshoppers) are represented in Britain. The fore-wings of the DICTYOPTERA, when present, are rather narrow, hard sheaths (tegmina) which cover and protect the more delicate, membranous, folded hind-wings when at rest. The females have an ovipositor which is large in the Gryllidae and Tettigoniidae but much shorter and less prominent in the Acrididae and Tetrigidae. The Acrididae and Tetrigidae can be separated at sight from the other families by their comparatively short feelers (antennae).

The males of Gryllidae, Tettigoniidae and Acrididae can make a chirping noise, the technical term for which is stridulation. This sound is normally only produced when the insects are at rest, by Gryllidae and Tettigoniidae in the evenings and at night, and by Acrididae on warm,

sunny days. Its significance is not known and several possible explanations have been suggested - it may serve to attract the females, or represent a form of competition between males, or merely an expression of energy. Gryllidae, Tettigoniidae and some Acrididae stridulate by rubbing one tegmen against the other. In the Gryllidae, both have the same structure, but in the Tettigoniidae they are different, "one acts as the fiddle and the other as the bow". In most grasshoppers, the sound is produced by rubbing a series of minute peg-like projections on the inside of the hind femora against thickened veins on the tegmina. This causes the tegmina to vibrate. Many grasshoppers "songs" are distinctive and afford a useful method of identification in the field, but the pitch of the notes of some species, particularly among the Tettigoniidae, is too high to be audible to some ears. The auditory organs of the insects are found on the sides of the first abdominal segment.

Tetrigidae

Superficially, these insects are like small grasshoppers. Even now, little is known about them. They hibernate as adults or late-stage hoppers, feed on mosses and are characteristic of the tundra regions of the world. Oviposition occurs in the soil in spring. There are probably four British species, one of which is known only from the Scottish Highlands where it is said to be rare. Tetrix vittata is found on heaths and rough, dry pastures and is common around Reading, while T. subulata frequents marshy ground and probably occurs locally in most suitable habitats. Both species are very variable in colouration. These insects have a characteristic backwards prolongation of the thorax which is short and broad in T. vittata but long, thin and slightly up-curved in T. subulata where it extends almost to, or even beyond, the tip of the abdomen. A third species, T. ceperoi, resembles subulata in many respects, including the dorsal prolongation of the thorax, but, in this species, the space between the eyes when viewed from above is scarcely more than the width of the eye whereas in subulata it is nearly double the width. Also the top of the head projects forward squarely, beyond the limit of the eyes in ceperoi but not in subulata. T. ceperoi is recorded from several places in southern England, but its distribution is very imperfectly known.

Acrididae

In Britain, the Acrididae are near the limit of their range. They are more abundant, both in numbers of individuals and species, nearer the tropics. Many of the British species occur on the continent of Europe in a much higher density than in this country and also in a wider variety of habitats. Even the behaviour may be different; Chorthippus albomarginatus is rarely observed in flight in Britain whereas it flies freely in some continental stations where the higher temperature is probably responsible for the greater activity. When near the limit of their distribution, the insects are more exacting in their habitat requirements than in more favourable regions. In England, Gomphocerippus rufus is very local and is practically confined to broken ground on the chalk downs, but in France it is equally common in open spaces in woods.

The food of British grasshoppers consists almost entirely of grasses, although other plants are occasionally eaten. Grasshoppers are never found in the absence of grass in this country but sometimes a few scattered plants will support a flourishing community. I once found a small colony of C. bicolor in a beechwood glade near Watlington, Oxfordshire, where the ground flora appeared to consist almost entirely of a mixture of Sedum acre and Iberis amara. However, by groping among the plants, I discovered a straggling growth of the grass Agrostis alba var stolonifera, and the insects were probably feeding on this, as neither the Sedum nor the Iberis was eaten, by grasshoppers of this species even after they had been deprived of food and water for several days.

The females of some grasshoppers deposit their eggs below the soil-surface in loose earth, often on ant-hills. Other species oviposit among the basal leaf-sheaths of tussock-grasses and the common Central European grasshopper, Chrysochraon dispar, is said to lay its eggs in raspberry canes. The ovipositor is a highly developed organ consisting of four toothed valves, with which the female excavates holes. The inter-segmental membranes of the abdomen become fully distended during this operation, so that the length of the abdomen is nearly doubled by the time digging is completed. A sticky secretion is passed out at the same time as the eggs. This quickly hardens on exposure to the air to form a protective egg-case (oötheca), and sand particles become incorporated in those cases which are deposited in the soil. The winter is passed in the egg stage.

The eggs hatch in early summer producing tiny, white, first-stage hoppers, and these are completely enclosed in a thin membrane, which protects the delicate head-appendages and legs during the passage up through the soil. Usually all the eggs in a case hatch out in fairly quick succession on the same day, at least in captivity. When the soil surface is reached the membrane is broken and the second-stage hopper emerges. It is now like a tiny edition of the adult in appearance, except that the wings and genitalia are not developed. The first-stage hopper, which is very short-lived and never feeds, is called the "pronymph". A similar stage occurs in the life cycle of a dragonfly.

The hopper passes through five or more feeding stages before it becomes the fully winged adult insect - about six weeks after it hatches from the egg. At each skin-change (ecdysis), the wings and genitalia are more developed. Immediately after an ecdysis, the insect has a very strange appearance as its head seems to be huge in proportion to the rest of its body.

The eggs of the earliest species usually begin to hatch at the end of April or in early May according to the season, so that adult insects can be found from early June onwards. The last individuals of the late-maturing species persist until they are killed by autumn frosts.

Locusts are large kinds of grasshoppers and only a few species are of economic importance.

There are ten British species of Acrididae. One of these, Chorthippus vagans, was first found in Britain on a heath near the Dorset-Hampshire border and is still known only from this district. The beautiful Oedipoda caerulescens has been recorded from St. Mary's in the Scilly Isles, but as it has not been seen there recently, it is not included in this account. It is common on sand-dunes in the Channel Islands. All the other nine species have been recorded from Berkshire, but I have not seen either Mecostethus grossus or C. albomarginatus in the county, although they may both occur.

As there are only ten British species, this group is very suitable for study among Natural History Societies. They are all quite distinctive in appearance and can soon be identified correctly at a glance. Most of the species vary considerably in colouration so that this character is of little value in identification. Size, wing structure, head appendages, and the markings on the thorax are the most useful characters to employ in field identification. When examining preserved dried specimens, it should be remembered that considerable shrinkage has probably taken place since death.

1. Mecostethus grossus. This is the largest British species. It is predominantly olive-green in colour, but the hind femora are vivid red on the under-surface. It occurs very locally in wet Sphagnum-Molinia bogs in the New Forest, Fen district and west Eire, and has been recorded from other places, including east Scotland. It should be looked for in the bogs on the Bagshot Sands in south-east Berkshire and the adjoining part of Surrey. It oviposits in Molinia tussocks. July - September.

2. Gomphocerippus rufus. This species is easily distinguished by the antennae, which are strongly clubbed and white-tipped in both sexes. It is a dark brown or blackish insect with a rather local distribution and is said to be confined to the counties south of the Thames, although it occurs on the South Oxfordshire slopes overlooking the river between Reading and Goring and possibly elsewhere. It likes rough ground on the chalk hills and is often found associated with rabbit warrens. A late-maturing species: late July - October.

3. Myrmeleotettix maculatus. This, the smallest British species and one of the most variable in colouration, is usually beautifully mottled in shades of red, green, brown, white and yellow. The male has clubbed antennae, but this feature is less pronounced in the female. It is apparently always associated with dry ground and is the characteristic species of heaths, where it often occurs on the paths between the heather, as it is often only here that grasses can successfully compete with the other vegetation. It also occurs on the stony tops of the downs and on sand-dunes. A widely distributed species occurring in Scotland as well as throughout England. June - September.

4. Chorthippus parallelus. The adult female of this species is typically brachypterous (i.e. the wings are vestigial). The male has well-developed tegmina but rudimentary hind-wings. The colouring of the female is very variable, that of the male is greenish. It is very

common and widely distributed in a great number of habitats, and is the species of damp grassy heaths whereas M. maculatus is found in the intervening drier zone. The name "parallelus" refers to the keel-like ridges on each side of the thorax, which are almost straight in this species although more curved than in C. albomarginatus. June - October.

5. Chorthippus albomarginatus. In this species, the thoracic keels are almost parallel and straight in the female. It is easily separated from C. parallelus by the well-developed wings in the female, and by the relative lengths of the tegmina and abdomen in the male. In parallelus, the tegmina are shorter than the abdomen whereas in albomarginatus they are longer. This character is less useful when examining dried specimens where considerable shrinkage has probably taken place. In the female, there is a prominent white streak along the costal margin of the tegmen. Colouration is very variable. This insect is common on the South and East coasts in salt marshes and damp grassy hollows on sand-dunes, but is much less common inland where it is usually to be found on grassy heaths. June - September.

6. Chorthippus bicolor. This species is one of the commonest and most variable in colour to be found in Britain. The thoracic keels are strongly angled in both sexes. It is widely distributed and occurs in many habitats. June - early November.

7. Chorthippus vagans. This species very like C. bicolor in appearance, but slightly smaller. In bicolor, the thoracic keels are angled before the middle, but in vagans the angle occurs at the middle. It is only recorded from a limited area on the western edge of the New Forest.

8. Omocestus ventralis. This species is recognised by its dark-brown palpi with chalk-white tips. It is a dark-coloured, striking insect, especially the male, which when mature, is blackish with a vivid scarlet patch on the upper surface of the abdomen near the hind end. The female is usually brown and black or dark green and black. It is the only British species which is associated with woods and it occurs in healthy glades and rides. It is very common in parts of the New Forest but occurs in suitable habitats as far north as southern Scotland. July - September.

9. Omocestus viridulus. The male of this species is either brownish or greenish in colour. The female is always greenish, but the sides of the thorax may be either green or brown. The lateral thoracic keels are curved and not angled. It seems to prefer taller herbage than the other species, but also occurs on very short downland turf. It is widely distributed and occurs in the Scottish Highlands to 1,500 feet. Usually the first to mature. June - August.

10. Stenobothrus lineatus. It is superficially very like O. viridulus in appearance. The predominant colour is green and the sides of the thorax are always green. It sometimes shows a striking mixture of green and yellow. Mature individuals have a prominent white crescent on the tegmina and there is a bright red patch on the hind upper surface of the abdomen in the male. The most reliable character in identification is the group of almost parallel cross-veins in the proximal region of tegmina. A widely distributed insect which is probably often overlooked through its resemblance to O.viridulus. July - October.

The most useful handbook for the identification of the Orthoptera is - "Handbooks for the Identification of British Insects. Vol. 1. Part 5. Dermaptera and Orthoptera" by W.D. Hincks (1949). Published by the Royal Entomological Society. Price 3/6d.

## Weather Records for 1953

### Data supplied by M. Parry

All data were recorded at Reading University Meteorological Station except those for sunshine, which were recorded at Sutton's Seed Trial Grounds. The site of the University Station was changed at the beginning of the year, and comparisons made so far indicate that maximum temperatures at the new site are about the same as at the old but that minimum temperatures tend to be lower by an average of about 0.5°F. The temperature and rainfall averages refer to the periods 1921-50 and 1800-1915, respectively.

STATION - Reading (University) Height above Sea Level - 148 ft. YEAR 1953

| | | JAN. | FEB. | MAR. | APL. | MAY | JNE | JLY | AUG | SPT | OCT | NOV | DEC | YEAR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean Daily Temperature °F | Max | 42.4 | 45.4 | 52.6 | 55.4 | 65.2 | 67.0 | 69.5 | 72.2 | 66.7 | 58.4 | 52.4 | 49.7 | 58.1 |
| | Min | 33.4 | 34.3 | 33.8 | 39.5 | 47.5 | 51.1 | 52.7 | 54.1 | 49.3 | 44.3 | 41.5 | 41.1 | 43.5 |
| | Mean | 37.9 | 39.9 | 43.2 | 47.5 | 56.3 | 59.1 | 61.1 | 63.1 | 58.0 | 51.3 | 46.9 | 45.4 | 50.8 |
| Extreme Temperatures °F | E.Max | 56 | 60 | 69 | 67 | 86 | 80 | 78 | 89 | 77 | 69 | 59 | 57 | 89 |
| | Date | 29 | 27 | 25 | 22 | 25 | 26,29 | 5 | 12 | 8 | 1 | 28 | 3,4 | Aug 12 |
| | E.Min | 24 | 23 | 24 | 32 | 37 | 42 | 47 | 45 | 42 | 32 | 32 | 31 | 23 |
| | Date | 30 | 8 | 4 | 8 | 9,11,12 | 2 | 11 | 19 | 11,29 | 31 | 3,20 | 21 | Feb 8 |
| | E. Grass Min | 19 | 17 | 21 | 21 | 24 | 31 | 33 | 33 | 30 | 28 | 26 | 25 | 17 |
| | Date | 5,13 | 8 | 4 | 8 | 3 | 8 | 15 | 19 | 11 | 31 | 3 | 26 | Feb 8 |
| Days with | Frost | 14 | 9 | 14 | - | - | - | - | - | - | - | - | 1 | 38 |
| | Ground Frost | 18 | 12 | 20 | 11 | 6 | - | - | - | 1 | 5 | 5 | 6 | 84 |
| Sunshine Hours | Sum | 35.3 | 71.0 | 132.0 | 172.2 | 209.7 | 174.0 | 215.6 | 238.0 | 163.4 | 89.8 | 48.5 | 26.9 | 1576.4 |
| | % Pos | 14 | 26 | 36 | 42 | 43 | 35 | 43 | 53 | 43 | 27 | 18 | 11 | 35 |
| | Daily Mean | 1.14 | 2.54 | 4.26 | 5.74 | 6.76 | 5.80 | 6.95 | 7.68 | 5.45 | 2.90 | 1.62 | 0.87 | 4.31 |
| Precipation ins | Amount | 0.90 | 1.64 | 0.35 | 2.27 | 1.78 | 1.52 | 3.42 | 1.90 | 2.15 | 3.36 | 0.93 | 0.56 | 20.78 |
| | Rain Days | 11 | 9 | 5 | 14 | 11 | 14 | 20 | 9 | 15 | 14 | 10 | 10 | 142 |
| | Max Rain in 1 day | 0.41 | 0.48 | 0.12 | 0.41 | 0.71 | 0.56 | 0.65 | 0.77 | 0.47 | 1.10 | 0.39 | 0.28 | 1.10 |
| | Date | 5 | 10 | 26 | 30 | 18 | 21 | 22 | 29 | 22 | 31 | 1 | 30 | Oct 31 |
| Longest run of Consocutive | Rain Days | 2 | 6 | 3 | 6 | 4 | 8 | 6 | 3 | 6 | 9 | 4 | 3 | |
| | Dry Days | 8 | 9 | 25 | 7 | 11 | 8 | 2 | 14 | 10 | 11 | 14 | 8 | |
| | Snow or Sleet Days | 6 | 7 | - | - | - | - | - | - | - | - | - | - | 13 |
| | Days Snow Lying | - | 2 | - | - | - | - | - | - | - | - | - | - | 2 |
| 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 |
| Precipation | Amount | 1.9 | 1.64 | 1.71 | 1.43 | 1.65 | 1.95 | 2.03 | 2.09 | 1.70 | 2.98 | 2.30 | 2.59 | 24.0 |
| | Rain Days | 15 | 13 | 13 | 12 | 10 | 10 | 12 | 13 | 11 | 15 | 15 | 15 | 153 |
| Thunderstorm Activity | Days of Thunder | - | - | - | - | 1 | 1 | 2 | 1 | 1 | - | - | - | 6 |
| | Days of Hail | - | - | 1 | 1 | - | - | - | - | - | - | - | - | 2 |

## Extracts from the Recorder's Report for Botany for 1952-53

By Kathleen I. Butler

(Nomenclature as in the "Check List of British Vascular Plants" compiled by A.R. Clapham)

The year 1953 will ever remain a memorable one for the botanists. After a lapse of 20 years, that rarest and most elusive of our wild flowers, Epipogium aphyllum (Spurred Coral-root Orchis), was located on august 12th in its old haunt somewhere in Oxfordshire by Mrs. Paul who, as Miss V. Smith, had first found it there in 1931. Mrs. Simmonds and the Recorder were privileged to be with her at the time and see for themselves the single plant with one flower in full bloom, and at its side a bud, which when revisited on September 7th, had fully opened into a single flower. More details will be given elsewhere in this issue.

Orchis simia (Monkey Orchis) still survives in spite of its home having been destroyed by the plough in 1950. One plant was found in May at its old station by a member of the Botanical Society of the British Isles.

One or two uncommon species of the Orchid Family have been located by members.

Orchis praetermissa (Marsh Orchis). Dr. E.V. Watson reports it fairly plentiful among willows on damp ground at Coleman's Moor on May 30th.

Aceras anthropophorum (Man Orchis). About a dozen plants in bloom seen in its old station in Oxfordshire by Lady Severn in early June.

Ophrys insectifera (Fly Orchis). Two plants in flower seen on May 24th, by Dr. E.V. Watson.

Coeloglossum viride (Frog Orchis). Found at Christmas Common (Mrs. Simmonds), and on Huntercombe Golf Club (Miss Macaulay).

Gymnadenia conopsea (Fragrant Orchis). Seen on Blewburton Hill by Dr. L. Williams.

Platanthera chlorantha (Greater Butterfly Orchis). In wood adjoining Unhill Bottom (Dr. E.V. Watson).

Platanthera bifolia (Lesser Butterfly Orchis). In Pamber Marsh (Mrs. Simmonds).

Some plants of particular interest were observed during the Society's Field Work:-

Astragalus glycyphyllos (Milk Vetch). On June 24th growing on the edge of the wood east of Sulham village. This is almost certain to be the same station as recorded by Druce in 1897.

Euphorbia cyparissias. This denizen Spurge, also recorded by Druce, appears to be diminishing on the grassy slope in Sulham Woods.

Hybrid of L. vulgaris (Yellow Toadflax) and L. repens (Creeping Toadflax), recognised as Linaria x sepium by Clapham, Tutin and Warburg in "Flora of the British Isles". In Nunhide Lane, Sulham.

Myriophyllum spicatum (Spiked Water Milfoil) and Ceratophyllum demersum (Hornwort). Both found in a pond near Basildon on August 25th.

Typha angustifolia (Lesser Reedmace). By the river near Pangbourne.

1953 has been quite a successful year for the number of less common plants which have been observed by members.

Lathraea squamaria (Toothwort). It was exactly ten years ago that this British parasite was recorded from Dyson's Wood, Oxon. Now in 1953 it has been discovered by Dr. L. Williams in a wood at Emmer Green, parasitic on Elm.

Lathyrus aphaca (Yellow Vetchling). Has been located near Moulsford, Berks, by Lady Severn.

Lathyrus nissolia (Grass Vetchling). Recorded but rarely in the past, has been reported from several localities. (1) Kingwood Common (Mrs. Paul); (2) Berkshire Downs between E. Ilsley and Streatley (Dr. Watson); (3) Tilehurst Road, near Prospect Park, Reading (Mr. C.E. Douglas); (4) Grazely by roadside (Mrs. Simmonds).

Cerastium arvense (Field Mouse-ear Chickweed). Another of our less common species that is being found more frequently. Coleman's Moor, and new localities on the Berks Downs.

Alchemilla vulgaris (Lady's Mantle). Very scarce in the south east, was seen again near the Happy Valley, Watlington Hill.

Hypericum montanum (Mountain St. John's Wort). Observed in woods near Upper Basildon.

Potentilla argentea (Hoary Potentilla). Reported by three members from the Theale Gravel Pits.

Hyoscyamus niger (Henbane). Slope near Bottom Farm, Mapledurham (Dr. E.V. Watson).

Smyrnium olusatrum (Alexanders). Two new stations reported by Dr. L. Williams (1) Near Ufton Nervet Church; (2) Bath Road near Sonning Halt.

Fumaria Vaillantii an uncommon species of Fumitory abundant in some cornfields at Tilehurst (Dr. L. Williams).

Thesium humifusum (Bastard Toadflax). Grims Dyke, Basildon and Blewburton.

Helleborus foetidus (Stinking Hellebore). Mrs. Simmonds reports a fine colony in woods at Medmenham, also in the same woods Iris foetidissima (Stinking Iris)

Symphytum peregrinum (Blue Comfrey). A new locality on the railway bank near Suttons Trial Grounds, and down Shepherd's Lane, Woodley.

Centaurea cyanus (Cornflower). Found in a hayfield by Miss J.M. Watson.

Geranium lucidum (Shining Cranesbill). Near Round Oak, Mortimer (Mr. Douglas). A new record for Berkshire.

Cuscuta epithymum (Common Dodder). Sulham (Mr. C.E. Douglas).

At the Fungus Foray on October 10th, five new species were found. (1) Mutinus caninus (Dog's Stinkhorn) distinguished from Phallus impudicus by its smaller size, and by the pileus being firmly attached to the stem throughout its length. (2) Boletus bovinus. (3) Boletus luteus. (4) Hygrophorus eburneus. (5) Lactarius torminosus.

## Extracts from the Recorder's Report for Entomology for 1952-53

By B. Baker.

With the departure of Mr. Rudland and Mr. Betts from our district and with Dr. Williams now answering the call of Her Majesty, our always small circle of entomologists has reached the smallest number ever. I present this year's report in the hope that some of our members - who are not as yet actively engaged in one or other of the fields of Natural History - might make some useful contributionsto next year's report. Except where otherwise stated the records are my own. The nomenclature is that adopted by Kloet and Hincks.

### Order Trichoptera - Caddis-flies.

The Victoria County History of Berkshire (1906) lists only some 25 species, but the nucleus of a local collection at the Museum can already muster more than this number, even omitting many of the V.C.H. records.

Limnephilus vittatus. Larvae collected from the "acid pond" on Burghfield Common at Easter gave rise to adults between 18th May and early July. The larval cases are horn-shaped and constructed of sand grains.

L. marmoratus. Larvae collected at the same time as L. vittatus gave rise to adults between mid-June and 26th July. The larval cases are made of cut stems.

Hydropsyche ornatula. Swarming by the Kennet at Thatcham reed-beds on 17th May.

Leptocerus aterrimus (Black Silverhorns). Numerous over Burghfield Pond on 6th June.

Mystacides longicornis (Grousewings). Abundant, especially on alders, by the Basingstoke Canal at Ash Vale on 5th September.

M. azurea (Black Silverhorns). On alders by the Pang at Tidmarsh on 6th September.

Order Orthoptera (Crickets and Grasshoppers).

Gryllotalpa gryllotalpa (Mole-Cricket). A living specimen brought by Mr. Ilsley from Grazeley survived in the Museum for almost three weeks, but burrowed below ground most of the time and was rarely seen. Apart from one in 1950, this is the first Museum record since the middle thirties.

Order Odonata (Dragonflies).

Gomphus vulgatissimus (Club-tailed Dragonfly). Reported by Dr. L. Williams by the Thames above Pangbourne during mid-May. This confirms an obsolete record.

Aeshna mixta (Scarce Aeshna). By the Basingstoke Canal near Fleet on 13th September.

Order Plecoptera (Stone-flies)

Leuctra geniculata. Beaten from willows by the Kennet at Thatcham on 19th September.

Many examples of a Nemourid were beaten from sallow in Pamber Forest on 9th May. The V.C.H. gives only one species for our district.

Order Ephemeroptera (May-flies).

Ephemera danica and E. vulgata. Recently emerged adults swarmed by the Kennet at Thatcham on 17th May; E. vulgata also at light at Tilehurst in mid-August.

Cloeon dipterum. A pond at Hambledon, Oxon., on 17th September. P.W. Hanney

Order Coleoptera (Beetles).

Metoecus paradoxus. Both adults and immature stages were present in a wasp's nest, where the latter are parasitic, brought to the Museum on 13th April.

Order Lepidoptera (Butterflies and Moths)

On the whole, 1953 was a good year for migrant moths, especially Plusia gamma (Common Silver Y), of which newly emerged adults were still appearing in late October. Butterflies were less in evidence, but Vanessa urticae (Small Tortoiseshell) swarmed everywhere on the autumn flowers. It was a notable year for at least two very rare migrant moths. Daphnis nerii (Oleander Hawk-Moth) was in evidence, though not in Berkshire, and the number of Eublemma parva (Small Marbled) taken in England in 1953 exceeded the total number taken there before. Mr. W.L. Rudland secured three parva, one of them off Caversham Road on 22nd May.

I operated a light trap at Tilehurst every night during most of the summer months and caught at least 226 species of moths in it. Over the August Bank Holiday period, when temperatures were up in the nineties, the nightly catch, released each morning, was 1,000 - 1,500. The catch included one specimen each of Heliothis peltigera (Bordered Straw) on 12th June, H. viriplaca (Marbled Clover) on 25th June; Herse convolvuli (Convolvulus Hawk-Moth) and Plusia festucae (Gold Spot) on 9th August; and Oria musculosa (Brighton Wainscot) on 4th August. The last is a good moth for our area, but in Wiltshire, especially in the Salisbury Plain area, it occurs in wheatfields, sometimes in great numbers. In spring, the larvae feed in young corn shoots, but there is some mystery regarding where the eggs are laid in August - probably on an alternative food plant round the edges of the cornfields. On the night of 6th August, when Brighton Wainscots came in considerable numbers to light near Stonehenge, the moths were pairing on the heads of grain, but a protracted search for ovipositing females was fruitless. Dr. Williams had the use of the light trap for a fortnight in July and took at least two Leucoma salicis (White Satin) for which we have no local records for many years, and Ophiuoa pastinum (Blackneck), a marsh species known to us only from Woolhampton and Thatcham. Mr. Parfitt recorded Plusia ni (Scarce Silver Y) at light at Sandhurst on 7th August; I know of no other record for this moth in our district. He also records Arctia caja - form flavescens, an extreme form of the Garden Tiger, wherein all the usual red colouring is replaced by bright yellow. The following moths were notable visitors to Sir Robert Saundby's light trap at Burghclere:- Leucania vitellina (Delicate Wainscot) 24th May; Ortholitha umbrifera (June Lead Belle), 5th May; Celerio lineata (Striped Hawk-Moth), 5th May, 11th June; Mythimna turca (Double-line Wainscot), 8th July; and Acherontia atropos (Death's Head Hawk-Moth), 10th September. On 12th September, Sir Robert Saundby obtained a further Death's Head Hawk-moth from a local larva, and three other larvae were brought to the Museum during August and early September. I obtained a larva of Apatura iris (Purple Emperor) by beating sallow in Pamber Forest on 9th May, and several larvae of Plusia chryson (Scarce Burnished Brass) in Thatcham reed-beds on 17th May.

Mr. H.L. Dolton supplied the following records for Microlepidoptera:- Mines of Lithocolletis coryli on hazel, 14th April. Plentiful in Little John's Lane, Reading.

Larvae of Coleophora solitariella on stitchwort and larvae of C. alcyon-ipennella on black knapweed. Both from Headley, near Kingsclere, Hants, 25th May.

C. discordella on bird's-foot trefoil at Tilehurst, Berks, 31st May.

Larvae of Elachista cerusella, plentiful on Arundo phragmites in Little John's Lane, Reading.

Several Tortrix bergmanniana emerged from larvae found in the garden (Chester St.) on roses, 6th June.

Pyrausta aurata was very common this season on mint in many local gardens. Larvae and pupae of Bedellia somnulentella very plentiful in Little John's Lane, Wigmore Lane, and at Purley, near Pangbourne, on Convolvulus arvensis and C. sepium.

During September and October, mines of the genera Coleophora and Lithocolletis were fairly common on oak, elm, blackthorn, apple and hawthorn.

Mines of Cosmopterix eximia on hop were very plentiful in Little John's Lane. This little moth is very local in distribution.

My thanks are due to Sir Robert Saundby, Dr. L. Williams and Messrs. Dolton, Hanney, Parfitt and Rudland, for records received, and to the Director of the Museum, Mr. W.A. Smallcombe, for allowing me to make use of relevant records from the Museum files.

## Extracts from the Recorder's Report for Ornithology for 1952-53

By E.V. Watson, B.Sc., Ph.D.,

(Period under consideration: October 1952 - October 1953)

1. Winter Gulls. No very big numbers were recorded, but a winter roost of Black-headed Gulls was located at Burghfield in December 1952. One Great Black-backed Gull was seen over Calcot by Mr. N.G.B. Jones on December 26th.

2. Winter Duck. Mr. C.E. Bignal, watching Sonning Eye gravel pit, observed numbers of Mallard in the order of 300 in December, and comparable numbers were met with during this first winter period at Bulmershe. At Cranesmoor Lake, several observers reported exceptionally large numbers (c. 600) in October 1953. The number of Teal at Cranesmoor Lake was estimated at well over 100 on several occasions, whilst other plentiful winter duck were, as usual, the Tufted Duck, Pochard and - more locally - the Shoveler. The season under review was good for rarer duck, too, the following species being noted in the

Reading area:- Ferruginous Duck, Gadwall, Golden-eye, Goosander, Pintail, Scaup and Smew. When this Report was delivered, no note of Common Scoter had come to hand, but the Reading Ornithological Club's Report for 1953 mentions a record of a pair seen by Mr. Bignal at Sonning Eye gravel pit on April 6th.

3. Winter Finches and other Winter Movements. The Recorder drew attention to three particular winter finches, of interest because not especially common and somewhat erratic in their appearance: the Brambling, Siskin and Redpoll. In the winter of 1952-53, the biggest numbers of Brambling (c. 100) were seen in the Burghfield district. Siskins were scarce, but 16 were recorded at Bearwood on April 5th. Records of Redpolls were not numerous, but there was a possibility that the species had been overlooked on occasion.

As regards movements of other winter birds, the area west of Theale continued to be favoured by wintering Lapwings and the scarce Golden Plover. About 80 of the latter species were seen by Mr. Bignal in this area on December 19th. Mrs. A.M. Edwards reports a Golden Plover near Stratfieldsaye on November 30th. The Recorder noted an exceptionally late Fieldfare at Sonning Eye on May 12th.

4. Spring Arrival of Migrants. The Recorder had few arrival dates other than his own to draw upon. Among those cited were:-

March 3rd. Chiffchaff.
April 5th. Willow Warbler.
April 17th. House Martin (Mr. T.L. Gwatkin)
April 19th. Cuckoo.
April 21st. Tree Pipit.
May 3rd. Garden Warbler.

The subsequent publication of the R.O.C. Report shows that while these data are probably fairly representative of the main influx of the species in question, they do not give an accurate picture of the arrival of the vanguard. Thus, other observers noted an early Chiffchaff on March 21st and an early Willow Warbler on March 28th. Several people heard the Cuckoo during the first week of April, Mr. A.R. Lucas recorded a House Martin on April 11th, and Mr. Douglas noted a Tree Pipit at Burghfield on April 4th. Mr. W.A. Smallcombe saw a Swift on April 28th, but the brothers Sutton established its arrival at Aldermaston six days earlier.

Records of arrival dates from N.H.S. members were extremely meagre.

5. Spring Passage of Waders and Terns.

A few visits made by the Recorder to Sonning Eye during the spring migration period yielded nothing of note, but regular observers at Burghfield gravel pit secured isolated records, during April and May, of Jack Snipe, Dunlin, Bar-tailed Godwit and Sanderling. All fairly rare species in this district. The R.O.C. Report mentions a record by Mr. Bignal of a single Curlew flying southwest over Sonning Eye gravel pit on June 14th. Black Tern passed through the area between April 22nd and May 4th this year, earlier than usual.

6. Breeding Records.

Mr. Smallcombe directed Mr. Douglas' attention to Grasshopper Warblers at Burghfield Bridge. Mr. Douglas thinks two pairs bred there. The Wryneck reared seven young from one nest and two from another, in a Caversham garden. This local species also bred almost certainly in certain other parts of the Reading district.

Common Sandpipers almost certainly bred at Aldermaston gravel pit. The Little Ringed Plover reared four young at a new site and one at an old site in the Reading district. Red-backed Shrikes almost certainly nested in the Tilehurst and Caversham areas. Whinchats were found established at various points on the Downs between East Ilsley and Streatley in mid-June, presumed to be breeding.

The Recorder concluded this section of his Report by referring to a letter from Mr. Smallcombe recording 12 nesting species in his garden in Holybrook Crescent over the period of the past 25 years. Mr. Smallcombe also referred to a remarkable case in which a House Sparrow was suspected of having attacked and fatally injured four young Spotted Flycatchers.

7. Departure of Regular Summer Visitors.

There was nothing to report under this head.

8. Autumn Passage of Waders and Terns.

Among the waders seen by Mr. C.E. Douglas and others at Burghfield gravel pit in late summer were one Greenshank and one Ringed Plover (both in September). This pit is not now as favourable for waders halting on passage as it was a few seasons ago. One Black Tern was at Burghfield gravel pit during September 18th - 25th, and there were numerous September records of Common or Arctic Tern.

9. Various Passage Movements, Rare Visitors, etc.

Outstanding was the enormous number of Leach's Fork-tailed Petrels that rained in over the southern counties in late October 1952 - just too late for inclusion in last year's report. One was picked up at Mapledurham, another at Reading Cattle Market. Both were submitted to the Museum and communicated by the Director, Mr. Smallcombe. Another

rarity seen by some observers during the year under review is the Great Grey Shrike, which stayed for a time at Aldermaston gravel pit in December 1952 and re-appeared in April 1953 (two birds were there on April 8th). A Buzzard was seen by Dr. T. Richards over Leighton Park in October 1953, and a White Wagtail was successfully identified at Burghfield gravel pit on April 24th (Mr. Douglas).

In conclusion, the Recorder appealed for all members to send him notes of their observations in the forthcoming year.