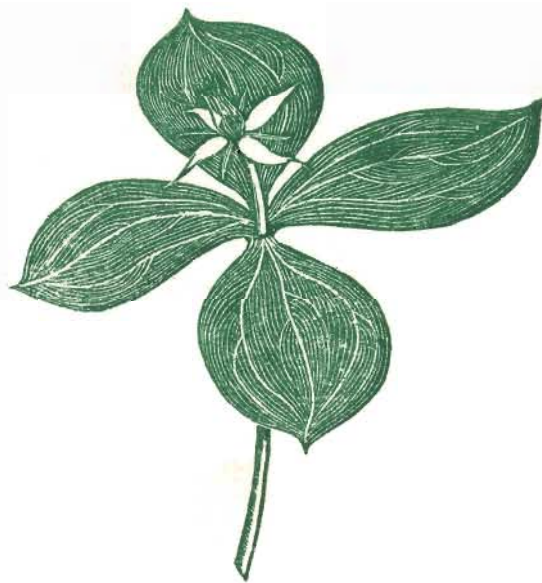


The Reading Naturalist

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THE READING NATURALIST

No. 35 for the year 1981-82

The Journal of
The Reading and District Natural History
Society

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Meetings and Excursions 1981-82

The Annual General Meeting on 15th October 1981 (attendance 52) was followed by Mr. B. R. Baker's Presidential Address entitled 'How to Renew an Interest in Carpentry'. A Natural History 'Brains Trust' (54) was held on 29th October under the chairmanship of the President, the members of the panel being Mr. Nigel Phillips, Mr. Martin Sell, Mr. Hugh Carter and Dr. Humphrey Bowen. Lectures given during the winter were 'Farming and Wildlife', by Mrs. D. Herlihy and a farmer (50); 'Plant/Animal Interactions', by Professor J. Harborne (49); 'Bats', by Mr. M. Hardy (32); 'The Mysteries of Mushrooms and Toadstools' by Dr. F. B. Hora (78); 'Continental Contrasts - plants of Malaysia and South Africa', by Mr. C. J. Leeke (59); 'European Dragonflies', by Mr. G. S. Vick (52), and 'Town Centre Plants', by Mr. M. V. Fletcher (38). Members' Evenings of films, talks and exhibits, at which coffee and biscuits were served were held on 7th January (52) and 18th March (51).

There were winter excursions to study fungi on 7th November (28), lichens on 5th December (17), birds at Burghfield Pits on 6th February (24) and mosses and liverworts at Mortimer and Pamber on 6th March (19).

Summer field excursions were to woods in the Hambledon area on 17th April (46), and at Goring Heath on 1st May (33), both for spring flowers; Munday Dean Bottom, Marlow (BBONT Reserve) for green-winged orchids on 15th May (30); Kennet Valley for birdsong including nightingales, on the evening of 19th May (26); Aston Upthorpe BBONT Reserve for burnt orchids and other chalk flora and Lepidoptera on 22nd May (23 NHS members and 7 BBONT members); Hartslock (BBONT Reserve) for chalk flora and mammals on the evening of 26th May (15); Buttlers Hangings (BBONT Reserve) for butterflies and chalk flora on 5th June (16); Burghfield area for waterside flora and bats on the evening of 9th June (19); Dinton Pastures Country Park for water flora, on the evening of 16th June (18); Hampstead Norris woods and disused railway line on 19th June (20); Watlington Hill (with BBONT) for ecology of chalk grassland on Sunday 27th June (19 NHS and 11 BBONT members); Kenfig Burrows, South Wales, by coach, for dune flora on 3rd July (54); Wellbarn Estate for moths on the evening of 9th July (26); Snelsmore Common Country Park for heathland flora and birds at nightfall, with a barbecue, on 17th July (38); Waterperry and Shabbington Woods for butterflies on Sunday 1st August (13); Wellington College area on 14th August (c. 16); Warren Bank (BBONT Reserve) for chalk flora and Great Green Grasshoppers on 28th August (26); and Shirburn Hill and Bald Hill for Chiltern gentians and other chalk flora on 11th September (25). There were Fungus Forays at Heckfield Heath on 25th September (28), Kingwood Common on 9th October (22) and Five Oaken, Mortimer, on 23rd October (18).

How to renew an interest in carpentry

The Presidential Address
to the Reading and District Natural History Society

15th October, 1981

B. R. Baker

I find myself this evening in something of a dilemma for it has occurred to me that some of you may not wish to renew an interest in carpentry being already fully proficient. You may therefore be thinking of leaving early, but before you do so perhaps I could draw your attention to the implements that I use because it may be that to see them would give you one or two new ideas.

First, a good strong mallet, not you will note a hammer, which would only damage your chisel of which you will need two sizes, a half-inch and an inch-and-a-half. Of saws a variety are useful - a small hand-saw, a strong tenon, for rougher work one with a removable blade is very handy, and last of all, if really up against it, a power-saw has often saved the day. A good strong knife, boy-scout type, is also required, a rasp or surform and, finally, the wire brush, absolutely essential. Now, had I not gone through that short list of tools, how many of you would have forgotten the wire brush? If we are honest with ourselves most of us would have had to put our hands up.

Now I hear you say "What has this to do with natural history?" or "Am I in to the wrong lecture?".

Well then, let us look at that classic book by Richard South on British Moths, and on page 339 of the second volume, 1961 edition, you will find the beginning of his account of the Sesiidae or Clearwing Moths, and clearwings and carpentry go well together. In fact, without the careful use of some of the tools listed above we would very rarely see any of these beautiful and colourful moths.

The clearwings are all day-flying moths so it is not surprising that we have never encountered any of them on our numerous annual mothing nights, but even on daytime field excursions, unless one is able to recognise the signs made by clearwing larvae, one could be walking through a colony without being aware of the fact.

The moths themselves are very distinctive-looking creatures with very narrow forewings, for the greater part clear as their name implies, and several of the species bear a tolerable resemblance to certain species of wasp, though of course being moths they are incapable of stinging. They possess a unique method of coupling of the fore and hind wings, the fore-wing hind margin being folded down and the hind-wing anterior margin folded upwards, both folds

interlocking by a series of recurved spines. With their abdominal patterning of black, red, white or yellow banding they make superb subjects for colour photography; the blue-black scaling often appears iridescent and lends further support for the claim that clearwings are among the most beautiful members of the Lepidoptera.

The eggs are sometimes laid on certain leaf surfaces or on to a fairly smooth face of bark, more typically they are inserted into bark crevices, old adult emergence holes or stem bases or fully exposed on twigs. From the eggs round to the adult moths again is never a short cycle of events, the shortest life cycle takes a year, the longest may exceed three, several species adopt the middle ground and undergo two-year life cycles.

The caterpillars spend this lengthy period tunnelling within the wood of certain trees or, less typically, mining the roots of various low-growing plants. Clearwing larvae have their enemies, not the least of which are birds, and, in order to maintain an uncertain balance and to perpetuate clearwing colonies, females lay a large number of eggs. These give rise to caterpillars having no requirement for protective colouration, living as they do in the dark, but well endowed with powerful jaws for tackling woody plant tissues. This mode of life is bound to leave its mark upon the host-plant whose stem, in the case of young saplings can become a labyrinth of tunnels. These tunnels can best be seen after coppicing work in woodlands or when birch scrub is being cut back on our heathlands. In early springtime the larvae make their own tell-tale signs by pushing out large quantities of 'sawdust' which collects into little heaps at trunk bases. It is signs such as these that the field worker looks for when prospecting sites at which to indulge in a little careful carpentry. This is not such a drastic operation as may be feared by the conservationist for more often than not we are concerned only with the stump left after forestry operations. Without doubt freshly cut stumps are highly favoured egg-laying sites for clearwings. When such stumps are not available other places must be used, though these may be less obvious to our eyes.

It is one of the attractions of clearwing hunting that much of the work can be undertaken in the depth of winter when other fieldwork for the lepidopterist may be at a low ebb. It pays however to do a little homework before setting off with our toolkit, for no self-respecting larva is going to push out 'sawdust' when the mercury is low - indeed the larva itself will be low, low down in the roots!

My interest in the clearwings goes back to before the last war when a former president of this Society would invite me to accompany him on winter-time cycle visits to the heathlands and damp gullies of Burghfield and Padworth. There appeared to be virtually no information available to help novices find these elusive clearwings, but we would look for birch or alder stumps and begin operations with

enthusiasm. We would spend seemingly endless hours putting very precise chisel cuts into the stumps, we would saw very accurate slices from birches and alders, our carpentry was superb and by the end of the day we would have accumulated enough firewood to last us round to April! I have no recollection of actually discovering any clearwings on those early excursions, and I deemed all of them to be great rarities. This idea was not dispelled by delving into old issues of some of the entomological journals. For instance, in the Transactions of the Entomological Society of London for the year 1906 there is a paper on the discovery of the larva of the Orange-tailed clearwing entitled Notes on the larva of Trochilium andrenaeforme, Lasp., by Eustace R. Bankes "On July 26th last I received, through the generosity of the Hon. N. Charles Rothschild, a portion of a stem of Viburnum lantana that he knew, by deduction must contain a feeding larva of the extremely rare Trochilium andrenaeforme.....".

Then in 1946 the Amateur Entomologists' Society issued an invaluable and inexpensive illustrated leaflet entitled "Collecting Clearwings" compiled by a panel of half-a-dozen experts. I can do no better than quote briefly from the introduction: "The scarcity of even the common species of Clearwing Moth in the average beginner's collection is a plain indication, not so much of lack of interest in the group, but of lack of knowledge of the habits and life-histories of these insects". "It is the aim of this Leaflet to dispel some of the air of mystery and prevalent belief in the scarcity of the members of the family and so make them commoner inhabitants of the amateur's cabinet and storebox". Dispel the air of mystery the leaflet certainly does and a copy should be in the pocket of any naturalist who seriously intends looking for signs of clearwings in the field.

Nevertheless the legend of scarcity dies hard and the prototype Lepidoptera Record Card issued by the Biological Records Centre in the 1960's was devoid of any clearwing names. Happily this was rectified following an open meeting held in London when comments were invited upon the composition of the cards before they went out on general release.

Although there are at least 1000 species of clearwing known to science worldwide and about 100 in the Palaearctic Region only 15 of these are at present known to occur in the British Isles. Of these 15 we have records of 12 within our County of Berkshire.

The President illustrated his address with a series of coloured slides which related to all the species of British clearwings. The adult moths were almost all photographed from life, many of them in the field. There were also slides of the immature stages of several species and distribution maps which had been prepared for inclusion in

a forthcoming volume of The Moths and Butterflies of Great Britain and Ireland.

Also exhibited in the Art Gallery were five drawers of the Museum's entomological collections which illustrated the biology of clearwings and a further two drawers containing examples of all the British species.

Localities for clearwings in the Reading area and other information on this Family are given in a paper which appeared in Reading Naturalist no. 17, 1965. The records for several species mentioned in that paper have now increased as a result of fieldwork undertaken over the intervening sixteen years.

* * * * *

Hymenoptera in the Reading Area

H. H. Carter

It is not my purpose in this paper to give a full account of the Hymenoptera so far as they are known in our area. For one thing, our knowledge is still woefully incomplete, for reasons which will become apparent. For another, the bare listing of names, with dates and localities, in the files of the Biological Record Centre runs to 18 pages and covers 583 species, a small number perhaps when set beside our 1675 known local Diptera but still far outside the scope of a short article. Instead I propose to introduce my readers to a group that is well represented here, and the members of which are conspicuous and from the behavioural aspect unquestionably the most fascinating of all insects, which is as much as to say, of all invertebrates, but which have been greatly neglected by our members. If as a result, some of us are moved to devote some attention to the worst areas of neglect (and coverage of the order is extremely uneven as I shall show) I shall not have written in vain.

Structurally, Hymenoptera are distinguished from other insects by highly modified wing venation, of a type which remains remarkably constant in basic pattern throughout the order, apart from extreme reduction in some families of Parasitica, but is reconcilable only by much ingenuity with the pattern found in insects generally. They also characteristically possess a strong piercing ovipositor which may be barbed or saw-toothed. This is used to penetrate the tissues of the host plant or animal when egg-laying, and usually introduces a secretion which causes a characteristic

reaction in the host - gall-formation in plants and temporary or permanent paralysis in animals. True parasitism, unknown in Hymenoptera, involves marked disparity in size between large host and small parasite, which is enabled to feed on the host without doing it much damage or preventing it from completing its life cycle. (One might perhaps describe the relationship between phytophagous Hymenoptera and plants as parasitism, but it does not essentially differ from that of any other plant-eating insect such as a caterpillar which feeds on a plant without destroying it.) The carnivorous members of the order in their immature stages very frequently adopt a mode of feeding intermediate between predation and true parasitism. The prey is comparable in size with the adult hymenopteran or its full-grown larva, and although completely consumed it is not disposed of at a single meal but lasts a larva through the whole of its larval life.

On three separate occasions the social way of life has arisen in the order, whereas it has appeared only once, in a fully developed form, among other insects. This is undoubtedly due to the unusual method of sex determination. There is no male or Y chromosome. Instead, females produce eggs, each with a single X chromosome. Unfertilised eggs hatch into males, inheriting a single X chromosome which is passed on to their sperms. Fertilised eggs receive an additional X chromosome with the sperm and hatch into females. The laying female can decide whether or not an egg is to be fertilised and so determine the sex of her offspring, which makes social organisation practicable.

The order is subdivided, both by structure and life-style, into three sub-orders. Most primitive are the Symphyta (Wood Wasps and Sawflies) in which the abdomen is broadly attached to the thorax as in other insects, and the ovipositor is stout and saw-toothed for cutting into tough plant tissues where the eggs are deposited. One primitive sawfly, Xyela julii, which I have taken on Wokefield Common, lays eggs among the scales of male pine cones, where its larvae feed on the protein-rich pollen which these anemophilous trees produce in great quantity; this is believed to be the original diet of the whole order, and many more developed species have reverted to it at some stage of their existence. Many sawfly larvae are external feeders and closely resemble caterpillars, having abdominal prolegs but being distinguished by large eyes. Others bore in stems and trunks or inhabit galls. The adults, usually black but often relieved by markings of yellow, red or white, can be found on flowers of Ranunculaceae, Umbelliferae and Compositae which produce abundant pollen. As they lack sucking mouthparts they cannot take nectar. Of the 483 species of this group that have been recorded in Britain, 151 are known from the Reading area.

The second and by far the largest suborder is the Parasitica. In this group the powerful biting mouthparts of the sawflies are retained, but the abdomen is attached by a slender waist for mobility when egg-laying, and this

may be enhanced by the waist being drawn out into a stalk. These insects are 'parasitic' in the special sense that applies to Hymenoptera. Their prey consists largely of the immature stages of other insects which undergo metamorphosis and have relatively immobile soft-bodied larvae. Lepidopterous larvae are great favourites, and members of the family Ichneumonidae are often bred from caterpillars. Several members of the genera Ichneumon, Cratichneumon and Diphyus (better known under its old name of Amblyteles) are common in the Reading area. Other prey includes beetle larvae and spiders; and one species, found in the Lambourn at Bagnor, attacks caddis larvae in their underwater homes. Many of the families of smaller Parasitica prey on aphids. The smaller Parasitica present difficulties to the collector because keys are not readily available and their determination is a matter for specialists, who are few in number and rarely have leisure to examine the chance captures of amateurs. One family however is easier to deal with and exceptional in its habits in that its members are gall-makers on plants. These are the Cynipidae or Gall-wasps. Members of the genera Andricus, Cynips and Neuroterus inhabit galls on Quercus robur (strangely enough Q. petraea is by comparison almost unaffected). In some years - including 1982 - the galls may be present in such profusion as to cover the leaves of the affected trees. These in turn may be the majority of those present in an area. The galls are probably easier to identify than the adult insects, which are less often captured than one would expect. These species show alternation of generations. Members of the sexual generation are adult in early summer when the oak leaves are fully expanded. They lay fertilised eggs on them, forming leaf galls which fall to the ground in autumn. These give rise in early spring to females only, which have no males to mate with. Some lay unfertilised eggs which develop into males, others lay eggs which undergo no reduction division and so have a full complement of paired chromosomes including two X chromosomes and thus produce females. As no leaves are present so early in the year, the galls are formed on bark, buds or roots and are quite different in appearance from the leaf galls. The known British Parasitica number 5594, and many more await discovery. So far in the Reading area I know of only 178, 113 being from the Ichneumonidae, of large size and well-keyed, 41 Cynipids and a mere 24 from the thousands of smaller Parasitica.

The third suborder and the one to which most attention has been paid in our area is the Aculeata. These have the same wasp-waist as the Parasitica but the ovipositor has become a sting and no longer transmits the egg. A few small primitive families form a connecting link between the two suborders and have retained the 'parasitic' mode of life. The rest, including the familiar ants, wasps and bees, have gone further in various differing ways, culminating in social behaviour. The first step has been, instead of leaving the prey in its natural environment where it can continue to feed but may itself become food for a predator along with the larva within, to hide it away

in a sheltered environment where the young aculeate can feed undisturbed though the host cannot. To obviate the danger of the prey wandering off or using up its energy resources on the one hand, or dying and becoming desiccated or decayed on the other, it is paralysed by the use of the sting. This is the practice of the solitary wasps. The most primitive of these first kill their prey, then excavate a burrow where it can be stowed away, risking its removal by some other predator meanwhile. More advanced species first excavate a burrow - or locate a hollow stem or an abandoned beetle tunnel or some similar refuge - then stock it with one or more paralysed prey, lay an egg and finally seal the opening. This method requires a very exact adaptation of the dosage of poison injected and the anatomical site of injection to obtain the right effect, neither fatal nor wearing off too soon. Consequently these wasps have to confine themselves to one particular type of prey to each wasp species. I have seen a provision store consisting solely of weevils of the genus Otiorrhynchus assembled by Cerceris arenaria; third instar nymphs of the bug Sehirus luctuosus by Astata boops; small flies of the subfamily Syrphinae by Ectemnius cavifrons. Trees full of suitable beetle holes are haunted by ruby-tailed wasps such as Chrysis cyanea and Chrysis ignita awaiting a chance to pop in and lay their own eggs on the prey while the captor is finding more. (All these species are known from the Reading area.) Several genera of solitary wasps (and bees) have similar habits, frequently 'parasitising' species or genera closely related to themselves. More advanced wasps, not occurring locally, practise progressive provisioning, revisiting the burrow at intervals to replenish the food supply. The social wasps extend this over successive generations by forming a colony in which the care of the young is taken over by unmated females (workers). There are seven British social wasps, Vespa (the Hornet) nesting in hollow trees, rare but probably still present in the Reading area, three species of Vespula which excavate or enlarge holes in the ground and are common everywhere, and another, Vespula austriaca, which is a social parasite on V. rufa and does not occur here, and two species, both local, of tree wasps Dolichovespula which build hanging nests in the open. Altogether 102 out of the 187 British wasps have been recorded locally, though many have not been reported in recent years and their status must now be in doubt.

Bees are an offshoot from the burrowing wasps. They are entirely vegetarian, both grubs and adults feeding on pollen and nectar from flowers. They have well-developed sucking mouthparts in addition to the biting mandibles. Their body hair is feathery and traps pollen which is combed out by the legs and packed into special pollen-carrying structures on the hind tibiae or under the abdomen. Like the solitary wasps, solitary bees utilise a wide variety of nest sites, underground burrows, hollow stems, beetle borings in wood, and even empty snail shells, all of which are provisioned with pollen to supply the needs of the larvae. Brood parasitism on close relatives, the development

of the social habit, and social parasitism where a parasite queen invades a colony, kills the host queen and lays eggs which are reared by the host workers, are all repeated among the bees just as among the wasps. Social bees have developed an elaborate technique for storing nectar, which if left to itself quickly develops moulds. The nectar is treated with enzymes which convert its sugars to more stable forms, and dehydrated till it is barely liquid and on the point of crystallising. The papery material used for nest-building by social wasps would be useless for the storage of honey, so social bees have developed beeswax, a water-proof substance soft enough to be worked and shaped with the jaws, but stiff enough to keep its shape indefinitely thereafter. There are 158 bee species (if one includes feral colonies of the domesticated honey bee) occurring in the Reading area out of 251 on the British list.

The ants are a group of Aculeates which have diverged from the main stock at a very early stage. Only males and queens possess wings, which they discard immediately after the conclusion of the mating flight, for this is a predominantly underground group living under conditions where wings are a hindrance rather than a help. All the 51 British species are social insects. Their nests are altogether different in structure from those of bees or wasps, being a network of passageways with enlarged chambers here and there but no individual cells. They may be constructed in soil as in the red ants of the genus Myrmica, of which the common local species is ruginodis, or the yellow Lasius flavus which makes the familiar ant-hills of grassland. Lasius niger is often found under paving stones, but may pass unnoticed until swarming time, when many nests over a wide area all send out their winged sexual forms on a single hot sunny day. The large wood ants of the genus Formica nest in heaps of pine needles, and the little Leptothorax acervorum in rotten tree stumps. Ants as a group have abandoned plant feeding more completely than any other Hymenoptera. Some species have reverted to it in an indirect way through the medium of aphids or 'greenfly'. Aphids suck the sap of plants which though very dilute is comparatively rich in sugars but poor in protein. To obtain their protein requirements they have to feed non-stop, processing a huge volume (relative to their own body size) of unwanted water and sugars. Some of the sugar is concentrated out as 'honey-dew' secreted from glands on the abdomen whence it is collected by ants. The ants have never evolved a way to store this other than inside their own bodies, so to assure a constant supply some species such as Lasius flavus convey aphids underground and attach them to the roots of plants. Only 15 species have been recorded in our district, so the number could undoubtedly be increased by anyone willing to concentrate on ants.

Wildlife Conservation at AWRE Aldermaston

A. Brickstock

The Ministry of Defence is one of the major landowners in Britain, controlling some 628,000 acres (nearly a thousand square miles) spread over some hundreds of sites. Much of this land is relatively undisturbed and harbours a great variety of wildlife. To investigate and help conserve wildlife on these lands the MoD in 1975 appointed a full-time Conservation Officer. Eventually all sites were asked to call for volunteer naturalists to form spare-time Conservation Groups. Over 150 sites now have groups with over 4000 members. Findings are published in site dossiers and also in the quarterly magazine "Sanctuary".

AWRE Aldermaston covers just over one square mile and has several areas of woodland, some of them preserved in an 'unmanaged' state, five ponds, the margins of some of these having good marsh areas, and extensive areas of heath and grassland.

Just over a mile of the Roman Road from Silchester to Speen crossed the site near its broadest point, but all traces of this were lost during previous estate and airfield use. We also have 400 yards of one of the many Grim's ditches. This is one of a number in the area known as the 'Silchester dykes' and was probably constructed after the Roman evacuation from Britain (300-400 A.D.). It is marked as an ancient monument and is in very good condition.

The largest of our ponds, The Decoy Pond, covers about six acres. Decoy ponds were an idea brought from Holland in the 17th Century and ours may have been the fourth to be established in Britain. They had at one end a curved, tapering 'funnel' which was covered by a net or branches. A trained dog appearing and disappearing behind a series of screens was used to 'decoy' ducks into the funnel, a flap was dropped over the entrance and the ducks were then easily caught. The pond is, of course, no longer used for duck trapping, although it often has numerous water birds in transit. It is well stocked with various fish and used by the angling club, as well as being recognised by the Nature Conservancy Council as an important site for Odonata (Dragonflies and Damselflies).

An introduction of the alien water plant Lagarosiphon var. major some years ago had near-disastrous effects. It grew in moderation until the long hot summer of 1976 when, unusually in Britain, it flowered and seeded profusely, resulting in a massive growth the following season which virtually choked the pond. Only after much expert advice, use of a herbicide (Reglone 40) and hundreds of man-hours spent dragging many tons of weed from the pond has it been restored to something approaching its former state. Clearly a weed, in no uncertain terms, by the criteria of Dr. Ackeroyd in his recent talk.

The Odonata round the Decoy Pond were studied well before the Conservation Group was formed, and 17 of the 44

British species were found. Four of these species were ones with restricted distribution: Red-eyed damselfly (Erythronia najas), Scarce Aeshna (Aeshna mixta), Emperor dragonfly (Anax imperator) and Downy Emerald (Cordulia linaenea).

AWRE Conservation Group was formed in 1976 and has sections devoted to all the major branches of Natural History. Although no organised parties can be admitted to site, visits by individuals with expertise lacking on site are possible and have occasionally been arranged.

The Botany section meets one lunchtime per week throughout most of the year, recording vascular plants and fungi. Some of our members are virtual beginners and we regard teaching them as an essential part of our activities. Several of them have subsequently joined Reading and District Natural History Society. So far over 350 vascular plants have been recorded, including a large number of superb Marsh/Spotted Orchid hybrids; Green winged Orchid; Marsh St. John's Wort, now sadly overgrown and probably no more; the alien Odontites lutea, Springbeauty (Montia perfoliata) and Yellow Bird's-nest. In another of our ponds Sweet-Flag flowers regularly although in general it rarely flowers in Britain and Fringed Water-lily is abundant, though rather rare in Britain.

A Latin name/common name/numeric order key is used to sort and list the considerable quantity of data amassed.

Nearly 250 species of fungi have been found, some of them in great numbers. Of particular interest are: Agaricus langei; Coprinus stercorarius; Gomphidius roseus; Hygrocybe chlorophanus; Leccinum aurantiacum; Lepiota rhacodes var. hortensis; Leptonia lampropus; Phaeolus schweinitzii, Sparassis crispa and Volvariella speciosa.

A mercury vapour moth trap has been run since February 1976, starting with one night per week and rising to four nights per week, with some gaps. The trap is fitted with a refrigerator which lowers the temperature to a point at which the activity of the insects caught is reduced and they remain reasonably quiescent until examined next morning, before being released. It is believed that ours was the first trap so fitted. Very large numbers of specimens have been examined, the total to date being about 110,000. Total species now number 32 butterflies and 403 of the larger moths out of a total of approximately 900 species on Bradley and Fletcher's British list. This total is probably representative of the surrounding countryside rather than AWRE alone. Identification of nearly all of these species has been verified by Brian Baker. A relative-abundance index is being prepared to highlight species of particular interest.

Other records include 70 mosses and liverworts, some rather uncommon for the area, notably Calypogeia arguta, Brachythecium mildeanum and B. salebrosum; 80 birds,

including kestrels nesting in the girders of one of the old aircraft hangars; large numbers of rabbits surviving despite periodic outbreaks of myxomatosis, as well as foxes, hares, badgers and numerous aquatic species (fish, insects, etc.)

Stag beetles, confined to southern Britain and decreasing in numbers, rarely exceed 50mm. in length. However, three large specimens each approximately 60mm. long have been found. Their size suggests a good breeding place, possibly some ancient oaks left from when the site was part of the Aldermaston estate.

Two Australian cockroaches (Periplaneta australasiae) were found on separate occasions in 1981, in packing cases from abroad, one a female nymph, the other a mature female with a body 2½cm. long and a wing span of 4½cm.

As well as recording species, Conservation Group also try to influence management of the site with a view to wildlife conservation, in particular recommending mowing schedules and preferred management methods for areas of particular interest. In this we are often quite successful, although of course essential site needs must always take precedence. During the winter months a series of lunchtime Natural History talks are organised. Numerous people have helped us in many ways over the seven years we have been active, and their efforts on our behalf are gratefully acknowledged.

* * * * *

Albinism in Frogs (*Rana temporaria* L.) 1978-82

or

Unig - Three generations of Frogs with the Albino strain

A. Price

During April 1978, 250ml. of fertile white frog spawn and many fertile clumps of black spawn were laid in the sinks in my garden at 6, Mansfield Road, Reading. This was not unexpected because of the great number of frogs, single recessive for albinism (Cc) that had been released in my garden and the neighbouring gardens during my studies of albinism in frogs. These were written up in eight earlier numbers of the Reading Naturalist (nos. 19-26, 1967-74). I abandoned these studies temporarily in 1973.

Later some pink, double recessive, tadpoles were

found in the sinks. Some were placed in the pond at 3, Mansfield Road and some in a tank in my study. By 2nd September 1978, one apparently full-albino frog 24mm. long and weighing 1.57g. had been reared from these tadpoles. By 17th June 1979 it was seen to be a female (60mm. and 33g.). It overwintered in a tank on my desk.

On 2nd March 1980, the frog was called UNIG: the letters suggest that the frog was an uninvited guest, which it certainly was as I had decided to give up frog breeding. She was placed with a normal male, bearing splodges, in a shallow sink protected by a wire cage to prevent outside interference by other frogs. Splodges consist of aberrant pigment cells usually connected with abnormal pigmentation. The black patches start small, grow for about five years and then stop growing. These black patches have been used for the individual identification of frogs so marked. No frogs have been found with identical patterns. Splodges have been studied on many animals by Dr. I. W. Whimster. See also Reading Naturalist no. 19 page 10.

The object of the breeding was to confirm that Unig was a full albino. On 27th March 1980, after 15 days in amplexus, Unig laid 150ml. of fertile white spawn. The expected result was:

Unig	cc	female	X	Male	CC
Cc		Cc		Cc	Cc

All the tadpoles pigmented confirming the genetic rating of the male.

By 24th June 1980, nineteen vigorous, pigmented frogs were growing well and by 2nd November the two largest, Freddie, a male, and Freda, a female, were 61 and 50mm. long and weighed 27 and 17g. respectively. By the spring of 1982 they were sexually mature and Freddie was 70mm. long and 41g. in weight and Freda 73mm. and 46g.

Following up Unig's breeding in 1980, the experiment was repeated in 1981 with another normal (i.e. CC) male. The result was similar to that of 1980 and a male (Solo) and two females were bred and retained. They should be ready to breed in 1983.

During the spring of 1982, it was decided to concentrate the breeding on Unig, Freda and Freddie, in order to prove their genetic make-up. Concentration on Unig was important owing to her uncertain physical condition. On 23rd March 1982, after three weeks in amplexus, Freda and Freddie produced 300ml. of black spawn which was part fertile and from which 76 pigmented tadpoles survived. The expected result was:

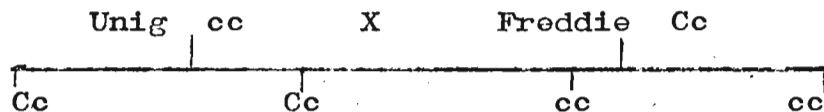
Freda	Cc	X	Freddie	Cc
CC		Cc	Cc	cc

Of the 72 surviving tadpoles, 14 lost their melanin (maternal pigment) as they developed, whilst 59 became fully pigmented due to their genetic pigment.

Therefore the percentage of full albinos was 19.4%. This may be taken as confirmation of the suggested genetic ratings. In view of the very close nature of the inbreeding it may also be taken as proof of the high quality of the strain with which we have been dealing over the last eighteen years.

On 28th October 1982, eleven albino frogs survived which were healthy, free of any defect and growing well. The two largest, both males, were 45 and 44mm in length and weighed more than 13g. in their first year.

On 24th March 1982 Unig, who had been in amplexus with her son, Freddie, produced 75ml. of fertile white spawn from which 152 tadpoles hatched. The expected result was:



Of the 152 tadpoles, 147 survived until the single recessive ones developed pigmented eyes and a peppering of melanin. At the final count 67 (46%) were single recessive and 80 (54%) double recessive.

This gives further proof that Unig is a full albino and her progeny from the 1980 and 1981 matings are single recessives. The tadpoles from the Unig X Freddie mating were of very poor quality, being circle swimmers and distorted. In view of the close relationship, this was to be expected. However on 29th October 1982, I had one pigmented frog from the Unig X Freddie mating which was 40mm. long and weighed 8g. I also had eleven healthy vigorous albino frogs of the Freddie X Freda mating.

Unig, who had steadily lost weight over the last two years, and had suffered damage to her left side (possibly a bite), has made something of a recovery this year (1982). The wound on her side has healed and she has put on weight. Also she seems to have suffered no permanent harm from having twice suffered a prolapse during oviposition.

One of the main difficulties in breeding albino frogs is that of saying 'I have now finished'. Another is the accompanying problem of what one should do with very important breeding stock. Their survival rate in the wild is nil. What suggestions have our members to offer?

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Looking Forward to the Spring - with a Difference

Sheila Ward

Way back in June, '82, I was given a large polythene box full of black wriggling peacock caterpillars and a few nettle leaves. For the first 5-10 minutes I found them extremely fascinating, and then panic set in - how was I going to look after them? In desperation I had the inspiration to contact Basil Parsons, who proved to be most helpful. He gave me instructions on the care of the caterpillars, telling me how long it would be before they were ready to pupate, which container to use, the date(s) the butterfly would be ready to emerge. All went exactly as he had advised, to the day. On 7th July, I opened the box on a warm sunny afternoon and was amazed to see how quickly the butterflies flew away. The following day the few remaining ones were released, leaving myself feeling delighted and also giving a sigh of relief that they had all emerged safely. At the end of July, speaking to a local shopkeeper who had a large number of Poplar Hawk Moth eggs laid on her green door by a trapped moth, I agreed to have 24 tiny little green caterpillars, thinking they would be as easy as the Peacock caterpillars - little realizing how quickly they grew and how much they ate! Each evening we had a 'cleaning out' session, followed by knocking at a neighbour's house for fresh willow leaves. Holidays became a problem, but another neighbour 'volunteered' to look after them. When we arrived home a week later, they looked a little sluggish. At 11 o'clock that evening, I was to be found filling a bucket with soil and placing the caterpillars on top, with a few willow leaves. I was not too soon - next morning they had all 'gone to ground'. What a relief to have no more cleaning out and collecting leaves! A week later a boy knocked at my door showing me a caterpillar which his cat had brought in. On examination it appeared to be undamaged. This time it was an Elephant Hawk Moth. Again the daily routine of leaves and cleaning out, but not for long. After 5-6 days it also was ready to pupate, and this time I was better prepared. Finally (I hope), on a Society's walk at Heckfield in September, I was given a Pale Tussock Moth caterpillar. This proved to be much less trouble. Within two days it was ready to pupate, in preparation for which it drew leaves all around itself, saving me having to find another bucket to fill with soil.

Now I am waiting eagerly for the spring, to see if I have been successful in rearing the Poplar Hawk, Elephant Hawk and Pale Tussock Moths - hoping so. On reflection it has been a very worthwhile experience. I can still remember the sheer magic of watching my first ever Peacock Butterflies being released.

Kenfig Pool and Dunes, Glamorgan

H. J. M. Bowen

On the third of July 1982, fifty-three members left Reading rather early in the morning and took the M4 for South Wales, bound for the Nature Reserve at Kenfig. I was able to flag down the coach at the Hungerford Interchange, where I saw a colony of Reflexed Saltmarsh-grass, to make up a full coach-load. After a short stop at Aust, overlooking the Severn, we passed roadside banks yellow with Dyer's Greenweed and approached Bridgend in good time. Here the driver took us on an unscheduled trip through rural Wales before finding the Reserve car park. Despite pangs of hunger, partly relieved by a local baker's van, we were hurried off into the dunes by the enthusiastic Warden, Steve Moon. In the dune slacks a mass of fascinating plants detained us, notably Bog Pimpernel, Creeping Willow, Early Marsh-orchid, Marsh Helleborine, Meadow Thistle, Moonwort, Round-leaved Wintergreen, Variegated Horsetail and the well naturalised alien Blue-Eyed Grass (in fruit). These dune slacks are flooded in the winter and then make a splendid habitat for wading birds. Despite a brisk wind, butterflies, dragonflies and beetles were fairly common, but Hugh Carter saw few flies. Of the eight species of butterfly seen, the Dark Green Fritillaries were the most striking; we were about a fortnight too late to see the Small Blue. Five-spot Burnet and Cinnabar Moths were seen, and caterpillars of Lackey and Puss Moth, the latter presumably living on Creeping Willow.

As soon as we reached a sandy dune-ridge, the hungrier members sat down to lighten their packs by eating the contents, leaving a few crumbs for the local tent spider, Pisaura mirabilis. Those keener and more ascetic carried on to find a colony of the curious Fen Orchid with its edged stem; one plant was photographed at least 54 times. The dunes were arid, but Biting Stonecrop, Burnet Rose, Polypody, Portland Spurge, Sand Sedge and Wild Pansy were still green, while tiny grasses like Dune Fescue, Sand Cat's-tail and Sea Fern-grass were dried up. On the tops were fragments of lichen heath with Bacidia muscorum, Diploschistes muscorum, two species of Peltigera (dog lichens) and several of Cladonia, of which C. foliacea was the most obvious.

After lunch we took the track behind the foreshore dunes, where rumours of birthday-suit bathers were proved false. We did see two really rare plants here, Sea Stock and Wallflower Cabbage, as well as many coastal species such as Prickly Saltwort, Rock Sea-lavender, Samphire, Sand Couch, Sea Bindweed, Sea-holly, Sea Rocket, Sea Sandwort and Sea Spurge. Colonies of Tenby Snail (Theba pisana) revelled in the desert conditions. We next turned inland to circumnavigate the Pool, finding on the way more Fen Orchid, Adder's-tongue, Brookweed, Lesser Waterplantain, Sharp Rush, Slender Spike-rush, Tubular Water-dropwort and colonies of Fragrant Orchid smelling of

hyacinths. To reach the Pool we crossed old dunes with much scrub, including birch, bramble, dogwood, elder, gorse, grey willow, guelder rose, hawthorn, pine, privet, rowan, sea-buckthorn and sloe and even apple, buckthorn and yew, but no ash, beech or oak. Here Alan Brickstock saw Yellow Bird's-nest, and most of the party saw a hybrid marsh orchid with ring-spotted leaves.

At the Pool margin the Warden took a small party on an assault course of alternating dune ridges and VWS (very wet slacks, as the ladies soon discovered). On the former we found a few spikes of the rare Green-flowered Helleborine, and a Squinancywort whose orange roots and sessile flowers showed it to be the newly described species Asperula occidentalis. In the latter we saw a small colony of Great Fen-sedge, a dense stand of hybrid Horsetail and Bogbean, Fen Pondweed and Knotted Pearlwort. On the way we passed the rusting pipeline with which it was once planned to extract water for the Port Talbot steelworks, a project happily now abandoned.

The Pool itself is large, shallow, sandy and fed by freshwater springs. Bathers and canoeists were using it, and the only birds seen were Coot, Great Crested Grebe, Mute Swan, Reed Bunting and Reed and Sedge Warblers. It contained interesting aquatic plants such as Fan-leaved Water-crowfoot, Hairlike Pondweed, Shoreweed, Spiked Water-milfoil, Rigid Hornwort and an unnamed Charophyte. The fringing marsh and swamp had Hemlock Water-dropwort, Marsh Speedwell, Sea Club-rush, Snaezewort, Water Dock and Yellow Loosestrife.

On the way back to the car park we saw several alien plants, such as Hoary Mustard (closely resembling Black Mustard), Pearly Everlasting, Slender Rush and a Bridewort. Many finished the day with a Welsh ice-cream and a visit to the exhibits in the Reserve headquarters. At a final comfort stop on the M4, wild cherry was in good fruit and at least one jar of cherry jam was made that evening.

Altogether the Society had a splendid day at one of the most interesting dune reserves in Britain. The site is undisturbed and few alien plants have invaded it. It holds several national rarities which are cared for, and is also remarkable for the absence of common woodland species. Most of the area we saw was lime-rich sand and alkaline fen-slacks; while we saw some heather, we missed areas of Sphagnum bog and cottongrass. In all 268 plant species were recorded, the two pondweeds being new county records. Thanks are due to Martin Sell for organising and leading the trip, to Steve Moon for coping with such a big party, and to the many members who helped provide records and information.

List of the more interesting plants seen, in alphabetical order by genus.

* = alien.

Achillea ptarmica	Sneezewort
Agrimonia odorata	Fragrant Agrimony
Anagallis tenella	Bog Pimpernel
*Anaphalis margaritacea	Pearly Everlasting
Anthyllis vulneraria	Kidney Vetch
Asperula occidentalis	
Baldellia ranunculoides	Lesser Water-plantain
Bidens tripartita	Trifid Bur-marigold
Botrychium lunaria	Moonwort
Briza media	Quaking-grass
Cakile maritima	Sea Rocket
Calystegia soldanella	Sea Bindweed
Carex arenaria	Sand Sedge
C. ovalis	Oval Sedge
Carlina vulgaris	Carlina Thistle
Cerastium diffusum	Sea Mouse-ear
Ceratophyllum demersum	Rigid Hornwort
Cirsium dissectum	Meadow Thistle
Cladium mariscus	Great Fen-sedge
Cynoglossum officinale	Hound's-tongue
Dactylorhiza fuchsii	Common Spotted-orchid
D. fuchsii x praetermissa	
D. incarnata subsp. coccinea	
D. praetermissa	Southern Marsh-orchid
Desmazeria marina	Sea Fern-grass
Echium vulgare	Viper's-bugloss
Eleocharis uniglumis	Slender Spike-rush
Elymus farctus	
Epipactis helleborine	Broad-leaved Helleborine
E. palustris	Marsh Helleborine
E. phyllanthes v. cambrensis	Green-flowered Helleborine
Equisetum arvense x fluviatile	
E. variegatum	Variegated Horsetail
Erigeron acer	Blue Fleabane
Euphorbia paralias	Sea Spurge
E. portlandica	Portland Spurge
Gymnadenia conopsea	Fragrant Orchid
*Hemerocallis fulva	Day Lily
Hieracium umbellatum	
*Hippophae rhamnoides	Sea-buckthorn
*Hirschfeldia incana	Hoary Mustard
Honckenya peploides	Sea Sandwort
Hutera cheiranthos	Wallflower Cabbage
Iris foetidissima	Stinking Iris
Juncus acutus	Sharp Rush
*J. tenuis	Slender Rush
Limonium binervosum	Rock Sea-lavender
Liparis loeselii ovata	Fen Orchid
Listera ovata	Common Twayblade
Lithospermum officinale	Common Gromwell
Littorella uniflora	Shoreweed
Lysimachia vulgaris	Yellow Loosestrife
Matthiola sinuata	Sea Stock

**Melilotus alba*
Menyanthes trifoliata
Molinia caerulea
Monotropa hypopitys
Myriophyllum spicatum
Oenanthe crocata
O. fistulosa
O. lachenalii?
**Oenothera cambrica*
Ononis spinosa
Ophioglossum vulgatum
Orobanche minor
Phleum arenarium
**Pinus mugo*
Plantago coronopus
Polygala vulgaris
Potamogeton coloratus
P. trichoides
Pyrola rotundifolia
Ranunculus circinatus
Rosa spinosissima
Rumex hydrolapathum
Sagina nodosa
Salix repens
S. caprea x *viminalis*?
Salsola kali
Samolus valerandi
Scirpus maritimus
Scutellaria galericulata
Sedum acre
**Senecio squalidus*
Sieglingia decumbens
**Sisyrinchium montanum*
Trifolium arvense
Verbascum thapsus
Veronica scutellata
Viola tricolor
Vulpia membranacea

White Melilot
Bogbean
Purple Moor-grass
Yellow Bird's-nest
Spiked Water-milfoil
Hemlock Water-dropwort
Tubular Water-dropwort
Parsley Water-dropwort?

Spiny Restharrow
Adder's-tongue
Common Broomrape
Sand Cat's-tail
Dwarf Pine
Buck's-horn Plantain
Common Milkwort
Fen Pondweed
Hairlike Pondweed
Round-leaved Wintergreen
Fan-leaved Water-crowfoot
Burnet Rose
Water Dock
Knotted Pearlwort
Creeping Willow

Prickly Saltwort
Brookweed
Sea Club-rush
Skullcap
Biting Stonecrop
Oxford Ragwort
Heath-grass
Blue-eyed-grass
Hare's-foot Clover
Great Mullein
Marsh Speedwell
Wild Pansy
Dune Fescue

SEEN IN 1981:

Apium inundatum
Eriophorum sp.
Ophrys apifera
**Rumex frutescens*

Lesser Marshwort
Cottongrass
Bee Orchid

* * * * *

Mosses of Central Reading : Update

M. V. Fletcher

To write an account of an area so restricted and apparently uninteresting, and then to make substantial additions ten years later, suggests an initial lack of thoroughness. Yet part of this article reflects apparently genuine changes since my account of the Bryophytes of Reading, published in the Reading Naturalist no. 25, 1973. Also over the years I have gained access to a number of private gardens and in particular, to the grounds of Reading School.

Nomenclature in this updated account is in accordance with Watson (E. V.) British Mosses and Liverworts, 2nd Edn., 1968. An asterisk indicates a new record.

The most striking omissions from the first account are to be found on a small area of steep mortar, under the ash tree at the north part of the Abbey Ruins. Here on ledges untroubled by children's feet, grows the striking leafy hepatic *Porella platyphylla (L.) Lindb. With it, and in larger quantity, is *Cirriphyllum crassinervium (Tayl.) Loeske & Fleisch.). These are characteristic of chalk banks and tree roots in woods in the Chilterns. Both are presumably relics which endured the Carboniferous era of air pollution in an exceptionally favoured habitat. The Porella almost disappeared after the hot dry summer of 1976. It has slowly increased since but is still scarce, and should not be gathered.

The grounds of Reading School also support some plants which are noteworthy in so limited a context. The old close-mown turf on the west side of the Erleigh Road entrance, under the avenue of limes, has been leached enough to give small patches with an acid vegetation noticeably darker than the grass around. In these *Polytrichum piliferum Hedw. and *Pohlia nutans (Hedw.) Lindb. grow, also rather stunted *Atrichum undulatum (Hedw.) P. Beauv. There is some very small *Dicranella heteromalla (Hedw.) Schp. nearby. The most striking of these acid plants is *Isopterygium elegans (Hook) Lindb., a pleurocarp with pale glossy flattened shoots. There is a large carpet of it on a clay bank in deep shade, under a cherry laurel near the swimming pool.

In a neglected old garden nearby, in Craven Road, are *Mnium undulatum Hedw. and *Fissidens bryoides Hedw. The asbestos roof and the tiles of the tuck shop support large amounts of *Tortula ruralis (Hedw.) Crome, whose large hoary cushions are obvious from a distance. Most interesting, on muddy tarmac by the vestry door of the school chapel, is *Tortula latifolia Hartm., a local plant normally confined to tree roots and stones in the flood zone of lowland rivers.

There are perhaps many more curiosities in such places.

To visit every secluded garden in even a small area of the town would take more planning than a survey of the remotest Scottish mountain, for obvious reasons.

Tarmac is a habitat not to be despised, once the tars and oils have been leached out of the surface, though it provides a poor buffer against air pollution. Where shaded and not trampled, it can support any of the common Reading pleurocarps, as in New Road, near Redlands Road. It yielded one surprising new record. On a shaded path beside St. George's Church, near the Oxford Road, grew large amounts of *Isoetidium myurum Brid. It now seems extinct, destroyed by resurfacing.

A change in the tarmac flora suggests that air pollution is now less severe. *Orthotrichum diaphanum Brid., I said in 1973, would not be found in pavement cracks. I found small tufts, not in cracks, but on the tarmac of a car park at Whitley School in 1975. It is now quite common on tarmac, though too inconspicuous to be noticed, save from a kneeling posture. *Grimmia apocarpa Hedw., of which only minute muddy and doubtful material was known to me in 1972, grows in some quantity on the pavement of King's Meadow car park - the pavement on which N.H.S. members assemble for excursions. The first authenticated record in Reading was on a gravel drive in Earley, in 1981. I have recently seen it on south-sloping cement in Abbey Square. Common enough on shaded walls in Berkshire, it is perhaps recolonising Reading. In its stunted forms it is a confusing plant to a beginner. Like Orthotrichum diaphanum it is small and dark, with hair points barely visible, save through a good lens. The tufts are larger, the stems less neat and erect than those of the Orthotrichum.

Another plant which may puzzle beginners, and which seems to have increased, though I probably overlooked it earlier, is *Scleropodium caespitosum (Wils.) B., S. & G. It is an occasional plant of warm rocky woods and riversides in the southern part of the British Isles, of which I had in 1972, doubtful material from a gravel drive in Emmer Green. I later found it in quantity in the gravelly weedy margins of Queen's Road car park. Its most typical Reading habitat is on shaded cement paths. It has turned up in the front and back gardens of my house (70 South Street) and there is an enormous patch of it on the back garden path of 67 South Street. It is best described as a smaller neater plant than Brachythecium rutabulum (Hedw.) B., S. & G., of a glossy golden yellow colour; with overlapping concave leaves.

One more pleurocarp whose status puzzled me in 1972, and which still puzzles me, is *Eurhynchium swartzii (Turn.) Curn. It seemed to be an ingredient in many of the old birds' nests in bushes near this house, yet I could not find the growing plant. The tiny trampled scraps of an unidentified pleurocarp in my garden would have been no use for nest building. In the late 1970s, I found vast

amounts of this moss under nettles in the rubbish tip at the bottom of the garden of Watlington House. It is now the most abundant moss on half-buried bricks in my garden. There is a large dirty patch of it behind a gateway near Yield Hall car park. I have not seen it elsewhere in Central Reading. Growing only loosely attached to the soil, in large wefts, it is attractive material for nesting birds, and is perhaps also more vulnerable to air pollution than other, more close-growing terrestrial mosses. Other records of this plant from local private gardens would interest me. It most resembles Eurhynchium praelongum (Hedw.) Hobk., but the stems are weaker and the branching quite loose and irregular.

It is on the walltop flora that the clearest effects of reduced pollution can be seen. All the common walltop species now grow freely throughout Reading, including Grimmia pulvinata (Hedw.) Sm., and fat healthy tufts of Orthotrichum diaphanum. In that mysterious patch of waste land, The Dell, in Watlington Street, is a north-facing wall which I succeeded in reaching in 1974, and which has long supported an enormous growth of *Camptothecium sericeum (Hedw.) Kindb. It may also have lurked unobserved on the wall round the garden of Watlington House, where there are now two large and fast spreading areas of this striking moss. There are small amounts, recent arrivals perhaps, on other walls in London Road, and on the south-eastern wall of St. Mary's, in the Butts. In contrast, Hypnum cupressiforme Hedw., another likely walltop moss, does not seem to be increasing.

The most striking addition to the Reading walltop flora consists of two small black tufts on a modern cement pillar by Kendrick School. Too scarce and stunted to be convincingly identified without fruit, it is probably *Orthotrichum anomalum Hedw. This is one of the commonest mosses of limestone walls in the Cotswolds, and frequent in West Berkshire. Its appearance in Reading is unexpected and welcome.

One of the most interesting plants is *Seligeria calcarea (Hedw.) B., S. & G., in small amounts on a limestone walltop near the Polish Catholic Church in Watlington Street in 1972. Repairs to the wall covered the moss with cement. It grows also in considerable quantity on the vertical side of an oolitic limestone wall in Eldon Road, on the side of a similar pillar in Craven Road, and on a vertical cement wall in Queen's Road. It is a very inconspicuous moss, barely to be noticed save in fruit, and should be looked for in similar places elsewhere. It is abundant on limestone walls in central Bath.

One of the best known moss habitats in Reading is, alas, no more. The Forbury fountain has been cleaned and left dry and barren. Tiny scraps of Bryum pseudotriquetrum (Hedw.) Schwaegt. (var. bimum (Brid.) Lilj.?) still lurk around the goldfish pond, so it is still a Reading plant. I am now more familiar with *Bryum radiculosum Brid., which

is fairly frequent in limestone and mortar cracks on walls. Good tufts are a rich, vivid, velvety dark green, with tight packed shoots and narrow, erect, crowded leaves. A determined hunt in garden beds locally will often turn up *Bryum rubens Mitt. with wide spaced leaves, stems reddish at least below, and usually with reddish bulbils in the axils of the lower leaves. Other dreadfully undistinguished species of Bryum occur, including probably B. intermedium (Brid.) Bland. and B. pendulum (Hornsch.) Schimp. However, without fruit, and sometimes even with it, their identification is hopeless.

The most encouraging feature of the changes noted here is the increase of several species noted in 1972. The reduction of air pollution seems a main cause. On the other hand, average sulphur dioxide levels have not fallen much. It may be that the fallout of poisonous coal soot was once an influence on these small plants. The introduction of smokeless zones has almost eliminated the persistent winter smogs, with their very high pollution peaks, which I used to record in the 1960s, when I first came to Reading.

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Agaricus around Reading, 1982

P. Andrews

Foray lists rarely contain more than one or two species of Agaricus despite the fact that nearly fifty species have been recorded for Britain so far. This suggests that the majority of Agaricus species are difficult to find, but is this really so? Mainly as a result of casual observations, twenty species were found in Berkshire in 1981, most of them near Reading (Andrews, 1982). The number of Agaricus species recorded for the county was increased, and two of the species found were not in the British Check List (Dennis, Orton & Hora, 1960).

Many of the records for 1981 were for Earley, Shinfield and Farley Hill. In 1982 the observations were continued in these areas, and extended to Whiteknights and parts of Arborfield and Swallowfield. Places further from Reading which provided records in 1981 (Theale, Newbury, etc.) were not visited in 1982.

In the areas that were surveyed in 1981 and 1982, twelve species of Agaricus were found in the same places in both years: A. bitorquis (Earley), A. ingratus (Farley Hill), A. fuscofibrillosus (Shinfield), A. haemorrhoidarius (Farley Hill, Whiteknights), A. variegans (Shinfield),

A. campestris (Shinfield, several places), A. arvensis (Shinfield, several places), A. xanthodermus (Shinfield), A. comtulus (Shinfield), A. lutosus (Shinfield), A. porphyrizon (Shinfield), A. sagatus (Farley Hill).

The 1982 survey provided additional information on the occurrence and distribution of Agaricus as follows:-

RUBESCENTES

A. bisporus Frequent under Cupressus and Taxus in July (two places near Farley Hill), October (four places in Earley) and November (Earley and Arborfield).

A. bitorquis In July over thirty specimens were found at Farley Hill, twenty in Earley and six in Whiteknights, all growing in bare soil or thin grass. Some were also found in September and October in Earley, Shinfield and Farley Hill.

A. bernardii and A. ingratus These two specimens have identical microscopical characters but A. bernardii has a cap covered with thick coarse scales and grows in grass whereas A. ingratus has a smoother cap and grows in bare ground under trees. Specimens found at Farley Hill in 1981 fitted the second description. In 1982, large or very large specimens were found in the same place almost continuously from June to November, and other large specimens were found in five other places during August, September and November in the Arborfield-Farley Hill area. Some fitted the A. ingratus description, others had caps with thick scales but were growing in bare soil. In 1976, 1977 and 1982 specimens typical of A. bernardii were found in grass on the verge of Redhatch Drive, Earley, but at the same time (October) similar but smaller fruit-bodies appeared at four other places in the same road in needle cover under Cupressus. The distinction between A. bernardii and A. ingratus does not appear to be as clear-cut as the literature indicates, and the existence of intermediates suggests that the two descriptions apply to extreme forms of the same species in which the nature of the cap may depend on habitat and weather.

A. langei Single large specimens at Shinfield and Farley Hill (October).

A. variegans Five specimens in Whiteknights (October), also found at Farley Hill.

A. haemorrhoidarius Several specimens in two places near Shinfield (September, October).

A. silvaticus Under deciduous trees in Earley (October and November) and Shinfield (November).

A. vaporarius One specimen near Shinfield (October).

A. spissicaulis Over fifty fruit-bodies were found in one

meadow at Shinfield in early October and over a dozen more about a hundred yards away in another meadow. Large specimens continued to appear at the more prolific site until the end of November.

FLAVESCENTES

A. augustus Groups of up to ten large specimens were found at the end of October and in early November near Shinfield, Arborfield and Swallowfield, and at the same time single specimens appeared in Whiteknights and Earley.

A. silvicola Six specimens at Farley Hill (two places) and two in Earley (October).

A. xanthodermus Frequent in Whiteknights, Shinfield (two places) and Earley (October, November).

A. placomyces Over a dozen specimens were found near Whiteknights in October, and at the same time the species was reported from the Warburg Reserve, Bix, in Wasing Wood and near Whitchurch. Fruit-bodies continued to appear near Whiteknights for over a month.

A. macrosporus One small specimen near Shinfield in September and six more in October.

A. porphyrizon Several specimens at Farley Hill (October) and one at Grazeley (November).

A. semotus A single specimen at Shinfield (October).

A. sagatus The identity of this species, at one time in doubt, was established from a specimen found at Farley Hill in 1981 (Andrews, 1982). It is evidently not rare, since five specimens were found at the same place in 1982, plus six more at another place in Farley Hill and one in Whiteknights (October).

As was expected, the 1982 survey added to the number of Agaricus species found in the Reading area (Andrews, 1982). Nevertheless, the discovery of A. spissicaulis growing in quantity in meadows near Shinfield was a surprise, and this observation adds another species to the Berkshire list. Another new local record is A. lanipes, found by Dr. Alan Brickstock near Mapledurham, Oxfordshire. Most of the twenty-six Agaricus species found within a few miles of Reading during the last two years were growing in places unlikely to be visited by forays, which suggests that any assessment of the distribution of Agaricus based on foray lists is likely to be inaccurate. It is doubtful if such a high proportion of the known British species of another major genus of gill fungi could be found so easily. The equivalent number of Lepiota species would be about thirty-five and of Russula species about sixty.

One feature of Agaricus distribution noticed in 1982 was the existence of small areas which each favoured the growth of a number of species. Three such places were

found. At Farley Hill, the verges of a 100-yard stretch of road produced A. bisporus, A. bitorquis, A. ingratus, A. langei, A. silvicola, A. porphyrizon and A. sagatus; the verges of a 50-yard stretch of farm road at Shinfield, plus an adjacent meadow, produced A. bitorquis, A. variegans, A. haemorrhoidarius, A. silvaticus, A. vaporarius and A. spissicaulis; and the verges of Redhatch Drive, Earley, produced A. bisporus, A. bitorquis, A. bernardii, A. augustus, A. arvensis, A. comtulus and a species not identified. The recognition of more areas such as these is one way in which our knowledge of the distribution of Agaricus species can be increased.

I am very grateful to Dr. F. B. Hora for many helpful discussions and to Mrs. Mary Diserens and Dr. Don Stead for finding some of the specimens.

References:

- Andrews, P. (1982) The Reading Naturalist, no. 34, pp. 28-32.
- Dennis, R. W. G., P. D. Orton & F. B. Hora (1960) New Check List of British Agarics and Boleti, Trans. Brit. Mycol. Soc. Supplement.

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The Recorder's Report for Fungi, 1982

A. Brickstock

This has been another good year for Fungi, with a long, extended season, yielding 380 species. Some of the species which are normally very common have been much rarer, but many unusual species have been recorded, some from a number of different locations. The Society's Forays were well attended and produced 63 species at Heckfield on 25.9.82, 78 species at Kingwood on 9.10.82 and 83 species at Five Oaken, Mortimer, on 23.10.82.

Grateful acknowledgements once again to Mary and Neville Diserens who have provided extensive lists, as well as helping with identification both during Forays and in long hours afterwards; to Iris Dicker for her cumulated list from California Country Park; to Margrit and Tom Harrison for their lists from Leighton Park School; to various others who have provided lists, and not least to my wife for her constant stream of specimens.

I AGARICALES

Agaricus lanipes

Bottom Wood, Mapledurham, 24.10.82 (B)

Agaricus variegans

Wasing gravel pits, 6.11.82 (D)

Agaricus xanthodermus

Prospect Park, 26.10.82 (B)

Asterophora lycoperdoides

Kingwood, 24.10.82 (D)

Baeospora myosura

Five Oaken, 23.10.82 (NH)

Boletus calopus

Wasing Woods, 4.9.82 (D)

Boletus impolitus

Garden, Cockney Hill, Tilehurst (B); Leighton Park School, 26.6.82 (H)

Boletus parasiticus

California C. P. (ID); Wasing, 4.9.82 (D)

Boletus pruinatus

Sulham, 17.10.82 (B)

Boletus purpureus

Whiteknights, 25.7.82 (PA)

Boletus versicolor

Farley Hill, 20.9.82 (PA)

Chroogomphus rutilus

Sulham, 17.10.82 (B)

Collybia rancida

Kingwood, 9.10.82 (NH)

- Coprinus impatiens
Luxter's Farm, Skirmett, 10.10.82 (D)
- Coprinus stercorarius
Tadley, 20.10.82 (B)
- Cortinarius armillatus
Kingwood, 9.10.82 (NH); Sulham, 17.10.82 (B); Five
Oaken, 23.10.82 (B)
- Cortinarius bolaris
Kingwood, 9.10.82 (NH); Finchampstead, 27.8.82 (B);
Benyon's Inclosure, 29.8.82 (H)
- Cortinarius cinnabarinus
Sulham, 17.10.82 (B)
- Cortinarius pholideus
Kingwood, 9.10.82 (NH)
- Cortinarius puniceus
Kingwood, 9.10.82 (NH)
- Cortinarius sodagnitus
Sulham, 17.10.82 (B)
- Cortinarius splendens
Kingwood, 9.10.82 (NH)
- Cortinarius torvus
Kingwood, 9.10.82 (NH); Harpsden, 10.10.82 (B)
- Craterellus cornucopioides
Harpsden, 10.10.82 (B); Bellehatch Park, near Binfield
Heath, 20.11.82 (B/D)
- Crepidotus autochthonus
Wasing, 4.9.82 (D)
- Entoloma nitidum
Kingwood, 9.10.82 (NH)
- Galerina paludosa
Moor Copse, 5.12.82 (B)
- Gyroporus castaneus
Wasing, 4.9.82 (D)
- Hygrophorus glutinipes
Shinfield, 20.11.82 (PA)
- Hygrophorus quietus
Shinfield, 20.11.82 (PA)
- Hygrophorus schulzeri
Shinfield, 20.11.82 (PA)
- Inocybe asterospora
Harpsden, 10.10.82 (B)
- Inocybe casimiri
Finchampstead, 27.8.82 (B)
- Inocybe pyriodora var. incarnata
Harpsden, 10.10.82 (B)
- Lactarius fuliginosus
Wasing, 4.9.82 (D)

- Lactarius pubescens
California C. P. (ID)
- Lactarius resimus
Harpsden, 10.10.82 (B)
- Lactarius uvidus
California C. P., 19.9.82 (B)
- Lactarius vietus
Kingwood, 9.10.82 (NH)
- Lepiota bucknallii
Harpsden, 16.10.82 (B/D)
- Lepiota castanea
Davenport Wood, (D)
- Lepiota clypeolaria
Sulham, 17.10.82 (B)
- Lepiota hystrix
Harpsden, 16.10.82 (B/D)
- Lepiota ventriosospora
Harpsden, 16.10.82 (B/D)
- Lyophyllum connatum
Harpsden, 10.10.82 (B)
- Lyophyllum loricatum
Whiteknights, 20.11.82 (PA)
- Melanoleuca cognata
Harpsden, 16.10.82 (B/D); California C.P. (ID)
- Melanoleuca excissa
Arborfield, 25.11.82 (PA)
- Micromphale foetidum
Harpsden, 10.10.82 (B); Luxter's Farm, Skirmett,
10.10.82 (D)
- Mycena tenerima
Kingwood, 24.10.82 (D)
- Panaeolus sphinctrinus
Heckfield, 25.9.82 (NH)
- Panellus serotinus
Sulham, 21.11.82 (B), 28.11.82 (B), 31.12.82 (B);
Moor Copse, 5.12.82 (B)
- Pluteus lutescens
Dead Man's Wood, Shire Hall, 4.12.82 (PMRJ)
- Psathyrella microrhiza
Luxter's Farm, Skirmett, 10.10.82 (D)
- Rhodotus palmatus
Nuney Green, 26.9.82 (D); Harpsden, 16.10.82 (B/D);
Bottom Wood, 24.10.82 (B)
- Russula betularum
Fence Wood, Hermitage, 11.11.82 (B)
- Russula erythropus
Farley Hill, 17.10.82 (PA)

Russula luteotacta
Whiteknights, 11.9.82 (PA)

Russula pseudointegra
Whiteknights, 25.7.82 (PA)

Russula xerampelina
Heckfield, 25.9.82 (NH)

Stropharia squamosa
Kingwood, 9.10.82 (NH)

Tricholoma atosquamosum
Bottom Wood, 24.10.82 (B)

Tricholoma sciodes
Kingwood, 9.10.82 (NH); Five Oaken, 23.10.82 (NH);
Fence Wood, 31.10.82 (B)

Tricholoma sejunctum
Whiteknights, 11.9.82 (PA)

Tylopilus felleus
Abbot's Wood, Woodcote, 18.7.82 (H)

Volvariella bombycina
Riseley, 10.9.82 (PA)

Volvariella speciosa
Church End Copse, 8.11.82 (B)

II APHYLLOPHORALES

Auriscalpium vulgare
Sulham, 5.9.82 (D)

Bjerkandera adusta
Sulham, 28.11.82 (B)

Clavaria fumosa
Leighton Park School, 26.10.82 (H)

Clavariadelphus fistulosus
Kingwood, 24.10.82 (D)

Clavariadelphus junceus
Kingwood, 24.10.82 (D)

Clavariadelphus pistillaris
Harpsden, 10.10.82 (B)

Coltricia perennis
Heckfield Heath, 25.8.82 (H)

Ganoderma lucidum
Prospect Park, 26.8.82 (B); Sulham, 30.10.82 (B)

Hapalopilus nidulans
Davenport Wood (D).

Hericiium erinaceum
High Wood, Mays Green, 16.10.82 (D)

Hydnum repandum
Kingwood, 9.10.82 (NH)

Hydnum rufescens
Sulham, 28.11.82 (B)

Phaeolus schweinitzii

Heckfield, 25.9.82 (NH); Fence Wood, Hermitage,
31.10.82 (B); Wasing, 8.12.82 (B)

Sparassis crispa

Heckfield, 25.9.82 (NH); Harpsden, 10.10.82 (B);
Bucklebury, 11.12.82 (B)

Thelephora spiculosa

Great Wood, Fawley, 10.10.82 (D)

Trametes serialis

California C.P. (ID)

III GASTEROMYCETALES

Geastrum rufescens

Harpsden, 10.10.82 (B)

Geastrum triplex

Sulham, 26.9.82 (B)

Mutinus caninus

Harpsden, 10.10.82 (B); Sulham, (B); Wasing, 7.12.82 (B)

IV HETEROBASIDIOMYCETES

Dacrymyces stillatus

High Wood, Mays Green, 16.10.82 (D)

Pseudohydnum gelatinosum

Five Oaken, 23.10.82 (B); Benyon's Inclosure, 28.11.82 (H)

V ASCOMYCETES

Anthracobia macrocystis

Wasing (D), 10.12.82 (B); California C. P. (ID)

Cordyceps canadensis

Tadley Water Tower, 30.9.82 (B)

Helvella lacunosa

Harpsden, 10.10.82 (B)

Neobulgaria pura

Kingwood, 9.10.82 (NH)

Otidea onotica

Kingwood, 9.10.82 (NH)

Peziza cerea

Binfield Heath, 25.8.82 (HHC)

Rhizina undulata

Heckfield Heath, 25.8.82 (H)

Sarcoscypha coccinea

Sulham, 21.11.82 (B)

Contributors: Pat Andrews (PA), Ivy & Alan Brickstock (B),
Hugh Carter (HHC), Mary & Neville Diserens (D), Iris Dicker
(ID), Margrit & Tom Harrison (H) & Paul Jinks (PMRJ).
Records from Society Forays are designated by (NH).

The Recorder's Report for Botany 1981-82

B. M. Newman

Several hundred records were received this year and your Recorder thanks all those members who contributed. Records with sufficient information to enable the plants to be located, and a note of their abundance are particularly useful. Many of the records serve to confirm that well known local plants are still flourishing, but a few are of plants rare in this area. Epilobium lanceolatum sent in by Mr. Carter, Cyperus fuscus (second record for Berkshire) and Cladium mariscus (second record for Berkshire) sent in by Dr. Bowen are some of the rarer ones. Cyperus fuscus is listed in Schedule 8 of Part 1 of the new Wildlife and Countryside Act which recently increased the number of protected species from 21 to 62. Mr. Hughes looked for Pilularia globulifera at South Lake without success, and as this was its only Berkshire station it may be extinct in the county. On the other hand Polygonum minus, thought to be extinct in Berkshire, has been found at Cockham by Dr. Bowen. There are few local records for Dipsacus pilosus; until 1981 it had not been recorded from Silchester since 1930 but Mr. Helyar and Dr. Bucke have seen it flourishing beside the old walls and Mr. Helyar says it has been growing there and increasing for several years. Dr. Brickstock also found this species, by the Kennet near Burghfield.

The nomenclature and order used in this Report are according to the "Flora of the British Isles" by Clapham, Tutin and Warburg (1962). An alien taxon is indicated by an asterisk (*). Most of the English names are from "English Names of Wild Flowers", the recommended list of the Botanical Society of the British Isles.

List of Members' Records

POLYPODIACEAE

- Blechnum spicant (L.) Roth Hard Fern
Wellington College, NHS walk, 14.8.82 (RJG)
- Asplenium adiantum-nigrum L. Black Spleenwort
Among tombs, Caversham churchyard, NHS winter walk (HJMB)
- Dryopteris carthusiana (Villar) H. P. Fuchs Narrow Buckler-fern
College Wood, Oxon., NHS winter walk (HJMB)

OPHIOGLOSSACEAE

- Ophioglossum vulgatum L. Adder's-tongue
Near North Court Farm, Finchampstead, 11.5.82 (RJG)

RANUNCULACEAE

- Helleborus viridis L. Green Hellebore
Ridgeway track near Nuffield, 14.3.82; Sulham, 2.5.82 (AB);
Warburg Reserve car park, 12.5.82 (BK)

Ranunculus arvensis L. Corn Buttercup
By the road, near entrance to Warburg Reserve, 12.5.82 (BK)

PAPAVERACEAE

Papaver argemone L. Prickly Poppy
By footpath from Binfield Heath Lane to Coach & Horses,
9.82 (HHC)

FUMARIACEAE

Corydalis claviculata (L.) DC. Climbing Corydalis
In a hedge near Moor Green Farm, Finchampstead, 16.8.82 (TDH)
*Corydalis lutea (L.) DC. Yellow Corydalis
Ridgeway path between Streatley and Bledlow, 14.9.82 (AB)

CRUCIFERAE

*Coronopus didymus (L.) Sm. Lesser Swine-cress
Trench at Bishopswood playing field, Sonning Common,
6.82 (HHC); Upper Redlands Road, Reading (MRH)
Cardamine amara L. Large Bitter-cress
Mundaydean Bottom, NHS walk, 15.5.82 (AB)
Dentaria bulbifera L. Coralroot
Horton Wood, NHS walk, 15.5.82 (AB)

VIOLACEAE

Viola palustris L. Marsh Violet
Padworth Common picnic area, 12.5.82 (AB)

HYPERICACEAE

Hypericum pulchrum L. Slender St. John's-wort
Northerhams Wood, Bracknell, 26.9.82 (RJG)
Hypericum montanum L. Pale St. John's-wort
Mundaydean Bottom, NHS walk, 15.5.82 (AB); Straw Hill,
Mapledurham, Oxon., one dozen plants (MRH)

CARYOPHYLLACEAE

Stellaria neglecta Weihe Greater Chickweed
Dinton Pastures, near Loddon, 25.4.82 (RJG)
Stellaria palustris Retz. Marsh Stitchwort
Marshland near Cookham (HJMB)
Arenaria leptoclados (Rchb.) Guss. Slender Sandwort
Field between Bishopswood and New Copse, Sonning Common,
9.82 (HHC)

PORTULACACEAE

*Montia perfoliata (Willd.) Howell Springbeauty
Rag Hill, Tadley, 15.6.82 (AB); Leighton Park, 6.5.82 (RJG)

CHENOPODIACEAE

Atriplex littoralis L. Grass-leaved Orache
Casual on the edge of old gravel workings between
Burghfield Bridge and the M4 gravel pit, 7.8.82 (AB)

GERANIACEAE

Geranium lucidum L. Shining Crane's-bill
Demolition site, Redlands Road, Reading (HJMB)

OXALIDACEAE

*Oxalis corymbosa DC.
Queens Road car park, 7.7.82 (HHC)

BALSAMINACEAE

*Impatiens glandulifera Royle Indian Balsam
Canal near Burghfield Bridge, 20.6.82 (AB); Watlington
Park, 7.82 (HHC)

PAPILIONACEAE

Melilotus altissima Thuill. Tall Melilot
Smallmead Road, 9.7.82 (HHC)

*Melilotus alba Medic. White Melilot
Smallmead Road, 9.7.82 (HHC)

Trifolium micranthum Viv. Slender Trefoil
Whiteknights Park (MRH)

Trifolium arvense L. Hare's-foot Clover
Dinton Pastures, 24.7.82; Larch Avenue, Wokingham, 12.8.82
(RJG); waste ground adjacent to railway station, central
Reading (MRH)

Lotus tenuis Waldst. & Kit. ex Willd. Narrow-leaved
Playhatch chalk pit, 14.10.82 (HHC) Bird's-foot-trefoil

*Scorpiurus muricatus L.
Casual, in a garden in St. Peter's Avenue, Caversham (BK)

Onobrychis viciifolia Scop. Sainfoin
Nuffield, 23.5.82 (AB); embankment of M4 near Winnersh,
3.6.82 (RJG)

ROSACEAE

Gaulthieria rivale L. x urbanum L.
Along Basingstoke canal, Dogmersfield, 30.5.82 (RJG)

Agrimonia odorata (Gouan) Mill. Fragrant Agrimony
Ridgeway path near Warren Farm, 28.8.82 (AB); north end
of Foxhill Lane by Kiln Road reservoir, 23.9.82 (HHC);
Northerhams Wood, Bracknell, 26.9.82 (RJG)

Aphanes microcarpa (Boiss. & Reut.) Rothm. Slender
Fields by Binfield Heath Lane, 9.82 (HHC) Parsley-piert

Sorbus torminalis (L.) Crantz Wild Service-tree
Corner of hedge between Comp Wood and Binfield Heath Lane
(HHC); Finchampstead, 11.5.82; copse between M4 and
Forest Road, Wokingham, 30.5.82 (RJG)

CRASSULACEAE

Sedum telephium L. Orpine
Mundaydean Bottom, NHS walk, 15.5.82 (AB)

SAXIFRAGACEAE

Chrysosplenium oppositifolium L. Opposite-leaved Golden-saxifrage
Padworth Common picnic area, 12.5.82 (AB)

DROSERACEAE

Drosera rotundifolia L. Round-leaved Sundew
Snelsmore Common, NHS walk, 17.7.82 (RJG)

Drosera intermedia Hayne Oblong-leaved Sundew
Englemere Road, Bracknell, 18.7.82; Chobham Common,
29.8.82 (RJG)

THYMELAEACEAE

Daphne mezereum L. Mezereon
Flowering well at Stonor, 11.3.82 (HJMB)

ONAGRACEAE

Epilobium lanceolatum Seb. & Mauri Spear-leaved Willowherb
Field by Binfield Heath Lane, 9.82 (HHC)

E. lanceolatum x adenocaulon Hausskn.
The Spinney, Bishopswood playing field, 11.7.82 (HHC)

*Oenothera erythrosepala Borbas Large-flowered Evening-primrose
By the Thames between Reading Bridge and Horseshoe Bridge,
10.5.82 (AB)

HIPPURIDACEAE

Hippuris vulgaris L. Mare's-tail
Basingstoke canal near Greywell, 31.7.82 (RJG)

UMBELLIFERAE

Foeniculum vulgare Mill. Fennel
Queen's Road car park, 7.7.82 (HHC); beside tracks,
Reading Station (MRH)

*Heracleum mantegazzianum Somm. & Lev. Giant Hogweed
Downs, Warren Farm, 11.7.82 (AB)

EUPHORBIACEAE

Mercurialis annua L. Annual Mercury
Queen's Road car park, 7.7.82; Gallowstree Common, 26.9.82;
Playhatch chalk pit, in abundance, 14.10.82 (HHC)

POLYGONACEAE

Polygonum nodosum Pers. Knotted Persicaria
Canal between Burghfield Bridge and the M4 gravel pit,
7.8.82 (AB)

Polygonum minus Huds. Small Water-pepper
Not uncommon near Cookham; thought to be extinct in
Berks. (HJMB)

*Polygonum cuspidatum Sieb. & Zucc. Japanese Knotweed
Several new localities in Sonning Common; Peppard Road,
Binfield Heath Lane (HHC)

*Rumex cristatus DC. Greek Dock
By roundabout, Basingstoke Road, J. Akeroyd (HJMB)

JUGLANDACEAE

*Juglans regia L. Walnut
Seven young trees in the Spinney, Bishopswood playing field (HHC)

SALICACEAE

Salix repens L. Creeping Willow
Wellington College, NHS walk (MRH)

PYROLACEAE

Pyrola minor L. Common Wintergreen
Long Moor, D. M. Keith-Lucas (HJMB)

PRIMULACEAE

Lysimachia vulgaris L. Yellow Loosestrife
Canal near Burghfield Bridge, 7.8.82 (AB); Dinton
Pastures, 24.7.82 (RJG)

MENYANTHACEAE

Nymphoides peltata (S. G. Gmel.) O. Kuntze Fringed
Pond at Cockpole Green, J. M. Mullin (HJMB) Water-lily

BORAGINACEAE

*Pulmonaria officinalis L. Lungwort
The Ridgeway between Streatley and Bledlow, 4.9.82 (AB)

SOLANACEAE

*Nicandra physalodes (L.) Gaertn. Apple-of-Peru, or
Shoo-fly Plant
Smallmead tip (HJMB); casual in garden, Highmoor Road,
Caversham (JLM)

SCROPHULARIACEAE

Verbascum nigrum L. Dark Mullein
Watlington Hill, NHS walk, 27.6.82 (AB); chalk pit
adjacent to A4155 near Sonning (MRH)

*Linaria purpurea (L.) Mill. Purple Toadflax
The Ridgeway between Warren Farm and A34, 7.9.82 (AB)

Veronica polita Fr. Grey Field-speedwell
Garden weed, Brookside, Wokingham, 21.2.82 (RJG)

Euphrasia pseudokernerii Pugsl.
Winter Hill, Cookham, confirming an old record (HJMB)

OROBANCHACEAE

*Lathraea clandestina L. Purple Toothwort
Still plentiful at Prospect Park site, Reading, but now
threatened by plans to remove the surrounding railings (MRH)

VERBENACEAE

Verbena officinalis L. Vervain
Wellbarn, 9.7.82; Snelsmore Common, NHS walk, 16.7.82 (AB);
Turville, 27.6.82 (RJG)

LABIATAE

Calamintha ascendens Jord. Common Calamint
Watlington Hill, 27.6.82 (AB)

Scutellaria minor Huds. Lesser Skullcap
Cranbourne Chase, Windsor Forest, 22.8.82 (RJG)

VALERIANACEAE

Valerianella rimosa Bast. Broad-fruited Cornsalad
Local in open soil, Aston Upthorpe Downs (HJMB)

DIPSACACEAE

Dipsacus pilosus L. Small Teasel
Canal near Burghfield Bridge, 7.8.82 (AB)

COMPOSITAE

*Helianthus tuberosus L. Jerusalem Artichoke
On pipeline trench through Blackhouse Wood, Emmer Green,
9.82 (HHC)

*Rudbeckia fulgida Ait.
New roadside, Green Dean Wood, Oxon. (HJMB)

Bidens cernua L. Nodding Bur-marigold
On mud near Cookham (HJMB)

Senecio integrifolius (L.) Clairv. Field Fleawort
Aston Upthorpe, NHS walk, 22.5.82 (AB)

Inula conyza DC. Ploughman's-spikenard
Chalk slope in Pissen Wood, Rotherfield Greys, 21.11.81 (HHC)

Solidago virgaurea L. Goldenrod
Wellington College, NHS walk, 14.8.82 (AB); Chobham
Common, 29.8.82 (RJG)

Chamaemelum nobile (L.) All. Chamomile
Leighton Park School, in short grass lawn. Rather late
flowering, 26.10.82 (TDH)

Artemisia absinthium L. Wormwood
King's Meadow Road transport depot, 9.82 (HHC)

Carduus tenuiflorus Curt. Slender Thistle
Watlington Hill, NHS walk, 27.6.82 (AB)

Cirsium dissectum (L.) Hill Meadow Thistle
Chobham Common, 29.8.82 (RJG)

Serratula tinctoria L. Saw-wort
Chobham Common, 2 .8.82 (RJG)

Picris hieracioides L. Hawkweed Oxtongue
Downs, Warren Farm, 11,7,82 (AB); Playhatch chalk pit,
14.10.82 (HHC)

*Cicerbita macrophylla (Willd.) Wallr. Blue Sow thistle
Near Snelsmore Common car park, NHS walk (HJMB)

Hieracium bichlorophyllum (Druce & Zahn) Pugs1.
By path through yew wood, Watlington Hill, 10.82 (HHC)

Hieracium perpropinquum (Zahn) Druce
Caversham Lock, 9.82 (HHC)

Hieracium trichocaulon (Dahlst.) Johans.
Bird Wood, Sonning Common, 9.82 (HHC)

Taraxacum laevigatum (Willd.) DC. Lesser Dandelion
Whitchurch Hill, 8.5.82 (AB)

ALISMATACEAE

Sagittaria sagittifolia L. Arrowhead
Canal near Burghfield Bridge, 7.8.82 (AB); River Thames
adjacent to Henley Road pit (MRH)

BUTOMACEAE

Butomus umbellatus L. Flowering-rush
Canal near Burghfield Bridge, 7.8.82 (AB); Kennet canal
west of Woolhampton; River Thames near the power station,
Reading (MRH)

HYDROCHARITACEAE

Hydrocharis morsus-ranae L. Frogbit
In a ditch near Littlejohn's Farm, Reading. J. Clark (HJMB)

POTAMOGETONACEAE

Potamogeton polygonifolius Pourr. Bog Pondweed
Wellington College, NHS walk (MRH)

LILIACEAE

Narthecium ossifragum (L.) Huds. Bog Asphodel
Snelsmore Common, NHS walk, 17.7.82 (RJG)

Allium ursinum L. Ramsons
Sulham, 2.5.82 (AB); Hurst, near Dinton Pastures and
Loddon, 9.5.82 (RJG)

*Allium paradoxum (Bieb.) G. Don Few-flowered Leek
Crowsley Lane, by entrance to Crowsley Manor, perhaps
planted (HHC)

JUNCACEAE

*Juncus tenuis Willd.
Wellington College, NHS walk, 14.8.82 (AB); by tracks,
Snelsmore Common, NHS walk (HJMB)

Juncus bulbosus L. Bulbous Rush
Englemere Pond, Bracknell, 18.7.82 (RJG)

AMARYLLIDACEAE

Leucojum aestivum L. Summer Snowflake,
Loddon Lily
Whitchurch Hill, 8.5.82 (AB); in the Loddon valley localit-
ies for this plant a half-mile stretch of river bank had
85 flowering plants, and one station had 3000+ flowering
plants (MRH)

ORCHIDACEAE

- Epipactis helleborine (L.) Crantz Broad-leaved Helleborine
Wellington College, NHS walk (MRH)
- Ophrys apifera Huds. Bee Orchid
Burghclere, 13.6.82 (SRW)
- Ophrys insectifera L. Fly Orchid
Burghclere, 13.6.82 (SRW)
- Dactylorhiza maculata (L.) Vermeul Heath Spotted-orchid
Snelsmore Common, NHS walk, 16.7.82 (AB); California
Country Park, 4.7.82 (RJG)

LEMNACEAE

- *Lemna miniuscula
Abundant in the Kennet and Avon canal near Theale. An
American species recently arrived and spreading (HJMB)

TYPHACEAE

- Typha angustifolia L. Lesser Bulrush
Englemere Pond, Bracknell, 18.7.82; Wellington College,
14.8.82; Cranbourne Chase, Windsor Forest, 22.8.82 (RJG)

CYPERACEAE

- Eriophorum angustifolium Honck. Common Cottongrass
Snelsmore Common, NHS walk, 16.7.82 (AB)
- Eleocharis multicaulis (Sm.) Sm. Many-stalked Spike-rush
Englemere Pond, Bracknell, 18.7.82 (RJG)
- Cyperus fuscus L. Brown Galingale
Very local near Cookham; second record for Berks., found
by G. Bellamy (HJMB)
- Rhynchospora alba (L.) Vahl White Beak-sedge
Wet heathland between Wellington College and Sandhurst,
NHS walk (MRH)
- Cladium mariscus (L.) Pohl Great Fen-sedge
Sterile, in a newly cleared piece of fen at Cothill;
second record for Berks., found by R. J. Hornby (HJMB)
- Carex muricata L. ssp. lamprocarpa Celak Prickly Sedge
Station Road, Earley, Reading (MRH)

GRAMINEAE

- Sieglingia decumbens (L.) Bernh. Heath-grass
In old locality on Peppard Common, 8.82 (HHC)
- Lolium multiflorum Lam. x perenne L.
Smallmead tip (HJMB)
- Puccinellia distans (Jacq.) Parl. Reflexed Saltmarsh-grass
Along the M4 near Hungerford Newtown; perhaps salting
operations provided a suitable habitat. (HJMB)
- *Hordeum jubatum L. Foxtail Barley
Newly sown roadside, Hungerford Newtown (HJMB)
- Hordelymus europaeus (L.) Harz Wood Barley
Lady's Shaw, Sonning Common, 8.82 (HHC)
- Polypogon monspeliensis (L.) Desf. Annual Beard-grass
Smallmead tip (HJMB); Gillette Road, 8.82 (HHC)

Some additional Records for 1980 and 1981

PAPILIONACEAE

Ornithopus perpusillus L. Common Bird's-foot
On Heckfield Heath, 22.7.80 (TDH)

PAPAVERACEAE

Papaver argemone L. Prickly Poppy
A weed in a maize patch near Shinfield, 17.7.81 (TDH)

PORTULACACEAE

*Montia perfoliata (Willd.) Howell Springbeauty
On bare sandy and stony ground, Leighton Park School,
23.5.81 (TDH)

SAXIFRAGACEAE

*Tellima grandiflora (Pursh) Dougl. ex Lindl.
In damp deciduous wood, Bear Wood, Arborfield, 26.5.81 (TDH)

MONOTROPACEAE

Monotropa hypopitys L. Yellow Bird's-nest
One plant outside AWRE fence at extreme western end of
roadside bank, P. M. R. Jinks, 7.81 (AB)

SCROPHULARIACEAE

Veronica scutellata L. Marsh Speedwell
Edge of marsh near Shinfield, 20.7.81 (TDH)

GRAMINEAE

*Echinochloa crus-galli (L.) Beauv. Cockspur
Edge of cabbage and rhubarb field near Shinfield Grange,
18.8.81 (TDH)

Contributors:

Dr. H. J. M. Bowen (HJMB); Dr. A. Brickstock (AB);
Mr. H. H. Carter (HHC); Dr. R. J. Grayer (RJG); Mr. T. D.
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Mrs. J. Le Mare (JLM); Mrs. S. R. Ward (SRW).

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The Recorder's Report for Entomology 1981-82

B. R. Baker

The order and nomenclature used in this Report are those given in Kloet and Hincks, A Check List of British Insects, Part 1: Small Orders and Hemiptera, 1964; Part 2: Lepidoptera, 1972; Part 3: Coleoptera, 1977; Part 4: Hymenoptera, 1978; and Part 5: Diptera, 1975.

Order Odonata

Dragonflies

Ischnura elegans (van der Lind.) Common Ischnura
Dinton Pastures, 7.8.82 (RJG); Whiteknights Park,
Reading (MRH)

Enallagma cyathigerum (Charp.) Common Blue Damselfly
Whiteknights Park, Reading (MRH)

Coenagrion puella (L.) Common Coenagrion
Dinton Pastures, 7.8.82 'in thousands' (RJG)

Lestes sponsa (Hansemann) Green Lestes
Wet grassland near the Power Station, Reading (MRH)

Agrion splendens (Harris) Banded Agrion
Marketway, Reading, 1 female (MRH); Elgar Road, Reading,
mid October (AP). This is a very common damselfly on
our local rivers and Mr. Hughes's Marketway sighting
must have been a wanderer from the Thames. Mr. Price's
sighting for mid October is an exceptionally late one.

Aeshna cyanea (Müll.) Southern Aeshna
Whiteknights Park, Reading (MRH); Snelsmore Common,
17.7.82 (HJMB)

A. grandis (L.) Brown Aeshna
Whiteknights Park, Reading (MRH)

Order Orthoptera

Bush Crickets, Crickets
and Grasshoppers

Meconema thalassinum (Deg.) Oak Bush Cricket
In property in Alexandra Road, Reading, 1.8.82 attracted
to house lights (MRH).

Pholidoptera griseoaptera (Deg.) Dark Bush Cricket
Moor Copse Nature Reserve, 8.8.82 (MRH)

Order Psocoptera

Book Lice

Caecilius flavidus (Steph.)
Fence Wood, 25.5.82 (HHC).

Order Hemiptera

Plant Bugs, Frog Hoppers, etc.

Cyphostethus tristriatus (Fabr.) Juniper Bug
Mansfield Road, Reading, 22.10.82, twenty-four beaten from
two small Cupressus trees. The beating was of short
duration hence many additional specimens could have been
present in the garden (AP). Reference to C. tristriatus
on plants other than juniper is made in the Reading
Naturalist no. 31 p. 32.

Order Neuroptera

Lacewings

Osmylus fulvicephalus (Scop.) Giant Lacewing
Moor Copse Nature Reserve, 31.5.82, Padworth, 4.7.82 (BRB).

Order Lepidoptera

Butterflies and Moths

The fine weather of early summer proved beneficial to many of our butterflies and most of our contributors comment on the high numbers observed by comparison with recent years. It was also a good year for immigrant butterflies and moths and some notable records have been submitted.

Synanthedon culiciformis (L.) Large Red-belted Clearwing
Bucklebury Common, 28.3.82 larvae in birch stumps (BRB, NMH).

Bembecia scopigera (Scop.) Six-belted Clearwing
Knowl Hill, one dead in spider's web (NMH)

Hesperia comma (L.) Silver-spotted Skipper
Aston Upthorpe, abundant (HJMB)

Gonepteryx rhamni (L.) Brimstone
Wokingham, 23.3.82 (RJG); Bearwood, 24.3.82 (BTP); Matlock Road, Caversham, 8.11.82 (HGB).

Anthocharis cardamines (L.) Orange-tip
Aldermaston, 10.5.82 (PS); Emmer Green, 15.4.82 (JHFN); Dinton Pastures, 25.4.82, Wokingham, 26.4.82, one or two almost daily between 14.5.82 and 7.6.82 (RJG).

Lycaena phlaeas (L.) Small Copper
Aston Upthorpe, aberration with one forewing white (HJMB)

Cupido minimus (Fuess.) Small Blue
Upton, abundant during June (HJMB); Seven Barrows, Lambourn, 5.6.82 (RJG).

Celastrina argiolus (L.) Holly Blue
Aldermaston, 14.5.82 (GE-F, KHP, PS); Basildon Park, 2.6.82 (BTP); Tilehurst Road, Reading, 13.5.82, Alexandra Road, Reading, 25.5.82 (MRH); Woolhampton, 29.5.82, Matlock Road, Caversham, 1.6.82, 18.7.82, 25.7.82, 1.8.82 (HGB); Emmer Green, 16.5.82 (JHFN); Northcourt Avenue, Reading, 30.7.82 (LEC).

Ladoga camilla (L.) White Admiral
Spelsmore Common, 17.7.82 (HJMB); Padworth and Pamber Forest, numerous throughout July (BRB).

Apatura iris (L.) Purple Emperor
Padworth, 11.7.82. As I parked my car, a male purple emperor flew around strongly then disappeared below the vehicle. On peering underneath, I saw the butterfly 'feeding' on the exhaust pipe (BRB).

Vanessa atalanta (L.) Red Admiral
Woolwich Green near Theale, 16.5.82 (BTP); Moor Copse Nature Reserve, 15.5.82, 31.5.82, 6.6.82, 12.11.82. Caversham, 6.8.82 to 13.11.82 seventy-nine sightings (BRB); Surley Row, Caversham, 15.8.82, 31.8.82, 4.9.82, 5.9.82 (PS); Dinton Pastures, 23.5.82, 26.6.82, 7.8.82 four; Wokingham, 29.5.82, 15.7.82 to 30.8.82 one or two almost daily, 3.9.82 to 10.10.82 up to five almost daily (RJG).

Cynthia cardui (L.) Painted Lady
Aldermaston, 5.7.82 (GE-F, KHP, PS); Surley Row, Caversham,

3.8.82, 6.8.82, 8.8.82, 30.8.82, 5.9.82, Tadley, 16.7.82, Streatley, 29.7.82 (all PS); Emmer Green, 5.6.82 (JHFN); Portman Road, Reading, 1.8.82 three, Caversham, 6.8.82, 14.9.82, 15.9.82, Vastern Road, Reading, 9.8.82, 11.8.82, 23.8.82, 3.9.82, 10.9.82 (all BRB); Whiteknights Park, 7.8.82 (BTP); Wokingham, 4.8.82, 5.8.82, 6.8.82, 19.8.82, 29.8.82, 30.8.82 (RJG); The Priory, Beech Hill, 6.6.82 (LEC).

Polygonia c-album (L.) Comma
Wasing Wood, 3.10.82, seven on one bramble patch (BRB, NMH); Emmer Green, 25.3.82 (JHFN); Matlock Road, Caversham, 24.9.82, seven on small ivy patch (BRB); Bearwood, 24.3.82 six (BTP); Wokingham, 18.5.82, 17.7.82 to 12.8.82 one or two regularly on buddleia, 10.9.82 one in pear tree (RJG).

Inachis io (L.) Peacock
Southcote, 28.2.82 (CAS).

Melanargia galathea (L.) Marbled White
Snelsmore Common, south side, 17.7.82 one in an unusual habitat (HJMB); back of Knowl Hill, late July (BTP).

Hipparchia semele (L.) Grayling
Silchester Common, 25.7.82 (BTP); Leighton Park, Reading, 2.8.82 (TDH); Bucklebury Common, 14.8.82 (BRB).

Hemistola chrysoprasaria (Esp.) Small Emerald
Aldermaston, 7.7.82 (GE-F, KHP, PS); Surley Row, Caversham, 23.7.82 (PS); Well Barn, Berks Downs, 9.7.82 (NMH).

Orthonama obstipata (Fabr.) The Gem
Matlock Road, Caversham, 23.7.82 immigrant (BRB).

Eulithis prunata (L.) The Phoenix
Aldermaston, 16.7.82 (GE-F, KHP, PS).

Odezia atrata (L.) Chimney Sweeper
Well Barn, Berks Downs, 9.7.82 (BRB).

Abraxas sylvata (Scop.) Clouded Magpie
Leighton Park, 8.7.82 (TDH).

Apeira syringaria (L.) Lilac Beauty
Aldermaston, 5.7.82, 15.9.82 (GE-F, KHP, PS); Matlock Road, Caversham, 1.7.82, 12.9.82 (BRB); Surley Row, Caversham, 12.6.82, 7.7.82 (PS); Leighton Park, 9.7.81 (TDH). The September date indicates an unusual second brood.

Sphinx ligustri (L.) Privet Hawkmoth
Well Barn, Berks Downs, 9.7.82 (BRB).

Macroglossum stellatarum (L.) Humming-bird Hawkmoth
Padworth, 5.7.82 (BRB); Well Barn, Berks Downs, early July (MB); Moor Copse, Tidmarsh, mid August (MC); Earley Gate, Whiteknights, end July (RL). Immigrants.

Hyles lineata (Fabr.)
ssp. livornica (Esp.) Striped Hawkmoth
Emmer Green, 3.7.82 (DN, JHFN), a rare immigrant and seemingly only the second Berkshire record this century.

Leucoma salicis (L.) White Satin Moth
Aldermaston, 15.6.82 (GE-F, KHP, PS).

Eilema sororcula (Hufn.) Orange Footman
Surley Row, Caversham, 8.6.82 (PS).

Eilema deplana (Esp.) Buff Footman
Well Barn, Berks Downs, 9.7.82 (NMH).

- Rhyacia simulans (Hufn.) Dotted Rustic
Well Barn, Berks Downs, 9.7.82 (NMH); Matlock Road,
Caversham, 13.7.82 (BRB); Emmer Green, 24.7.82, 23.9.82,
(JHFN); Surley Row, Caversham, 19.7.82, 25.7.82 (PS);
Pinkneys Green, Maidenhead, 25.7.82 (TJGH).
- Spaelotis ravida (D. & S.) Stout Dart
Matlock Road, Caversham, 17.7.82, 18.7.82, 29.8.82 (BRB).
- Xestia rhomboidea (Esp.) Square-spotted Clay
Matlock Road, Caversham, 5.8.82, 10.8.82, 15.8.82 (BRB).
- Anaplectoides prasina (D. & S.) Green Arches
Well Barn, Berks Downs, 9.7.82 (BRB).
- Cerastis leucographa (D. & S.) White-marked
Aldermaston, 21.4.82 (GE-F, KHP, PS).
- Hadena compta (D. & S.) Varied Coronet
Surley Row, Caversham, 26.6.82, 27.6.82, 1.7.82 (PS);
Emmer Green, (JHFN); Matlock Road, Caversham, 4.6.82,
5.6.82, 12.7.82, 14.7.82 (BRB).
- Lithophane leautieri (Boisd.) Blair's Pinion
Surley Row, Caversham, 1.11.82 (PS); Matlock Road,
Caversham, 30.9.82 to 7.11.82 twenty recorded in light
trap (BRB).
- Xanthia gilvago (D. & S.) Dusky-lemon Sallow
Leighton Park, 6.10.82 (TDH)
- Dicycla oo (L.) Heart Moth,
Aldermaston, 8.7.82 (GE-F, KHP, PS).
- Apamea sublustria (Esp.) Reddish Light Arches
Surley Row, Caversham, 13.6.82 (PS).
- A. scolopacina (Esp.) Slender Brindle
Well Barn, Berks Downs, 9.7.82 (BRB).
- Spodoptera exigua (Hubn.) Small Mottled Willow
Matlock Road, Caversham, 8.7.82, 18.7.82, uncommon
immigrants (BRB).
- Panemeria tenebrata (Scop.) Small Yellow Underwing
Moor Copse Nature Reserve, 31.5.82. New Reserve record (BRB)
- Heliothis peltigera (D. & S.) Bordered Straw
Matlock Road, Caversham, 19.9.82 immigrant (BRD);
Didcot, 9.9.82 (RL).
- Trichoplusia ni (Hubn.) The Ni Moth
Didcot, 9.9.82 (RL), a rare immigrant last recorded from
Berkshire 7.8.53 at Sandhurst.
- Lygophila pastinum (Treit.) Blackneck Moth
Leighton Park, 8.7.82 (TDH)
- Parascotia fuliginaria (Hubn.) Waved Black
Aldermaston, 13.7.82 and subsequently, eleven specimens
(GE-F, KHP, PS); Emmer Green, (JHFN); Pinkneys Green,
Maidenhead, 5.8.82 (TJGH).

Order Coleoptera

Beetles

- Dytiscus marginalis L. Great Diving Beetle
Woosehill, Wokingham, in the Emmbrook, 21.8.82 (RJG).

Oxyporus rufus (L.)

Bird Wood, Sonning Common, three tunneling in Amanita rubescens (HHC)

Lucanus cervus (L.)

Stag Beetle

Cockney Hill, Reading, 29.12.81 (AB). Whilst digging out a large post in his garden Dr. Brickstock unearthed about thirty-six stag beetle larvae of varying sizes. They were brought into the Museum and placed in a tank with some large pieces of the rotted post which they reduced to sawdust over the next several weeks. Twenty-one larvae survived until 27.3.82 when they were re-housed within the roots of a fallen oak at Moor Copse Nature Reserve.

Nr. Woosehill, Wokingham, 5.6.82 one in subway under Reading Road (RJG); Earley Road, Reading, 29.6.82 male, 7.7.82 female (MRH).

Order Hymenoptera

Sawflies, Ichneumons,
Bees and Wasps

Urocus gigas (L.)

Giant Horntail

Friar Street, Reading, inside a tobacconist's shop, 10.8.82 (NH); Tilehurst Road, Reading, 25.8.82 (KER).

Sirex noctilio Fabr.

Parker Timber Co., Theale, 17.8.82; 21.8.82, several specimens of this large sawfly were brought to the Museum by Mr. Russ. The insects had been emerging from imported Portuguese Pinus.

Dineura stilata (Klug)

Crowsley Forest, 12.5.82, not a new species to us but the last published record was from Bagley Wood about 1920 (HHC).

Crypteffigies lanus (Grav.)

Fence Wood, 25.5.82 (HHC).

HHC submits the following records of early bees:-

Andrena minutula (Kirby)

Clayfield Copse, 24.3.82 (HHC)

A. fulva (Müll.)

Forbury Gardens, Reading, 25.3.82 (HHC)

Bombus terrestris (L.)

Common Humble-bee

Crowsley Forest, 4.4.82; Bur Wood, 5.4.82 (HHC).

B. pascuorum (Scop.)

Common Carder-bee

Crowsley Forest, 4.4.82 (HHC).

B. lapidarius (L.)

Stone Humble-bee

Forbury Gardens, Reading, 5.4.82 (HHC).

B. pratorum (L.)

Early-nesting Humble-bee

82, Kennylands Road, Sonning Common, 5.4.82 (HHC).

Order Diptera

True Flies

All the Diptera records are of species new to the district unless stated otherwise.

Ctenophora flaveolata (Fabr.)

Pissen Wood, Rotherfield Greys, 1.5.82 (HHC). Not a new species, but a new locality for this uncommon and spectacular cranefly.

Empis woodi Collin

Crowsley Forest, 12.5.82 (HHC).

Volucella zonaria (Poda)

7, Heathway, Tilehurst, 18.9.82 (JEL).

Phytomyza vitalbae Kalt.

Crowsley Forest, 12.5.82 (HHC).

Alophora hemiptera (Fabr.)

Shiplake College, 6.80 (RGL).

Chirosia parvicornis (Zett.)

Fence Wood, 25.5.82 (HHC).

Crataerina pallida (Latr.)

Cockney Hill, Reading, 25.8.82 (IMB), not new but found in unusual circumstances!

The Society's Entomological Evening

This was again enjoyed in the same locality on the Well Barn Estate as visited in 1978 and 1979. Our thanks are extended to the Estate for permission to enter and operate lamps and moth traps - we were also pleased that Michael Burford, the Head Keeper, visited us around midnight and was able to see for himself what a hot summer night will produce in the way of nocturnal insects. Most of the interesting records are embodied in the Report under Well Barn, Berks Downs, 9.7.82, but further mention might be made of the solitary Chimney Sweeper moth. This insect is normally a day-flier, particularly in sunny weather, and the larvae feed on earth-nut. Last Berkshire record was for White Horse Hill, 1931.

Contributors

The Recorder would like to thank the following members and friends for records received:

Mrs. H. G. Baker (HGB); Dr. H. J. M. Bowen (HJMB); Dr. A. Brickstock (AB); Mrs. I. M. Brickstock (IMB); H. H. Carter (HHC); Mrs. M. Charley (MC); Miss L. E. Cobb (LEC); Dr. R. J. Grayer (RJG); Lt. Col. G. G. Eastwick-Field (GE-F); N. M. Hall (NMH); T. D. Harrison (TDH); N. Harrison (NH); T. J. G. Homer (TJGH); M. R. Hughes (MRH); Mrs. J. E. Leeke (JEL); R. Leeke (RL); R. G. Leeke (RGL); R. Lewington (RL); D. Notton (DN); J. H. F. Notton (JHFN); B. T. Parsons (BTP); K. H. Pinnock (KHP); A. Price (AP); Mrs. K. F. Rhodes (KFR); C. A. Sizer (CAS); P. Silver (PS).

Our thanks are additionally due to the Director of Reading Museum & Art Gallery for allowing us to incorporate any relevant records from the Museum's collections.

The Recorder's Report for Vertebrates, 1981-82

H. H. Carter

FISH

Esox lucius L. Pike
One of about 5.5 kg (12 lb) and 0.6 m in length taken by an angler at Caversham Bridge, 15.9.82 (BRB)

Cyprinus carpio L. Carp
Cottage Lane gravel pit (Burghfield, a new locality).
Marley Tile pit (Beenham).

Perca fluviatilis L. Perch
In the Thames at Wallingford, a new locality.

AMPHIBIANS

Triturus vulgaris (L.) Smooth Newt
Male and females at Sulham Pond, 8.5.82, some larvae there in June (PRC).

Triturus helveticus (Raz.) Palmate Newt
One male at the Fish Pond (Burghfield Common), 31.1.82 (PRC).

Triturus cristatus (Schr.) Great Crested Newt
Pair in breeding colours, Sulham Pond, 28.2.82 (PRC).

Rana temporaria L. Frog
Dates of first spawning about three days later than last year. 4 pairs in pond at Austwick House (Woodcote), 11.3.82, first spawn, 13.3.82 (Mr. and Mrs. Pettit). None seen at Greenmore Hill (Woodcote), 13.3.82. None at the Horse Pond (Gallowstree Common), 13.3.82, present 21.3.82. 8 females in garden pond, Alexandra Road, and much spawn there, 14.3.82 (MRH). 20 adults spawning in garden pond, Tilehurst, 22.3.82, spawn hatching, 9.4.82 (PRC). Frogs and spawn at 217 Henley Road, 31.3.82 (Mrs. Taylor). 27 frogs in pond at 27b Grove Road (Emmer Green), 6.4.82 (Mrs. Wall). One adult and large quantities of spawn at the Fish Pond (Burghfield Common), 17.4.82; tadpoles in Sulham Pond, a new locality for this observer, 8.5.82 (PRC). A 30 mm (2nd year) frog in a dry garden at 30 Pages Orchard (Sonning Common), 22.5.82. A 45 mm (2nd year) frog in a dry garden at 82 Kennylands Road (Sonning Common) 27.8.82. A lone male regularly frequenting a newly constructed garden pond at Pangbourne in autumn, 1979-1981 (CF).

Bufo bufo L. Toad
Bred in garden pond at 161 Cotswold Way (Tilehurst), 1981, but not seen again by 2.4.82 (Mrs. Wensley-Wright). Many dead on road by Coach and Horses (Binfield Heath), 1.3.82. One dead in Kennylands Road, 3.3.82. Present in garden of 217 Henley Road, but does not breed here, April 1982 (Mrs. Taylor). Spawn present in the Fish Pond (Burghfield Common), 17.4.82, and adults present in gardens in the Tilehurst area (PRC). Dead on roads during autumn migration at Peppard Road and Phillimore Road (Emmer Green), 16-20.9.82, Kennylands Road, 20-21.9.82, and two in Binfield Heath Lane, 30.9.82. Newly emerged toads near the bridge in Moor Copse, 11.7.82 (PRC).

REPTILES

Anguis fragilis L.

Slow Worm

One in hedgerow, Tilehurst, August 1982. One in Forbury Gardens, 2.9.82 (gardener per BRB).

Natrix natrix (L.)

Grass Snake

2 adults, length 400-500 mm, basking in bracken, Moor Copse, 13.6.82, and one there 12.8.82 (PRC).

MAMMALS

Talpa europaea L.

Mole

Molehills at Greenmore Hill, (Woodcote), 13.3.82. One dead at Moor Copse, 12.9.82 (PRC).

Sorex araneus L.

Common Shrew

Binfield Heath Lane, 29.4.82 and several dates in May. Regular prey of cats in Tilehurst, and one dead in gutter, October 1982 (PRC).

Erinaceus europaeus L.

Hedgehog

Regular visitor to gardens in Tilehurst area, also frequent road victim with maximum deaths in late summer and early autumn (PRC). 2 alive, 13 dead on roads in Sonning Common - Emmer Green area, November 1981 and March - October 1982 with highest numbers in May and June. An adult and 4 juveniles (except for one which died) active in Prospect St. till 12.11.81 (Mr. Harden). Brockley Close (Tilehurst), litter in garden shed (M. Baker). One swimming in garden pond, unable to climb the walls, Circuit Lane (Southcote), 4.7.82 (CAS).

Myotis daubentoni (Kuhl)

Daubenton's Bat

Mortimer area, 9.6.82 (PRC).

Pipistrellus pipistrellus (Schr.) Pipistrelle

Mortimer area, 9.6.82. This and the preceding species were observed on the Society's excursion, using Holgate and QMC detectors kindly loaned by Michael Hardy (PRC). Seen by the same observer in the Sulham area. One dead at Yeomanry House, 1.6.82 (S. Y. Townend). Several observers noted a scarcity of this species, but the Recorder saw the usual number of Pipistrelle-like small bats around Sonning Common.

Nyctalus noctula (Schr.)

Noctule

First flight around the observer's house in Tilehurst, 27.3.82 similar to previous year, 26.3.81, but numbers later in the year much lower (PRC). Patrolling Binfield Heath Lane, 4.10.82.

Vulpes vulpes (L.)

Fox

A large male feeding from a bird table at Moor Copse, 11.12.81 (Mrs. Charley per BRB). Tracks in snow at Howberry Wood (Highmoor), 24.12.81 (EMC and Recorder). Fox and vixen in garden at Pangbourne, Feb. 1982 (CF). Three dead on road in Long Lane to Sulham area, March and April 1982 (PRC). Seen or heard on 6 occasions at Padworth from March to July 1982 (MJH). Dead juvenile at New Lane Close (Tilehurst), 3.4.82 (Dr. Brickstock). Two earths, and foxes often seen by workmen, Smallmead pits. One at Ashmore Green (Thatcham). Circuit Lane, 2.5.82 (CAS). Hartslock Reserve, 26.5.82 (RDNHS Excursion). Fewer than usual in the Sonning Common area; one seen robbing our hen

run, 29.5.82 (EMC) but only three other records. On garden fence, 2.7.82 (LEC). Sonning Cutting, 2.9.82 (BRB).

Meles meles (L.)

Badger

Young female dead on M4 by Ammer's Farm, 14.2.82 (MRH).

Mustola erminea L.

Stoat

Leaping around in snow at garden in Pangbourne, January 1982 (CF). Manor Farm, 24.7.82 (M. Ravening). Adult male dead on road near Hermitage, 17.9.82 (PRC).

M. vison Schr.

Mink

Climbing out of Pang to disappear into woods at Moor Copse, 4.4.82 (MRH).

Dama dama (L.)

Fallow Deer

Tracks in snow at Howberry Wood (Highmoor), 24.12.81 (EMC and Recorder). Tracks in Crowsley Forest, 21-28.3.82, and two does there, 7.5.82.

Capreolus capreolus (L.)

Roe Deer

Blacklands Copse, (Bucklebury), 3.5.82 and a buck at Padworth, 5.7.82 (BRB).

Muntiacus reevesi Og.

Muntjac

Blacklands Copse, (per BRB). The animal heard barking on the move near LEC's home, 9-10.1.82 was probably this species. Droppings in Crowsley Forest, 28.3.82. One at Moor Copse, 12.5.82 (B. Kay).

Oryctolagus cuniculus (L.)

Rabbit

Seen throughout year at Moor Copse, one with myxomatosis, 12.9.82 (PRC). Total sightings in South Oxfordshire 214, maxima 25 at old pit, Chalkhouse Green, 10.6.82 and 10 at Sonning Common sewage works, 8.4.82. Few in Crowsley Forest, one with myxomatosis there, 28.3.82.

Lepus capensis Pall.

Hare

Six on hill above Crowmarsh, 24.12.81 (EMC and MJC).

Clethrionomys glareolus Schr.

Bank Vole

One dead at Kennylands (Sonning Common), 21.8.82.

Arvicola amphibius (L.)

Water Vole

Marsh Lock (Henley), 7.2.82 (MJC). Frequent at Moor Copse, especially near the bridge, from April on; three swimming together, 11.7.82 (PRC).

Microtus agrestis (L.)

Short-tailed Vole

Two dead at Gallowstree Common, 26.9.82.

Apodemus sylvaticus (L.)

Wood Mouse

Tracks in snow at Howberry Wood (Highmoor), 24.12.81 (EMC and Recorder). One at Kennylands (Sonning Common), 12.3.82. Adult and at least two juveniles at Westwood Road, Tilehurst, June-July 1982 (PRC).

Rattus norvegicus Berk.

Brown Rat

Kennylands, 13.11.81 (MJC) and a juvenile, 8.11.81. Adult and three juveniles at Widmore Pond (Sonning Common), 8.5.82. Dead on road at Emmer Green, 3.9.82 and 30.9.82.

Sciurus carolinensis Gmel.

Grey Squirrel

At least three active all year in Tilehurst garden; adult seen carrying young in mouth (PRC). Tracks in snow at Howberry Wood (Highmoor), 24.12.81 (EMC and Recorder).

Found dead at foot of electricity pole, Padworth, 2.9.82
(MJH). One in Old Town Hall, 20.9.82, trapped 23.9.82.

Contributors:

Mr. Brian R. Baker (BRB), Mrs. Elizabeth M. Carter
(EMC), Miss Mary J. Carter (MJC); Miss Leonie E. Cobb (LEC),
Mrs. Paula R. Cox (PRC), Mrs. Clare Frank (CF),
Mr. Malcolm J. Hitchcock (MJH), Mr. Michael R. Hughes (MRH),
Mr. Colin A. Sizer (CAS) and others named in full in the
text.

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WEATHER RECORDS : 1982

contributed by M. Parry

STATION : READING UNIVERSITY

		Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Mean	Max.	6.3	7.8	10.5	13.6	17.1	20.7	21.6	20.9	19.8	13.5	11.0	7.9	14.2
Daily	Min.	-0.3	1.7	2.0	4.2	6.4	11.6	12.4	11.9	9.7	6.9	5.6	1.4	6.1
Temperatures	Mean	3.0	4.8	6.3	8.9	11.8	16.2	17.0	16.4	14.8	10.2	8.3	4.7	10.2
°C	Range	6.6	6.1	8.5	9.4	10.7	9.1	9.2	9.0	10.1	6.6	5.4	6.5	8.1
Extreme	E. Max.	12.2	11.9	16.7	19.0	25.5	27.7	27.1	26.4	27.0	17.0	16.4	12.6	27.7
temperatures	Date	2	9	27	5	31	4	8	2	18	1	1	15	Jun. 4
°C	E. Min.	-14.5	-4.9	-3.4	-0.8	-0.7	4.5	7.8	6.2	2.8	0.2	-5.3	-4.2	-14.5
	Date	14	24	8	9	5	15	17	14	22	24	30	23	Jan. 14
	E. Grass Min.	-20.1	-12.1	-9.8	-7.2	-6.0	-1.8	1.1	0.3	-2.5	-4.8	-9.9	-11.5	-20.1
	Date	14	23	8	13	8	15	17	14	22	24	30	23	Jan. 14
Days with frost		13	7	7	2	2	0	0	0	0	0	4	12	47
Days with ground frost		21	16	22	15	10	1	0	0	3	7	9	19	123
Sunshine	Sum	58.0	46.6	167.2	185.4	213.3	182.7	165.9	171.1	145.1	65.2	61.1	57.1	1518.7
Hours	% Possible	22	17	45	43	44	37	32	38	38	20	23	23	32
	Daily Mean	1.9	1.7	5.4	6.2	6.9	6.1	5.3	5.5	4.8	2.1	2.0	1.8	4.1
Precipitation	Amount	33	35	71	29	50	79	29	47	45	131	84	65	698
mm.	Rain Days	15	10	19	5	12	17	9	16	12	17	19	14	165
	Max. rain	5.2	7.5	18.4	14.5	18.3	12.4	7.6	6.7	10.9	33.0	12.5	14.6	33.0
	in one day	8	12	15	5	5	25	13	26	28	21	21	9	Oct. 21
Longest run of consecutive rain days		5	3	5	3	6	8	3	4	7	4	8	6	8
Longest run of consecutive dry days		9	6	7	21	8	4	7	3	13	5	5	8	21
Snow or sleet days		3	2	2	0	0	0	0	0	0	0	0	0	7
Days with snow lying		9	0	0	0	0	0	0	0	0	0	0	0	9
Visibility	Fog at 0900 GMT	5	4	0	0	0	0	0	0	2	3	2	0	16
Thunderstorm	Days of thunder	0	0	2	1	2	4	3	1	2	0	0	0	15
Activity	Days of hail	0	0	5	0	3	1	0	0	0	0	0	0	9

MONTHLY WEATHER NOTES - 1982

JANUARY	An extraordinary month! After five mild days, a very cold spell lasted till mid-month. The extreme minimum of -14.5°C (6°F) on 14th was the lowest ever in the University station's record. The minimum on 15th was -13.4°C (8°F), the second lowest. Record lows for England (-26.1°C or -15°F at Newport, Shrops.) and for Britain as a whole (-27.2°C or -17°F) at Braemar, Scotland) also occurred in that cold spell. Yet with a mild second half, the monthly average was near normal. Dry (half average rainfall) and sunny.
FEBRUARY	Mild, dull and drier than average.
MARCH	Average temperatures, wet, but with some sunny spells.
APRIL	Average temperatures, but sunny and dry: a long anticyclonic spell brought an absolute drought from 8th to 29th.
MAY	After cold Northerly winds during the first week, temperatures near average for the month as a whole. Rainfall also near normal, though sunshine hours well up.
JUNE	A wet thundery month with rainfall nearly double normal. Warm nights and dull days. Included the warmest day of the year (exactly equalling that of 1981).
JULY	Temperatures a little below average, sunshine much below and rainfall less than half normal.
AUGUST	Warm first half, cool second half, so average temperatures on the whole: average sunshine too, but rather dry.
SEPTEMBER	Rather warm, on the dry side, average sunshine.
OCTOBER	Average temperatures but very wet (rainfall twice normal) and dull. There have been only three wetter Octobers in the University record (began 1921).
NOVEMBER	Mild, rather wet and dull. The wind gusted to 72mph on 12th - the highest November gust since the recording anemometer was installed in 1961 (exceeded only once at any time of year.)
DECEMBER	A little milder and rainier than average but rather sunnier.