The Reading Naturalist

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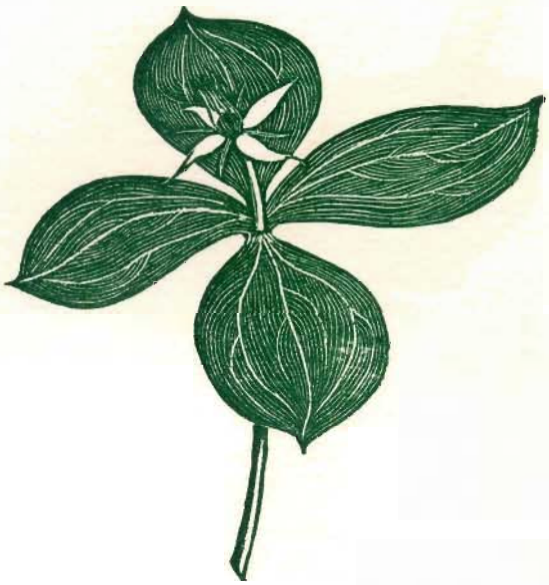

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THE READING NATURALIST

No. 37 for the year 1983-84

The Journal of

The Reading and District Natural History

Society

Contents

Editorial

Miss E. M. Nelmes has now resigned from the editorial sub-committee of The Reading Naturalist. She was Honorary Editor from 1954-1965 and from 1970-1978, having continued in office after leaving the district and moving to Gloucestershire. On behalf of the membership we would like to record our appreciation and thank her for all the years of hard work on our behalf. We extend to her our best wishes for the future.

We thank also all members who have sent in records; the recorders; Mr. B. Baker and Mr. H. Carter for record-checking and proof-reading; Miss S. Townend for duplicating and the team of members involved in collating.

It has been decided that, in future, the full list of members will be included every three years and not every two years as has been the custom. This will allow more space for inclusion of articles and contributions from members. Such contributions for publication in next year's issue will be welcomed any time up to the end of October.

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Obituaries

Frederick Bayard Hora

Those of us who knew Dr. Hora in recent years will remember him as a Foray leader and fungus expert par excellence, but Mycology did not become his passion until the early 1940's.

Born on September 1st 1908 at Hove, he obtained a first in Botany at New College Oxford in 1932. After being Demonstrator and Research Assistant in the Department of Botany there, he obtained his D.Phil. for researches in Plant Physiology in 1936. From 1937 to 1940 he worked mainly on the flora of Tropical East Africa, and in 1943 he published, with P. J. Greenway, 'A Check List of the Trees of Tanganyika'.

He was Lecturer and subsequently Reader in Botany at Reading University from 1940 until his retirement in 1973. After retirement he contributed to 'Flowering Plants of the World' and was Consultant Editor for 'The Oxford Encyclopedia of Trees of the World'.

He joined the British Mycological Society in 1943, holding various offices in that Society from 1950 to 1966, including being President in 1958.

During the period 1950 to 1978 he published a number of Mycological works, including, in 1943 with Morten Lange, the

enormously popular 'Collins Guide to Mushrooms and Toadstools' - the first fungus 'bible' of myself and numerous other members of the Society. Not till Roger Phillips 'Mushrooms' in 1981 did anything threaten to take its place; but 'Hora' still goes around in my rucksack, battered, thumb-marked and well loved.

Fungus Forays led by the unmistakable figure with black beret, mackintosh and trug were not only excellent in a Mycological sense, but were also first-rate entertainment and social occasions. His sense of humour and supply of anecdotes to fit any eventuality kept his audiences constantly entertained, most memorably for me during lunch breaks in one of his annual fungus courses at the University Microbiology labs. Though some of his anecdotes may have been heard several times, the expertise of the true raconteur made them still just as enjoyable. The Americal lady 'thoughtful in the night' will be long remembered.

Lone wanderers in the woods on his forays never lost the rest of the party for long; it was only necessary to stand still and listen, and very shortly an enthusiastic exclamation from the Master, or a gust of laughter from his audience, would give away their direction.

The most mundane specimens would be greeted with enthusiasm. Occasionally uncertain identification of specimens past their prime, or difficult in the field, would be qualified by one of his characteristic phrases: 'but I wouldn't hang a man on it'.

He was always ready to be called on by anyone with problem fungi. There was never any doubt which was the correct house; the baskets or boxes of fungi awaiting examination on the door step gave it away. If instant recognition was not possible, he would produce numerous books, some old, some new, in various languages, from the upstairs study, while one marvelled at the fungal specimens, some fresh, some past their prime, in various nooks and crannies - even on top of the piano. There were no 'quick' calls on the Master.

After a stroke in February, he died on April 10th 1984; we shall miss him sadly, and remember him with affection and gratitude.

AB

Arthur Price

The news of the sudden death of Arthur Price when out cycling with his sister Gladys on 16th July 1984 seemed unbelievable for he had called at the Museum a few days previously and his collection of early microscopes was still on view in our Collectors' Exhibition.

Arthur had been a mainstay of this Society for many years. He served a double term as President from 1964 to 1966, was

mainly responsible for the formation of our Junior Section in the early 60's and was a valued member of the Publications Sub Committee. Past papers reflect his wide interest in natural history. They range from "Pond Dipping in Winter" to "Well Shrimps" and from "Notes on British Leeches" to his major contribution on Albino Frogs. His interest in the amphibia and, in particular, to albinism, began in 1964 and occupied much of his limited spare time, but by 1973 it seemed that even Arthur had had enough of frogs for a diary entry for that year reads "1973 was the last year of the albino frog breeding". However, during his years of retirement, which began in 1979, he returned to this main interest and wrote another paper in our Journal of 1983. The interest in albinos was to remain with him for on 4th July 1984 he wrote "albino frogs still being bred". (Fortunately this breeding stock has been placed in the care of the Zoology Department of Reading University).

Arthur's teaching career began in his native Wales but was interrupted by war service in the Royal Air Force. Following demobilisation he returned to Wales to fulfil part of his teacher training course which, when completed, paved the way for a post in a school at Boston, Lincolnshire. In later years he returned south, teaching first in Newbury and then in Reading at Battle Junior School and Redlands Primary where he served as Deputy Head until his retirement in 1979.

Arthur had many interests apart from natural history and was a keen sportsman. His passion for rugby was the equal of any of his countrymen but he was also a fine hockey player and cricketer.

It is good to know that his five years of retirement were happy ones and, though now free from formal teaching, he still took great delight in encouraging an interest in natural history among his local youngsters.

His enthusiasm was infectious and he had an impish good humour. Who but Arthur could have written - "A lady in a bright yellow dress was heavily covered with aphids - no other colour attracted them" - or, when his favourite collecting ground was lost - "The whole area of Tilehurst Potteries had been bulldozed for development - I beg to be excused from purchasing one of these houses or teaching in the proposed school".

Arthur will be sadly missed by us all and the sincere sympathy of all members is extended to his sister Gladys.

B. R. B.

Leonie Elaine Cobb

Leonie Cobb was born in 1912 at Duffryn Gardens, near Cardiff, where her father was head gardener. He was deeply involved in the development of dahlias, then grown only for exhibition, as garden plants, and some 50 years later Leonie was delighted to recognise one of his varieties growing unlabelled, in the garden of The Vyne. In 1919, he was appointed lecturer in horticulture at Reading University and they lived at Shinfield until his retirement in 1938, when they moved into Reading. She was educated at the Convent School and Reading University, where she took an Honours degree in French and subsequently acquired qualifications in German, Spanish and Secretarial Studies. At this time, her leisure interests, pursued with her French mother and friends, were largely linguistic, and through membership of a society promoting Anglo-French relations she had the honour of meeting the French President LeBrun in London in 1939. In that year her father took a war-time appointment at Seale-Hayne Agricultural College, and sadly died there in 1940.

In 1936, she became an abstractor at the Commonwealth Institute of Economic Entomology, which publishes monthly reviews of the world literature on insects and other arthropods of agricultural, medical and veterinary importance. This patient and exacting work, requiring good English, foreign languages and absolute accuracy, suited her admirably and she continued in it until her retirement in 1976. During the war, travelling to and from London through air-raids and the black-out made her days long and arduous, but she nevertheless undertook civil defence work at night. There was one day of celebration at C.I.E., however, when the Director's son, Airey, with whom she had played tennis on a pre-war Staff visit to their home, landed safely in Scotland from Colditz!

In 1939, she joined the Reading & District Natural History Society, which was to become of major interest and importance to her, its meetings taking precedence over almost all other engagements. She soon became involved in administration as a committee member, and tribute has been paid to her stabilising influence and practical common sense during the difficult years of low membership. She served as Honorary Treasurer in 1943-47 and 1950-70, was proud to be elected President for 1970-71, served on the Editorial Sub-Committee from its inception in 1949, and was Honorary Editor from 1978 till her death in October 1984. In the field, her main interests were in flowering plants and she recorded diligently for the Atlas of the British Flora, the Flora of Berkshire and the Flora of Oxfordshire. She was interested in fungi, and assisted Dr. Hora in the early studies on which he based his key published in Reading Naturalist no. 2, and in mosses and the larger insects, but difficulties with artificial sight aids hampered observationsof birds. Having witnessed the devastation of local habitats over the years, she was a keen conservationist and a founder member of BBONT, and she gave practical help in the field at several reserves.

We first met in 1939, when I too joined C.I.E., and we soon discovered many common interests. Leonie's mother, with whom

she was very close, died in 1947, and from then onwards I spent monthly weekends and most bank and annual holidays with her. She introduced me to all the local plant specialities, and to the Natural History Society and the Discussion Group, and I joined her in recording for the Atlas and the Berkshire Flora. Over some 30 years we 'pottered' enjoyably, with biological library and equipment (often embroidery frames, too) in many parts of these islands and in Europe, and also on a memorable botanical Hellenic cruise to Greece and Turkey - we preached conservation so vehemently on this that we felt constrained to retire on occasion so that the guest botanist from Kew could collect specimens if he wished without embarrassment!

We had both enjoyed folk dancing for many years, chiefly the social country dance, but also the ritual morris, rapper and long-sword when opportunity offered. Leonie was a country dancer of style and was recently complimented by a veteran on 'knowing how to dance!' She helped run a local country-dance group and was dancing there with enjoyment only five days before her death. Visits to Bampton in May to see its 500-year-old tradition of Morris were always high lights. We were interested in all folk ceremonies and witnessed many, but especially enjoyed the Padstow Hobby-horse (and the hedge-banks dripping with Allium triquetrum and Orchis mascula), Castleton Garland Day, the Cheshire Soul-cakers' play and the Tissington Well-dressing.

Leonie was a skilful embroideress and worked kneelers for Westminster Abbey and St. Paul's and Exeter Cathedrals, as well as designing and working two (Long-tailed tits, and a Pied Wagtail) for a friend's country church. For her own church, of which she was a faithful member, she embroidered and repaired vestments and also helped with floral decorations - and gardening in the churchyard. On retirement, she took on various parish and charitable activities and enjoyed renewing old friendships and visiting old friends living away from Reading. She was a member of Convocation of her University. A life-member of the National Trust, she joined the local centre and derived great pleasure from its meetings and excursions.

Her sudden passing shocked and saddened her many friends, among whom NHS members ranked high. With her friendly, yet often diffident, helpfulness, her thoughtfulness, clear-sightedness, dedication and integrity, she will be greatly missed. She had so many qualities of mind and character and so many skills, literary, artistic and physical, and made full use of them all, to her and our benefit. Truly a good and faithful servant.

E.M.N.

Meetings and Excursions, 1983-84

The Annual General Meeting on 6th October 1983 (attendance 43) was followed by Mr. M. R. W. Sell's Presidential Address entitled "Can We Reserve This Space?" Other lectures during the winter were "The Butterflies of Berks, Bucks and Oxon" by Miss Caroline Peachey (59); "Falling Leaves" by Dr. B. M. Glyn Jones (49); "Land and Freshwater Molluscs in Britain" by Mr. Michel Hughes (52); "Amphibians of Britain - their Biology and Conservation" by Miss Julie Roberts (38); "Iceland and its Flowers" by Dr. Peter Brough (65); "Conservation and the Ministry of Defence" by Lt.-Col. C. N. Clayden (55); "A Photographer at large in the Eastern Mediterranean" by Mr. Ken Grinstead, kindly standing in for Mr. Nigel Phillips who was indisposed (55); "120,000 years of Natural History in the Kennet Valley" by Dr. David Holyoak (54); and "B.B.O.N.T. and its Nature Reserves" by Nr. N. Ajax-Lewis (71). Members' Evenings of Slides, Talks and Exhibits, at which coffee and biscuits were served, were held on 15th December 1983 (63) and 22nd March 1984 (62).

Winter Excursions

The first Fungus Foray was to Cold Ash. (Morning attendance 31 and afternoon 17); the second on 25th October to Baynes Reserve (15). There was a "Snail Trail" on 10th December at Sonning Eye (20); a visit to Small Mead Gravel Pits on 14th January for Birds (16); to Nippers Grove on 18th February for Mosses and Liverworts (24) and to The New Forest on 17th March for Birds (27).

Summer Excursions

Summer excursions were to the Basingstoke Canal at Greywell to see Dabchicks and the floating Liverwort Ricciocarpus natans on 7th April (33); an evening in Woodley identifying bird-song on 25th April (20); Dinton Pastures and Sandford Mill for Loddon Lilies on 28th April (36); Three Mile Cross and Stratfield Saye for Water Violet and Fritillaries on the evening of 9th May (45); a spring walk in the Midgham/Beenham area on 12th May (20); an evening walk beside the Kennet for birds on 16th May (10); Thames-side to see the Club-tailed Dragonfly on 27th May (12); Wokefield in the evening to see bats on 6th June (16); Old Burghclere Limeworks for chalk flora, fly orchids and Green Hairstreak butterflies on 9th June (37); Caversham to Tilehurst along the Thames on 13th June (14); coach excursion to Martin Down National Nature Reserve, and Black Gutter Bottom in the New Forest on 23rd June (51); Baynes Reserve, Thatcham for Moths on the evening of 19th June (16); Padworth Gully identifying grasses on 7th July (25); Wellington Country Park for a walk, a barbecue and moths on the evening of 21st July (42); Aston Upthorpe (B B.O.N.T. Reserve) for chalk grassland on 4th August (18); to Turville Hill on 1st September (21) and Mapledurham area on 15th September (10) both for general interest, and the first Fungus Foray on 29th September (16) at Grimsbury Woods.

Can We Reserve This Space?

The Presidential Address
to the Reading and District Natural History Society

6th October, 1983

M. R. W. Sell B.A.

My talk tonight will be a mixture - partly history lesson, part sermon - although I am sure that I am preaching to the converted - but primarily, I hope, a botanical excursion, punctuated by ornithological and entomological interludes!

The Berkshire, Buckinghamshire and Oxfordshire Naturalists' Trust (B.B.O.N.T. for short) was set up in 1959, one of its major objectives being to create Nature Reserves, one of which, Aston Upthorpe, is well known to this Society. Part of a much larger S.S S.I. of over 100 acres, the reserve now consists of an area of 39 acres known as Juniper Valley, and lies above Cholsey on the Berkshire Downs - somewhat wrongly named as they are now in Oxfordshire! Chalk grassland in its original state, or "unimproved" as the agriculturalists would have it, is now a rare commodity, due to the bulk of downland being turned over to arable farming. It is said, incidentally, that modern farming is making a far greater impact on the countryside than anything else, and the pace of change is accelerating. Modern large machinery for use in larger, prairie-like fields is completely changing the face of downland where flocks of sheep used to graze on species-rich swards, with numerous butterflies and other insects. The Common Agricultural Policy of the E.E.C. is the most recent factor to be taken into account in the changes now witnessed to our downlands, so whatever we can preserve of this type of habitat is vital for the appreciation of future generations. We would never be forgiven if we only bequeathed them the prospect of a monoculture of cereal crops or conifers. Aston Upthorpe is one of the few areas of "unimproved" grassland left on the Berkshire Downs, and may it remain that way .....

The history of the Reserve is interesting. In 1964, a "gentleman's agreement" was reached between B.B.O.N.T. and the then owner for a period of 15 years. This was continued with the next owner when the estate was broken up in the mid-1970s (although under some considerable threat) until 1979, when a similar agreement was made for a period of a further 5 years with the present owner. This expires in January 1984, and will be superseded by a series of one-year agreements, renewable by mutual consent. It will therefore be seen that no written agreement has ever been entered into with any of the owners of Juniper Valley - not the most satisfactory state of affairs as far as the Trust is concerned - but the best that can be secured in present circumstances.

As a "quid pro quo" for the Trust having the privilege of access to the valley, and the Reserve being maintained as unimproved grassland, the Trust has the responsibility for certain aspects of management, such as regular ragwort-pulling, and rabbit control. The presence of rabbits, in fact, is one

of the main reasons for the spread of ragwort, as the newly-excavated burrows form seed-beds for ragwort plants to spread quickly and flourish. The original size of the reserve was 1.1 acres, which consisted of a fenced-off area on the West-facing slope, with a small enclosure for the Pasque Flower (Anemone pulsatilla). This enclosure is incorporated in the new 39-acre Reserve, although pulsatilla also grows outside on the upper area of the same slope. In fact one of the main attractions of the Reserve area is that it is one of the few sites left with a reasonable-sized pulsatilla colony anywhere in the country. So many other sites are now either overgrown, or have disappeared under the plough.

Management demands made on the Reserve area can be conflicting - the grazing in the late sixties and early seventies was spasmodic, and sometimes non-existent, and as a result the grass Bromus erectus was dominant throughout the valley. This caused excessive competition with the chalk flora which otherwise would have flourished, but there were benefits in other respects The tall grass provided cover for voles and mice, particularly short-tailed voles, and this led to numbers of Short-Eared Owls spending the winters in the valley, where food of a suitable type was abundant. In the late seventies, grazing was resumed at a much more intensive level, and while the chalk flora flourished, there was insufficient cover for the owls, which moved to other sites. Another factor was that, while many seedling Junipers were noticed in the long grass, when grazing was resumed in normal intensities, these young seedlings soon disappeared, apart from a few in the small enclosure specially erected with rabbit- and vole-proof fencing, where probably a complete lack of browsing and protection of the long grass has enabled them to survive. While this enclosure may be a successful way of allowing young Juniper to regenerate, the purpose for which it was originally installed seems to have been a failure, namely, to protect pulsatilla from browsing. In fact, the opposite type of treatment would seem to be the most beneficial, as evidenced by other Pasque Flower sites such as Therfield Heath, where there is a footpath over the Downs, and the whole area is well-walked and trampled. In fact, this appears to be the most effective type of management, as recent papers on the subject show. The plants produce side-shoots, and spread vegetatively, rather than set seed, for which method only a very low success rate has been shown. Flowering is therefore more profuse. Another method, although totally impracticable, would be to convert the site to a bombing range! The effect of such drastic treatment below the Fair Mile was to convert the valley there to a carpet of purple for the duration of most of the last war, so I am told!

Management of the Reserve since the late sixties has therefore been a question of reconciling different objectives. Obviously, the main purpose has been to restore the chalk flora to its full glory, taking into account also the apparently conflicting requirements of Pasque Flowers and Juniper. As the original Agreement only included the 1.1 acres to the North-East of the valley, this area was made into a large enclosure during the summer months, with moveable fences at top and bottom to allow access for cattle outside the flowering season, i.e. before April, and from September onwards. While this

regime was satisfactorily operated for a few years, with the new Agreement covering the entire valley, the present owner did not favour the retention of this enclosure, and it was removed, allowing cattle access to the entire valley, with the exception of course of the very small rabbit-proof enclosure instituted for the benefit of pulsatilla. The overall effect on the flora does not seem to be detrimental in any respect, particularly in respect of plants like Chalk Milkwort and Horseshoe Vetch, which have positively benefited from the reduction in competition from the taller grasses. At one stage, the growth of Bromus erectus was threatening to swamp all the other vegetation, so efforts were made to control it - first by cutting by shears, then by controlled burning, and finally by "Flymo". This seems at first sight a rather drastic solution, but it was one which virtually eliminated Bromus erectus and Cocksfoot grass by chopping up the tussocks. After a couple of years of this "treatment", the more typical chalk grassland grasses and sedges began to reappear, and when grazing was resumed on a more commercial scale, the chalk flora reasserted itself. Under normal circumstances, grazing in the valley does not commence until early June, after Pulsatilla, Field Fleawort, Chalk Milkwort and Burnt-Tip Orchids have flowered and have had a chance to set seed. Young beef cattle have been grazing the valley in recent years, and are usually in for a spell of about six weeks, alternating with six weeks in the next valley. This gives the flora a chance to flower and set seed throughout the summer. Obviously, the Trust would have preferred sheep for grazing, but the cattle, providing the valley is not overgrazed, as it was in the dry summer of 1976, seem to do no harm. There are of course more nutrients fed back into the soil with cattle, which encourages the ranker weeds such as nettles and Creeping and Musk Thistles.

Management activities involve ragwort-pulling in July, the Conservation Corps of the three Counties usually managing to complete the whole valley in two weekends. Definite progress is being made in this respect, and it is hoped that most of the Ragwort will be eliminated within a five-year cycle. Pulling of Ragwort is quite an art, or science, perhaps I should call it, as one has to take the strain on the plants, pulling gently until the roots come out. If the root is broken off, the plant then becomes perennial, instead of biennial, with further trouble in years to come! Rosettes can be spot-treated with chemicals in the Spring, but this appears to be an unacceptable solution, as the stock then has to be kept out of the area for about 6 weeks.

Rabbits are a problem to the owner, and part of the management agreement for the valley involves control, or better, elimination of this problem. Myxomatosis of course takes its toll each year, but rabbits seem to be getting increasingly resistant to this disease. Mortality to the affected animals ranges from 50% to 90%, according to the virulence of the strain of the disease, and other rabbits will come in to fill the vacant warrens in due course. Gassing and ferreting have both been tried, with varying degrees of success, and electric fences have been erected to protect the adjacent wheat crop, but I have seen rabbits actually jump through this fence, with no apparent ill effects! Severe crop depredation has occurred

in certain areas, reaching about ten to fifteen feet into the field in question. Many of the buries are under expanses of Juniper on the East-facing slope, and very difficult to get at. It would probably be impossible to eradicate rabbits entirely from the valley, but with a complete fencing project to keep them in the valley, no damage would ensue to the crops outside at least, and with continuous ferreting, they could be kept well under control. The buries also form seed-beds for ragwort, which then has to be dealt with the following year.

The problems arising from the effective management and encouragement of the spread of the Pasque Flower have been mentioned. There has been a general decline in this species since 1974, when about 300 blooms were counted, and normally only a handful of blooms are to be seen each year, over a fairly long flowering period of about five to six weeks. Most of the plants are small, with one or at most two blooms, and many of the larger and older plants seem to have disappeared in the last few years. It is difficult to age the present plants, but at a guess, they are probably not more than 5 years old. This would suggest some regeneration, but how much is through seeding and how much through trampling, it is difficult, if not impossible, to tell.

Some scrub clearance has also been carried out, and in one area where this was done, and the stumps treated, there was an immediate colonisation by plants of Catmint, quite a rare and local chalk plant, and a corresponding influx of Ragwort in the disturbed ground. The conditions were also suitable for rabbits, and Deadly Nightshade also flourished. After a year or two of cattle grazing, however, the sward became more typical of what one might expect in a chalk grassland area. Further scrub clearance was not undertaken, as the owner did not wish any more work of this nature to be done, so there is an area near the top of the valley with Buckthorn, Roses, Hawthorn and some Elder, which incidentally gives cover for any game in the vicinity, and provides food in Autumn and Winter for Mistle Thrushes, Fieldfares, Redwings and finch flocks which spend time in the valley.

Effective management for Juniper, which is one of the main attractions of the valley, is very difficult. As already mentioned, young plants were at one stage fairly frequent, but none are to be found at present, and the reasons for this are not at all clear. Most of the bushes in the valley are even-aged, I estimate about 50 to 80 years old. Juniper is very slow-growing, and very little is understood about its regeneration. This particular type is at the southern end of its range. The fruits take two years to develop, and then need a hard frost to germinate, or alternatively can be put in the deep-freeze to help! There are some small colonies left on the Downs as well as the large ones, of which Aston Upthorpe must be about the best. Generally, however, the species shows a history of retrenchment and decline, and there are difficulties of regeneration as the bushes grow older. The male plants, incidentally, live far longer than the females, a reverse of the human situation! If no successful regeneration is accomplished, probably most of the plants will have died within the next 50 years. Suggestions have been put forward for

management - the clearance of any competing vegetation, provision of bare ground for successful seedlings, grazing, burning or ground disturbance. Most of these suggestions have been tried, in one way or another, on the Reserve, but drastic steps, like the burning of senescent Juniper, may be the best way of stimulating growth of young plants.

Artificial seeding is possible, propagation of cuttings is costly and may prove impractical, but young plants would almost certainly need protection from heavy grazing, and rabbit numbers would have to be kept at a low level for several years. My view is that rabbits do in fact ring-bark young Junipers in severe winters, causing them to die, and only the old trees can survive this treatment by using the sap-wood for the effective supply of sap - something that the young plants seem unable to do. The answer, I feel, is to place strategically-located small rabbit- and vole-proof enclosures in the areas of the female Juniper bushes, to allow young saplings to regenerate. The proof of this measure, I consider, is in the fact that the only young Junipers on the Reserve are in the present small enclosure which was originally provided to protect Pulsatilla. If this solution were to be adopted, hand-weeding and grass-cutting would probably be essential, the disbenefits being an increase in the amount of moss, tall grasses, hawthorn scrub, and eventually climax vegetation, if left.

The flora of the Reserve is very rich - Cowslips are a typical chalk grassland plant, but are becoming scarcer, due to disappearance of suitable habitat, and possibly the increase of home wine-making activities. There are several large colonies on the Reserve, and on the main path approaching the Reserve from the north.

Candytuft is a denizen of bare chalk patches, often created by rabbits or moles, and is a speciality of the Berkshire Downs, and to a lesser extent, the Chilterns.

Chalk Milkwort is also a plant of chalk downland, preferring short turf, and often in May the whole Reserve is covered by a blue haze. There are also pink or white variants of this species, which is a more azure blue than its related species, which grow on acid soils or heathland.

Rock Rose is not frequently found at Aston Upthorpe, but tends to grow more on bare steep chalky banks, again where competition from other flora is not too great.

Horse-shoe Vetch began to return to the Reserve after grass-cutting by "Flymo" had started in earnest, and in most years there is a good display. This is the food-plant of the Adonis Blue butterfly, one of our most spectacular chalk downland species.

Dropwort is another typical chalk and limestone plant, commoner in some parts of downland Britain than others, but particularly abundant, in suitable habitats, in central Southern England, and present in quantity at Aston Upthorpe.

Salad Burnet and Eyebright are two common downland plants,

the latter having many varieties, not only growing on downland, but heathland and waste places.

Small Forget-me-not grows on anthills, a type of habitat difficult to recapture at Aston Upthorpe. Ants seem to be returning, but are slow to recolonise areas. Wild Thyme, Squinancywort and various Chickweeds, sometimes also Field Mouse-Ear Chickweed colonise these hills, which may originally have been anthills or molehills. The ants are the yellow downland species, found frequently in open grassy areas.

Field Fleawort, a speciality of Aston Upthorpe, grows in a limited number of areas of unimproved chalk grassland - I know it only from 3 or 4 sites in Britain, but there are doubtless more - not a very tall plant as a rule, although there are two sites in Britain where it grows to an enormous size. It also grows further down the valley, below the Reserve, but does not do so well there, where Bromus erectus is dominant.

Dwarf Thistle, otherwise known as the "Camper's Nightmare", became, after the initial "Flymoing", almost a pest in one area where the Frog Orchids grew, and I nearly had to devise a plan to kill them off (I hasten to add that this was before the 1981 Wildlife and Countryside Act came into force), but grazing now seems to have reduced them to manageable proportions.

The Carline Thistle is another downland species, thriving on chalk and limestone grassland, flowering in late summer.

One of the grasses which tends to get overcome by Bromus erectus, but which reappears when the turf is mown or grazed, is Quaking Grass. The sedges Carex caryophyllea, which flowers in April and early May, and Carex flacca, are typical of short chalk turf.

Indicators of orchids, in chalk sward (these plants being one of the major reasons for maintaining or acquiring Reserves such as Aston Upthorpe) are flowering heads of the delicate Fairy Flax, known colloquially as the "Orchid Pointer".

Last, but by no means least, are the Orchids themselves. Typical of chalk downland, probably the most attractive, although by no means the most abundant plant there, and one of the most exciting at Aston Upthorpe is the Burnt-Tip Orchid, often difficult to spot among the small white lumps of chalk brought up by moles. Numbers of this species fluctuate from year to year, from a mere handful to almost 200 flowering spikes in 1972, which appeared to be a good year for Orchids generally. Occasionally the odd Bee Orchid appears, usually in one particular spot. There were three plants in 1983 in the same area as one seven years previously. These were probably the direct descendants of the plant in 1976; as they are monocarpic, they die after flowering, but produce tens of thousands of small seeds, like dust, which if successful in germination come to maturity and produce flowers seven years later. Perhaps the next Bee Orchids will not appear until 1990! There are also two colonies of Frog Orchids, another Downland species, which does not favour tall rank vegetation, and is so well disguised at Aston Upthorpe, being predominantly green in colour and

only one to two inches tall, that it takes a search on hands and knees to find them, as a rule! Plants at Watlington Hill however, by contrast, do have considerable amounts of reddish coloration, and grow to about six inches, so they are much easier to locate. Numbers at Aston Upthorpe each year vary from one or two, to a bumper total of 53 in 1972.

Pyramidal Orchids are also a feature of the Reserve, but seem to do best where the turf is not grazed by either rabbits or cattle - they are obviously very palatable, and in the small enclosure they tend to do quite well if the grass is cut by hand in early Spring. Management for these plants is difficult - the total withdrawal of summer grazing would probably be the best solution although this would be unacceptable to the owner.

Fragrant Orchids do not grow at Aston Upthorpe, but are to be found nearby on apparently identical grassland - there is no particular reason why they do not grow on the Reserve itself.

One of the latest flowering plants on the Reserve is Felwort, or Autumn Gentian, which in some years flowers in abundance. It is a small attractive plant, and flourishes best when the turf is well-cropped and there is not too much competition from the coarser grasses.

There are other flowers in and around the S.S.S.I. and Juniper Valley in particular, such as Clustered Bellflower, Vervain, Field Mouse-Ear Chickweed, Deadly Nightshade and Night-Scented Catchfly. These are part of the very rich heritage bequeathed to us by our ancestors, and one which we should strive to our utmost to preserve.

Apart from the chalk flora, the Reserve and surrounding area have a varied bird life. Quail spend the Summer on the Downs in some years - 1972 being a good year - with two birds calling in the valley itself. Stone Curlews, alas now a declining species on farmland, often called nearby, although the last year I heard them was 1975, when a field that had been left fallow during the Summer was brought into cultivation throughout the year. Hen Harriers visit the downs in Winter, and Short-Eared Owls were frequent in the valley until 1975, when the shorter grass no longer suited them. Sparrowhawks nest in the adjacent wood, and I have seen Buzzards on the Reserve. Birds such as Curlew and Grey Plover have flown over on migration, and there is a family of Kestrels hunting in the area in most years.

I have seen 16 species of butterfly in one day in the valley, and I am quite sure that this could be increased to 20 with a little patience and the right conditions.

This, then, is Aston Upthorpe - a gem amid the modern agricultural scene, a Grade 1 S.S.S.I., which is to be rescheduled shortly. It is surely our bounden duty to see that such areas are preserved and conserved for posterity. It is a window on a colourful past, before modern agribusiness made the landscape what it is today. The danger is that too many of these areas have become too small and fragmented, so that they are unviable for birds in particular, and to a lesser extent,

insects, especially butterflies. Correct management is essential - we all know the sad history of the Large Blue - and techniques must be adequate for the job in hand. Lessons can be learned from history and a strict management regime should ideally be implemented wherever possible, preserving this type of habitat for posterity. We must also find satisfactory solutions for the management of species such as Pasque Flower and Juniper if we are to succeed in our objectives, but we do not have time on our side. If I knew the answers to these two particular problems at Aston Upthorpe, I would feel that I could achieve my major objectives in the management of this superb part of our natural heritage. Apart from these unknown factors, it is always a question of trying to reconcile different objectives, and I think it is this that makes nature conservation such a fascinating, demanding and rewarding activity.

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Baynes Reserve and Bowdown Woods

R. J. Hornby

Until a few years ago the alder gullies radiating from the plateau of Greenham Common had received very cursory treatment from naturalists. In fact they have a great deal to offer, particularly to the botanist and the entomologist, and they contain a number of features which are not present in alder woods in other parts of the country.

There is a surprising amount of variation between individual Greenham gullies and some marked contrasts between those on the south side that drain to the Enborno and those on the north that drain to the Kennet. Several interesting plants are apparently confined to the south side, e.g. Viola palustris, Equisetum sylvaticum, Convallaria majalis, Carex paniculata, Polystichum aculeatum and Scutellaria minor. The absence of these from the north-facing gullies is surprising in view of the rich flora to be found in the woodland on the north side of Greenham Common, the majority of which has been afforded the protection of the Wildlife and Countryside Act by being included in the 165 acre Bowdown and Chamberhouse Woods S.S.S.I.

In recent years two separate parts of this have been purchased by B.B.O.N.T., namely the 37 acre Baynes Reserve (occupying Great Wood and Parklodge Gully) and the 51 acre Bowdown Woods. Both areas together with intervening Old Bomb Site (40 acres owned by the Ministry of Defence) have received a lot of management since April 1983 through B.B.O.N.T.'s Community Programme Teams funded by the Manpower Services Commission. They have created greater habitat diversity and a network of paths providing the naturalist with easy access to a range of flora and fauna difficult to rival anywhere in Berkshire.

Part of the reasons for the great range of habitats is attributable to the geology. The high ground to the south lies on well-drained, acid plateau gravels, generally supporting birch and oak with occasional cherry and the odd very large, presumably planted, beeches. Beneath the plateau gravels there is a broad band of Bagshot Beds which varies from silty sands to clays and which contains many springs and seepage zones. The characteristic tree here is alder, often growing in apparently well drained soils and present as massive coppice stools with 6-8 stems up to 50 feet tall. Alder extends down to the bottom of the valleys with hazel, birch, crack willow and an increasing proportion of ash. Along the lowest edge of the woodland, on head deposits overlying London Clay, there are good numbers of large ash and oak with field maple, aspen, blackthorn, guelder rose, crab apple, dogwood and other shrubs.

In addition to habitat diversity, the biological interest of the woodland owes a lot to its long history. Maps at the County Records Office reveal that Great Wood has been present as woodland back to the 16 Century. It is very unlikely that there would have been any phase of clearance and farming before this, so the area is probably primary woodland. It would have been managed as coppice, probably for at least 500 years, supplying hazel for sheep hurdles, thatching spars and crate rods, and alder, ash and birch for charcoal, tool handles and, more recently, turnery. Most probably wood turners established themselves in the Thatcham area because of the abundance of alder and birch on either side of the Kennet Valley.

Great Wood was probably part of Chamberhouse Park, created in the 15 Century. It remained as woodland, probably regularly coppiced, until 1798 when it was purchased by Henry Tull of Crookham. The Tull family kept the wood until 1939 when it was sold to a timber company, Baynes (Reading) Ltd. They felled nearly all the worthwhile timber in 1940 after which it remained untouched, save for the construction of an overhead power line. The peace was shattered in 1981, when a timber merchant felled about five acres. This led to a reappraisal of the future of the Baynes' land, resulting in the company leasing it to B.B.O.N.T. at a peppercorn rent for five years. More recently still, B.B.O.N.T. has purchased the freehold with the help of grants from the Nature Conservancy Council, Berkshire County Council, World Wildlife Fund and the National Heritage Memorial Fund.

Not so much is known of the history of the Bowdown Woods, except that they were bought by the Dormer family in 1920, from whom B.B.O.N.T. bought the reserve in 1984.

In between Baynes and Bowdown the Old Bomb Site now offers a fascinating mosaic of heathland, acid grassland, bracken, scrub and woodland. Most of this area was arable in 1840 and was probably used for rough grazing until sometime in the early 20 Century. The depletion of nutrients through arable farming would have encouraged the formation of heathland. Today there are good stands of Calluna vulgaris with its typical associates Erica cinerea, Ulex minor and Teucrium scorodonia. Acid grassland here supports a wealth of small herbs such as Gnaphalium sylvaticum, Ornithopus pepusillus, Veronica arvensis, Myosotis

ramosissima, Erophila verna, Aphanes arvensis, Montia fontana and the grasses Vulpia bromoides, Aira praecox and Aira caryophyllea. Wartime activities involved constructing a network of concrete roads, the edges of which now support Agrimonia odorata, Sedum acre, Trisetum flavescens, Malva moschata, Verbascum thapsus and Echium vulgare.

The lower parts of the woodland in Baynes Reserve support a remarkable variety of plants typical of ancient coppice woods, e.g. Paris quadrifolia, Lamiastrum galeobdolon, Veronica montana, Polygonatum multiflorum, Conopodium majus, Narcissus pseudonarcissus, Orchis mascula, Listera ovata, Carex strigosa and the grasses Bromus ramosus, Melica uniflora, and Festuca gigantea. Wet flushes and streamsides support Cardamine amara, flexuosa and pratensis, Ribes nigrum and R. rubrum, Stellaria alsine, Scirpus sylvaticus, Galanthus nivalis, and Chrysosplenium oppositifolium and alternifolium. The latter is only known from one other site in Berkshire - a few plants in one of the gullies on the south side of Greenham Common. Perhaps the most striking feature of Baynes Reserve is the ferns. The darkest patches of woodland tend to be dominated by Dryopteris dilatata and D. filixmas; wetter areas often contain Athyrium filix-femina; patches where the canopy has recently been lightened tend to produce Dryopteris carthusiana, and there is a scatter of very large, stately Dryopteris pseudomas. Polystichum setiferum is present only as one old plant; Polypodium interjectum only occurs in one place, and Phyllitis scolopendrium is confined to some brickwork on the disused wartime sewage works on the southern edge of the reserve. Parts of the Bowdown Woods have a field layer composed entirely of tall ferns, the dominant species being Dryopteris pseudomas.

The Bowdown Woods are heavily dissected by a series of valleys which tend to contain very wet peaty soils but not a lot of water flowing in the stream courses. The largest of these is remarkable for the extent of very soft, permanently waterlogged ground dominated by Ranunculus repens, Lamiastrum galeobdolon, Ajuga reptans and Dryopteris dilatata. The head of this valley harbours a few plants of Carex laevigata with Ranunculus flammula which here seems to pick out the most acid spring-fed ground. A little further down the valley on the edge of the waterlogged zone, is a fine stand of Carex pseudocyperus growing with Cardamine amara.

The adjacent valley in Bowdown Woods is more open and has an interesting Sphagnum dominated, flushed pond at the foot of an area of heathland and bracken. This seems to have provided an ideal refuge for some species which failed to survive elsewhere, for it has fine stands of Carex demissa and C. echinata along with Myosotis laxa, Carex laevigata and Juncus acutiflorus.

In 1981 a timber merchant felled about five acres of woodland in the heart of the area which became Baynes Reserve. He was primarily concerned to extract alder and birch for sale to the turnery trade, but he also took a quantity of ash and some of the larger hazel. Most of the brash was burnt and much of the ground was disturbed or churned by the tractor used to

extract the timber. The visual effect of this operation was of course devastating, even though a few trees were left standing within the clear-fell blocks and some patches of hazel and other shrubs were left untouched.

Throughout 1982 much of the ground remained very bare, though brambles were becoming increasingly evident by the end of the summer. The large areas of bare ground were exploited in that first year by adders, common lizards and slow worms. In subsequent years they have not been so evident but this is probably because it became more difficult to see them rather than any real decline. Another species which appeared in 1982 was the tree pipit, a pair of which bred in an area with both tall trees and bare ground.

The effect of the 1981 felling on the flora has been of some interest, particularly as it helps in predicting the results of further woodland management work. A patch of wild daffodils (Narcissus pseudonarcissus) responded well to additional light and produced a fine splash of colour in March 1982. They were still flowering well in 1984 but are unlikely to be able to compete with bramble for more than another year or two unless they are given a helping hand. The one species which responded most spectacularly to the felling was foxglove (Digitalis purpurea) which produced a few flowers in 1982 but was a positive riot of colour in 1983. In the wetter ground Scirpus sylvaticus made a welcome appearance, presumably from seed, and in the autumn of 1982 seedlings of heather Calluna vulgaris were noticed in an area which had supported dense birch with no sign of a heathland flora. This area has been kept short by cutting and it now supports an attractive community of Calluna (flowering), Carex pilulifera, Galium saxatile, Rumex acetosella, Polytrichum commune, Veronica officinalis, Luzula pilosa and Aira praecox. Annual mowing should maintain this habitat which seems to be particularly favoured by grasshoppers Chorthippus brunneus and C.paralellus.

Elsewhere within the 1981 felling or in areas subject to subsequent coppicing or ride widening, various species have flourished in the additional light. Notable examples are Dryopteris carthusiana (not present in the unmanaged woodland), Hypericum humifusum, Euphorbia amygdaloides, Scirpus setaceus, Carex strigosa and Orchis mascula. Several species have appeared only along the main access track which was subjected to repeated tractor movements. Polygonum persicaria, Chenopodium polyspermum, Coronopus didymus, Carex muricata and C. ovalis all appeared in 1982, but Carex pallescens and Hypericum pulchrum were not observed until 1984. Many rosettes of Cirsium palustre appeared in 1983 and shot up to 6-8 feet tall by July 1984, providing a source of nectar much appreciated by many butterflies.

One species which was quick to take advantage of the newly created open areas in 1982 was the grayling butterfly. This species breeds on Greenham Common, (probably with difficulty now in view of the level of human activity), but prior to 1981 Baynes Reserve would have been too dense for it. It is the only butterfly in the Reserve to habitually alight on the bole of large trees where presumably it obtains a measure of

security through camouflage. Butterflies are in fact one of the best represented groups in the S.S.S.I., with thirty species recorded since 1982. Most spectacular are the white admirals, which are very numerous particularly around the edges of clearings. It has been particularly rewarding that purple emperors have been seen in various scattered parts of the S.S.S.I. We are hoping that management will help this magnificent species which is apparently quite strong in the Newbury area but which is very restricted nationally and seems to be in decline. The silver-washed fritillary is present in low numbers in the reserve and we are hoping that sightings of small pearl-bordered fritillaries can also be confirmed and that both species will increase. Beating for larvae has shown that the purple hairstreak is locally plentiful but rather overlooked because of the adults' habit of staying in the treetops. The grizzled skipper seems to be expanding out from its localised stronghold on the Old Bomb Site, hopefully benefitting from the network of open flowery habitats. An unexpected discovery was that the brown argus is breeding on the Old Bomb Site, possibly on a species of Geranium for its normal food plants of rockrose and storksbill are not present.

The other insect group which is very much in evidence throughout the S.S.S.I. is the dragonflies. Until recently there has been no standing water habitat present within the site so most species have been emerging from garden ponds or the Kennet and Avon Canal and flying to the reserve because of the favourable conditions for feeding. This says quite a lot for the numbers of small flying insects that must be present in the summer (an observation supported by the number of bats seen flying around the trees at dusk).

Fifteen species of dragonfly have been observed in Baynes Reserve alone. This includes Cordulegaster boltonii and Agrion virgo which must be breeding in the streams, as they are both flowing water species, and the Kennet would not be suitable for them. The still water species include Lestes sponsa, Orthetrum cancellatum, Anax imperator, Libellula depressa, Aeshna grandis, A. cyanea and A. mixta. The latter, the so-called scarce Aeshna, was very common in September 1984 and seems to be on the increase. It is believed that it breeds in the canal but it would be a species that would well repay a detailed study.

Another insect group which has received a fair amount of attention is the moths. I am very grateful to Norman Hall who has carried out several nights of moth trapping and who has managed to build up a list of about 200 species of macromoths for a restricted area of Baynes Reserve. Some of the catches have been very rewarding and many notable species have been recorded, e.g. barred hook-tip, lead-coloured drab, barred umber, chocolate-tip, yellow belle, map-winged swift, tawny pinion, pale pinion, white-marked, square-spot, rosy marbled and the alder moth. The large dark-coloured galleries in cut stumps of sallows turned out to belong to lunar hornet clearwings, and in July 1984 a group of us were delighted to find a yellow-legged clearwing taking nectar from flowers in short turf on the Old Bomb Site.

Recording of other insects has been ticking over since 1982 but in 1984 it took off when Hugh Carter began to make regular visits. This has proved very worthwhile for to date he has found five species of Diptera, two of Coleoptera, three of Hemiptera, two of Hymenoptera and one of Neuroptera which have not previously been recorded in Berkshire. This must be both a reflection of the richness of Baynes and the dearth of entomological recording in most of the county.

In drawing up a management programme one tries to take account of all species of any nature conservation significance. This is a tall order for even if one could be sure of the effects of management on individual species, we are still a very long way from having found all the species. It is only for vascular plants that the species list is reasonably complete, but still new species appear each year which had not been noticed in previous years. Inevitably one has to judge the probable effects of different management options and scales of working, and weigh up the needs and implications for different groups and species. Of course one is very much influenced by personal experience and this is never likely to be adequate. One has to try to determine a programme which will maximise possible benefits, bearing in mind all the advice which can be obtained. One thing is clear - that there is a greater chance of getting it right if more people are actively contributing to the pool of knowledge. I hope this article will encourage more people to visit and record in this fascinating corner of the Berkshire countryside.

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Distribution of Freshwater Crayfish in the Thames Catchment

J. B. Hogger, Thames Water, Reading

There is a general lack of published information regarding the national distribution of freshwater crayfish and this is also true of the Thames catchment. This is surprising since there is only one native species, Austropotamobius pallipes (Lereboullet, 1858). It is the largest freshwater invertebrate and is of both ecological and potential economic importance.

Early records of crayfish occurrence in the area have been collated (Thomas & Ingle, 1971; Duffield, 1933) and indicate a reasonably widespread distribution. Crayfish certainly occurred in the main River Thames at the turn of the century when they were reputed to be "plentiful from Staines upstream to the source" (Cornish, 1902).

As part of a wider study of the biology and distribution of crayfish in the Thames catchment recent records have been collected and up to date distribution maps plotted. For the

purposes of this survey records were obtained from a variety of sources, principally: Water Authority records, county biological recording schemes, published data and personal observations and communications. Wherever possible records have been verified.

To determine whether or not crayfish were present at a site, hand searching was carried out. This involved methodically working upstream turning over suitable hides whilst holding a collecting net at their downstream side. As crayfish are mainly nocturnal feeders some hand searching and observation were carried out at night, by torchlight. Most sites were adjacent to roadbridges for ease of access and for the abundance of hides, e.g. brick rubble, old tyres, etc., at such locations. (N.B. Permission of the riparian owner and the water authority is required before crayfish may be removed.)

Figures 1 and 2 illustrate the distribution of A. pallipes. Figure 1 shows national distribution and distribution in the Thames catchment. Each solid 100 km.^{2} square represents one in which crayfish have been found since 1970. Figure 2 shows the Thames area distribution recorded as occurrence in 4 km.^{2} squares, the scheme used by the county biological recording schemes. Unverified or pre-1970 records are plotted as open squares. As can be seen A. pallipes are widely distributed throughout the Thames catchment, occurring in all the major tributary systems. There are numerous post-1970 records from within a 15 mile radius of Reading:- R. Enbourne (whole length); High Wycombe Dyke; R. Kennet (Marlborough to Burghfield); Kingsclere Brook (whole length); R. Lambourn (Welford to Shaw); R. Loddon (Sherfield to Sindlesham); R. Lyde (whole length); R. Pang (Blue Pool to Pangbourne); Ramsdell lake; Silwood Park lake; R. Whitewater (Odiham); Winterbourne (Bagnor). Additional pre-1970 plus unverified records came from Hambridge lake, Newbury; Holybrook, Calcot; Kennet (Blakes Lock); Maidenhead Ditch, Bray; R. Thames at North Stoke and Caversham Mill.

The distribution pattern of A. pallipes is constantly under threat from changes in water quality, alteration to the physical nature of the site and biological changes.

In the Thames catchment natural water quality is ideal for crayfish, being an area based largely on chalk and limestone, containing rivers with a neutral/alkaline pH and water with a high calcium content. A. pallipes are reported to require a pH of 7 to 9. However, man has greatly influenced water quality in this area of considerable urban and agricultural growth. The relationship between crayfish distribution and the chemical classification of water quality (National Water Council) indicates that crayfish prefer Class 1A and Class 1B rivers; these are also rivers that support diverse biological communities. Temporary pollution incidents, either short-term or intermittent, may also have a long-term effect on crayfish populations by reducing or totally eliminating them. In this area this is known to have occurred in the Kingsclere Brook.

The other major influence that man can have on a water course is the physical alteration of its nature, to improve

drainage, flood alleviation or to improve navigation. This may involve periodic dredging, removal of bankside cover and the removal of the type of habitat required by crayfish, which is normally considered an impediment to water flow by the drainage engineer. Crayfish may be bodily removed from the water - in an investigation on the River Beane in Hertfordshire an average of 92 crayfish per dredger bucket load were removed.

Coupled with routine maintenance is the construction or modification of flow-regulating mechanisms, such as weirs and flood-relief channels. Such areas can be constructed to provide suitable crayfish habitat and their colonisation by crayfish has been demonstrated in the River Lea at Ware.

'Natural' influences that may alter crayfish distribution are generally the result of human interference. In recent years large numbers of the Californian 'Signal Crayfish' Pacifastacus leniusculus (Dana, 1852) have been introduced into the U.K., including the Thames area, for growing-on for the table. These fetched up to £11 per kg. Since 1981 several large-scale crayfish mortalities have occurred throughout the U.K.; the cause of some of these has been found to be "Crayfish plague", a fungus Aphanomyces astaci (Schikora, 1903). This is known to be carried by P.leniusculus in the U.S.A. but has not yet been found on this species in the U.K. Generally all A. pallipes in a population will succumb to the disease. In the Thames area outbreaks of 'plague' have been confirmed in the River Wey and River Lea systems and in the Wessex area in the Bristol and Hampshire Avons. In this latter river A. pallipes over a 65 km. length were wiped out in a matter of 2-3 weeks in the spring of 1984. Other mortalities of unproven cause have been reported from throughout the U.K. in recent years.

Lastly fishing may drastically influence crayfish populations in some areas. In the Woodstock area of Oxon. and around Hungerford in Berks. crayfish suppers are a tradition that still take place annually and presumably necessitate the cropping of large numbers of A. pallipes from local populations. It is not known how serious an effect this has on crayfish distribution.

In local streams some changes to A. pallipes populations in recent years have been as follows:- Kingsclere Brook - large scale mortality, 1980, due to pollution; R. Loddon - population 'rescued' during infilling of redundant channel at Sindlesham, 1978; R. Loddon and R. Lyde - general decline in crayfish abundance, 1982-83; R. Kennet at Hungerford - decline/disappearance of crayfish over last 3-4 years; R. Wey - large scale plague mortality, 1983, Alton to Godalming; R. Whitewater - large scale mortality (suspected plague) 1983, Odiham area.

On the whole, then, it can be seen that the native freshwater crayfish, A. pallipes, is widely distributed throughout the Thames catchment and occurs in the Reading locality. This situation is changing, however, and the continued monitoring of crayfish distribution is essential. Any information concerning the occurrence or disappearance of crayfish populations (freshly dead crayfish are required for 'plague' diagnosis)

would be most gratefully received. Write to: J. B. Hogger, Thames Water, Nugent House, Vastern Road, Reading RG1 8DB, or telephone: Reading 593585.

Acknowledgements:

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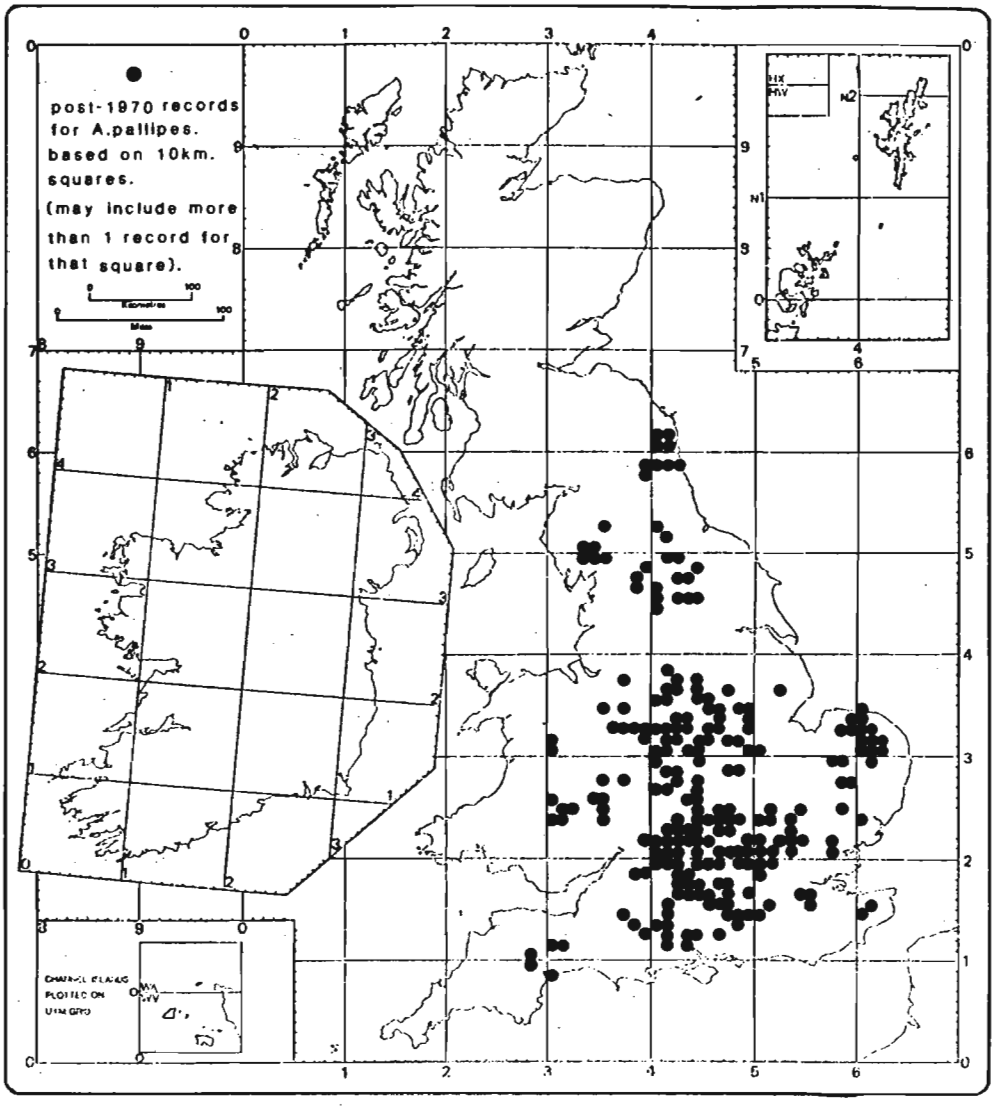
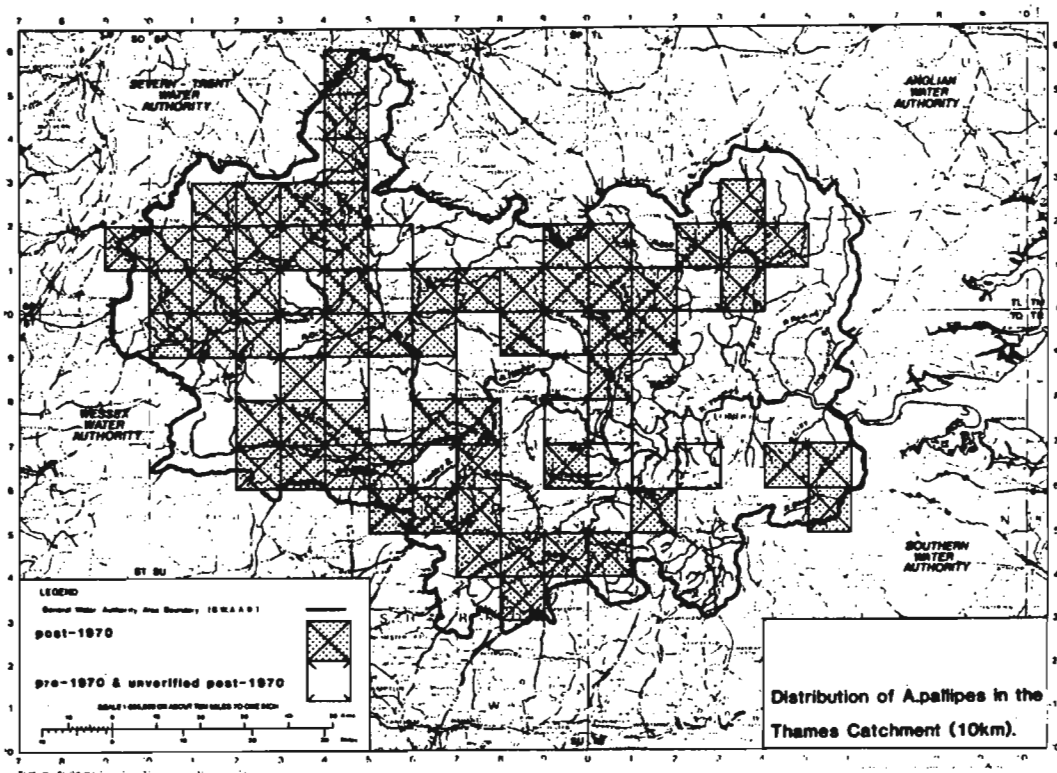
FIGURE 1.

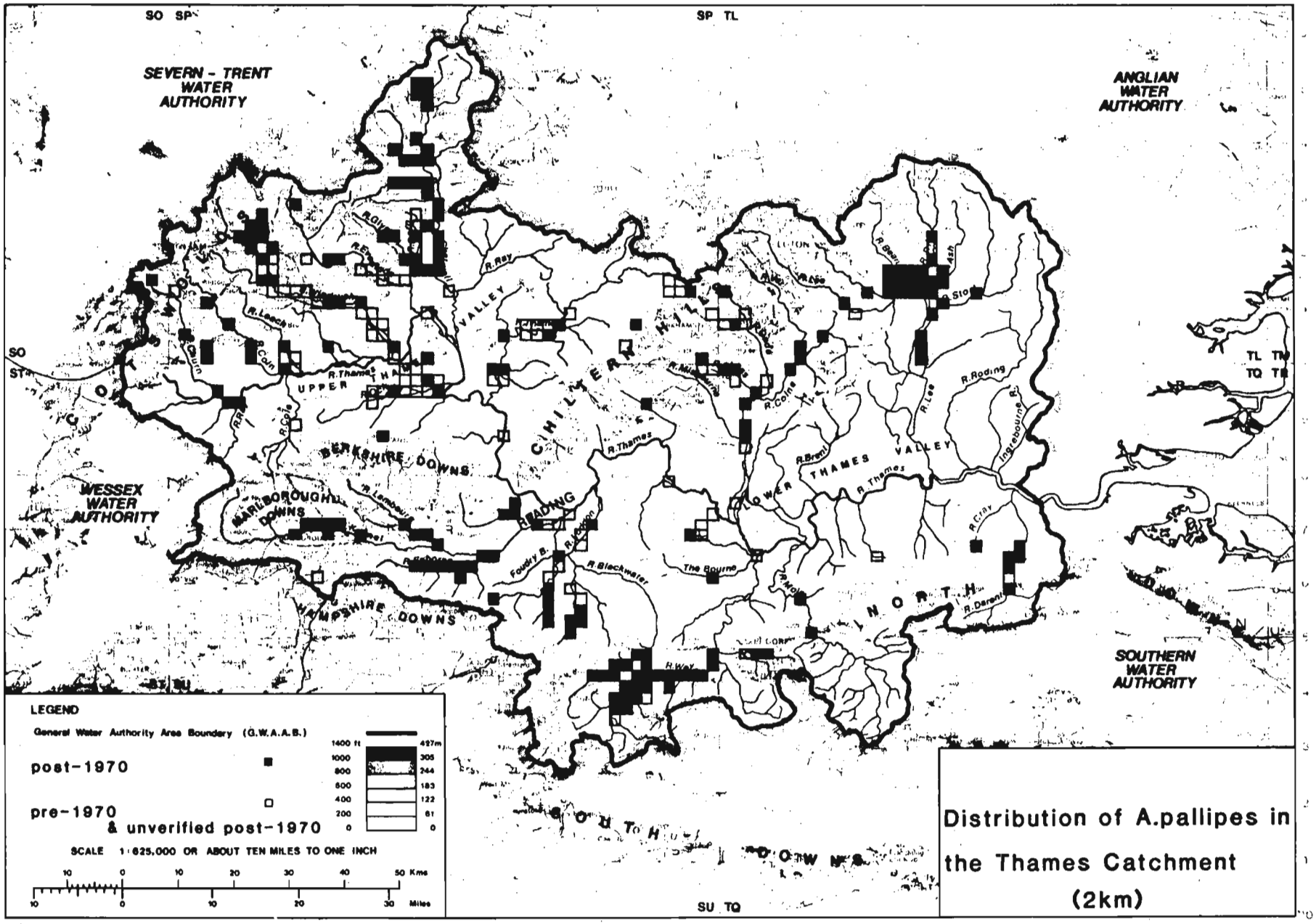
Distribution of A.pallipes in the U.K.





Distribution of A.pallipes in the Thames Catchment (10km).

Figure 2.



Distribution of A.pallipes in the Thames Catchment (2km)

Some recollections of NHS Bryophyte Excursions, with special reference to the bryophyte flora of the Mortimer-Silchester district and that of Cleeve, Goring

For more than twenty years, with only a few gaps in the sequence, it has been my pleasure to lead a 'Winter walk' where attention has been focused on the bryophytes. On the whole, the policy has been to visit alternately two sharply contrasted areas where the bryophyte flora is both of considerable interest and reasonably well known to me. The first includes Mortimer 'Pickling Yard', some adjoining land such as 'Gibbet Piece', and - a mile or two away - the heath and bog communities of Silchester Common. Occasionally this excursion has extended further afield, to include Brimpton Common, Tadley or parts of Wasing Woods. The whole region comprises a sizeable complex of prevailingly acid habitats and the bryophyte flora reflects this marked acidity. The second general area, that lying behind the village of Cleeve, Goring, on the edge of the Chilterns, is of an entirely different character. Because of the underlying chalk which comes close to the surface (or appears actually on the surface) in some habitats, though not in all, this region supports a diversity of 'calcicole' (or lime-loving) bryophytes many of which are absent from the heathlands to the southwest of Reading; but where the chalk lies far below the surface certain acidophile species can find a place. In both areas, but especially in the more sheltered woodland habitats of the Cleeve district, some epiphytes can be found.

On these excursions it has been a principal purpose of mine to assist any members who might chance to be embarking on the rather technical study of mosses and liverworts, by emphasising salient features of some of the commoner species and providing a few 'short cuts' to identification. We have also set out to appreciate the existence and character of certain bryophyte communities (which at their best, in early spring, can be objects of great aesthetic beauty) and to sense the role of these little plants in the larger and more conspicuous units of general vegetation of which they form a part. In short, record making as such has never been a primary concern on these essentially introductory walks, neither in the sense of a desperate search for new vice-county records nor in the wider context of adding something new to the known local flora. Nevertheless, it has been suggested to me that the time might be ripe to set down some kind of written record of what has come to our notice over the years, especially as it has never been NHS custom to publish a bryophyte 'Recorder's Report'. It was felt, both by Miss Leonie Cobb and myself, that what we needed was, at this stage, a general introductory statement, enough to recall past events and help put members 'in the picture' bryologically. From this there might perhaps flow, in later years, a series of articles going into a little more detail regarding particular areas.

First, let it be said that the bryophyte flora of the whole Reading district is reasonably well known and adequately documented. We have the useful annotated list in H. J. M. Bowen's Flora of Berkshire (1968). This list was edited by

E. W. Jones and is essentially a summary statement from his own earlier papers (1952, 1953) suitably brought up to date by the inclusion of something on species that had been discovered in our area over the intervening 15 years. These earlier papers, collectively entitled "A Bryophyte Flora of Berkshire and Oxfordshire" (for they are really two parts of a single work) constitute the real source from which present-day studies of local bryophytes must spring. It must be stressed, however, that where our two excursion areas are concerned it has serious limitations. This is partly because so much of the ground we cover in the Mortimer-Silchester district lies not in Berkshire (V-C. 22) but in North Hampshire (V-C. 12). This is true of almost all the Pickling Yard and of the whole of Tadley and Silchester Commons. Secondly, although the interesting chalk country beyond Cleeve, Goring, lies in Oxfordshire (V-C.23) and is hence within the scope of Dr. Jones's flora, it is quite evident, on perusing the work, that extremely few records, at least of the more interesting species which occur there, were available to Dr. Jones at the time. Thus, one of our chosen areas lies in what until recently was a decidedly underworked part of Oxfordshire; the other lies principally in North Hampshire of which no modern Bryophyte Flora exists.

What then is the picture that emerges of the bryophyte component in the flora of these two chosen areas? And what are the principal species that have habitually been seen to advantage on these walks? We may begin with the Mortimer-Silchester area, which was visited, always in March or April, in 1967, 1969, 1973, 1975 and 1979. Its most characteristic communities are those of lowland heath, examples of which are found in the higher, better drained parts of Mortimer Pickling Yard, on the adjoining Gibbet Piece, on Silchester Common and at Tadley. Amid stretches of Calluna the bryophyte understorey reflects in its composition and character the precise stage reached in the 'burn regeneration cycle'. Sometimes, closely following a heath fire, we have come across *Funaria hygrometrica in quantity, the individual tufts in various stages of development. But often, notably on the higher, level parts of Silchester Common it has been sheets of Polytrichum juniperinum or P. piliferum that have met the eye, the male plants bright with the deep olive or red-tinged flower-like reproductive shoots. Polytrichum species, and various lichens of the genus Cladonia, tend to signify a later stage in the succession. So too, probably, does an extensive 'carpet' of Pohlia nutans. This is a heathland moss which we could easily overlook, were it not for the bright green capsules - in varying degrees of maturing - that are such a conspicuous feature in spring. As long ago as 1967, close to the NE boundary road of Mortimer Pickling Yard, we were struck by the impressive amounts of Campylopus introflexus, an invasive alien colonist of heathland (white 'stars' at tips of shoots). It had first appeared there in March 1953 when it had been found by two Reading University students of botany.

Not in every year has it been easy to find, in luxuriant condition, the typical understorey of really old, tall Calluna. This consists principally of Hypnum jutlandicum (until recently H. cupressiforme var. ericetorum), Pleurozium schreberi

and one of the tall states of Dicranum scoparium. After a heath fire, at least thirty years are said to have to elapse before full restitution of this community. Other parts of Mortimer Pickling Yard are very different from the dry Calluna heath, and certain parts of the lower-lying ground, where a small stream flows through deciduous woodland, support a far richer assemblage of bryophytes. Here, in deep shade and on soil of a higher nutrient status, we have seen several of the bigger species of Brachythecium and Eurhynchium, the beautiful frond-like Thuidium tamariscinum, species of Mnium and Plagiothecium, and notably on old decaying stumps, Tetraphis pellucida and Aulacomnium androgynum, both abundantly gemmiferous. On the ground, beneath trees a little out of the valley, the spongy cushions of Leucobryum glaucum have sometimes been locally plentiful. On the stream bank itself Pellia epiphylla has usually been plentiful (and very fertile) but has sometimes received a set-back after a very dry summer. The ditch banks flanking the SW boundary road have been, for at least forty years and probably much longer, the special local habitat of the leafy liverworts, Lophozia ventricosa, Lepidozia reptans and Diplophyllum albicans. They are more localised than their commonest moss associate, Dicranella heteromalla. In some years we have 'stopped off' to see them. Even after the most punitively dry summers the colonies have invariably shown good powers of recovery by the following spring.

Close to the SW Boundary of the Pickling Yard is one very limited area where something like true bog has developed; for in it, among Molinia tussocks, we find big mounds of the tall Polytrichum commune and, in the hollows, Sphagnum palustre. In order to see to better advantage the bryophyte flora of a 'Valley bog' we have, in most years, proceeded on to Silchester and down to the low-lying ground where we could see the important part played by different species of Sphagnum in the vegetation. In the wettest spots the slender, grass-green S. recurvum or the pale, robust shoots of S. palustre will often have been the first to catch the eye, or the curved (horn-like) shoots of partially submerged S. auriculatum; but on the drier mounds one can find too the rose-tinted S. capillifolium (S. rubellum), the delicate, light green S. tenellum and the tufts of Sphagnum compactum, which are at times so tightly compacted as almost to resemble Leucobryum. So far as I am aware, however, the bog at Silchester is not at a sufficiently early stage of its development to harbour many of the characteristic bog leafy liverworts; but it does happen to be a locality for the remarkable subterranean saprophytic liverwort, Cryptothallus mirabilis, which was first found there, under birches, by Dr. James Dickson in October, 1964. Many times, in the ensuing twenty years, have NHS parties excavated for it, most often unsuccessfully. A bog moss which we have usually succeeded in seeing, both at Mortimer and Silchester, is Aulacomnium palustre.

Bryophyte communities are constantly changing, often in response to subtle changes in the habitats that support them. In some years, when dealing with heathland on the Tertiary gravels, we have made a brief stop at Tadley Common where much of the ground is fairly level and supports a type of

Callunetum. But at the western extremity the land falls away sharply, making a seasonally wet hollow. When a British Bryological Society party visited Tadley on October 1964, extensive sheets of the rather uncommon Campylopus brevipilus carpeted the ground in much of the Callunetum, the rare Dicranum spurium was found locally and the distinctive pale green shoots of Calliergon stramineum (Acrocladium stramineum) were not hard to come by in the moist hollow. In the last few years the Campylopus has been much reduced in amount, Dicranum spurium has disappeared and we have been unable to find C. stramineum anywhere in a hollow largely taken over by a massive growth of Polytrichum commune.

When I first knew the banks beside the road, close to where the "Three Firs" Inn used to be, they were the site of a small but healthy colony of the so-called "apple moss", Bartramia pomiformis. I remember noticing in the spring of 1963 that these plants appeared to have suffered (especially the developing green capsules) as a result of the exceptionally severe winter. Sometimes, on later visits, I failed to locate the plants, but when the NHS party, on 10th March 1973, stopped to examine this bank, Bartramia pomiformis was still there. On the moss walk of 6th March 1982 (a very wet afternoon!) members of the party found B. pomiformis, with a few capsules, some four miles farther west. This was on a similar roadside bank, south of Brimpton Common.

Members who attended 'moss walks' in the Mortimer area more than 20 years ago will very likely have been shown the liverwort Anthoceros punctatus (better known as A. husnotii) on the moist clayey soil of a ditch bank close to the SE extremity of the Pickling Yard. I had known this as the sole local site for this interesting liverwort ever since it was pointed out to me by Professor T. M. Harris in 1946. Year after year, it continued to flourish there (though the strength of the colony varied from season to season) because the tenacious substratum and the water regime were right. Then, quite suddenly, drainage beside the road was 'improved', the habitat was grossly modified and Anthoceros was seen no more. Dr. Jones in his Flora alludes to a number of remarkable records of leafy liverworts from Mortimer, some of them made by Professor Harris, rather more by A. D. Banwell, in the period 1938-1945. The reason lay partly in the fact that Mortimer (and especially the pentagonal area of the Pickling Yard) was the favourite locality for field studies run in those days by Reading University Botany Department. One of the most notable was Nardia geoscyphus from a spot close to the "Three Firs" Inn. It is most unlikely that it survives in that heavily populated area today.

Our second area, the chalklands up beyond the village of Cleeve, Goring, is not only a total contrast both geologically and in its bryophyte flora but also, happily, it is not under threat to the same extent. The main areas explored by NHS parties on the Cleeve moss walks have been mixed woodland behind Fiddle Hill, and the edges of Park Wood, to the south, and Elmorepark Wood to the north of Elvendon road - a botanically interesting area lying east of Goring and SW of Woodcote. It includes several quite distinct types of woodland habitat -

their differences neatly reflected in the bryophyte flora. It also supports some chalk grassland, heavily encroached on by shrubs. Variants of this walk were undertaken, always in March, in 1971, 1974, 1976, and 1980. In March 1983 we concentrated on the bryophyte flora of my own garden (Little Court, Cleeve) and the good habitats at the top of Elvendon road. This same general area has been examined, too, by student parties on many different occasions. Thus, by now, the salient features of its bryophyte flora are reasonably well known and the walk holds few surprises. Even so, in most years something fresh of interest has turned up. On a particularly successful day one might hope to see up to 70 mosses and 10 liverworts on this short round.

In fact, no less than six different types of woodland ground flora are encountered so far as the bryophyte element is concerned. The first, seen when we enter the first stretch of mixed woodland, directly above Icknield road, is a moss flora which includes Atrichum undulatum, Mnium hornum, Polytrichum formosum and Dicranella heteromalla. Because here the chalk lies well below the surface they are the mosses of a mildly acid substratum (all these four occur at Mortimer). It is a community that can be seen widely in the Chilterns. The canopy here is well broken. The second woodland community appears along the narrow path leading down, to the southwest, towards Battle farm. Here we are in the shade of a dense larch plantation and there appears at first to be an abundant and luxuriant bryophyte cover. It turns out to be almost entirely made up of Eurhynchium praelongum, with just small amounts of Brachythecium rutabulum and not much else. It is a shade-imposed bryoflora - spectacular but restricted. Lower down, this same path opens on to a very small area where the slope is steep, the soil thin with chalk close to the surface (rendzina soil). It is under beeches; sanicle and white helleborine (Epipactis damasonium) are in the field layer. This is indeed a tiny fragment of 'Fagetum calcicolum' and this is reflected in a totally distinct bryophytic element. Bryophytes tend to be sparse but here, in different years, we have met with Ctenidium molluscum, Fissidens taxifolius, Cirriphyllum crassinervium and the liverwort Porella platyphylla.

From the path that runs its narrow course between this beechwood and the adjacent pasture fields we have, in earlier years, frequently turned back up, to the left, through chalk scrub and out on to quite a good chalk grassland slope. In the summer of 1959, during the laying of a long-distance pipeline, a broad white 'scar' could be seen from a distance on this slope, where turf was removed and chalk exposed. In the early stages of re-colonisation many small 'acrocarp' mosses, such as Pottia recta, Pottia starkeana ssp. minutula, Barbula fallax, B. unguiculata, species of Weissia and others came in as early colonists. Now, after 25 years, the re-colonisation of 'closed' chalk grassland is to a large extent complete. More than that, succession to chalk scrub has gone on, more of less unchecked, over large parts of this slope and its interest to the bryologist has diminished. In the last few years, moreover, it has been made difficult of access. This is a pity since, besides the minute primary

colonists, several of the most robust and characteristic mosses of chalk grassland can be seen to advantage on this west-facing slope, notably Pseudoscleropodium purum and Homalothecium (Camptothecium) lutescens. It was from this grassland and scrub slope that on a few of our earlier Cleeve walks (but not many) we gained access to our fourth type of forest floor community. This consists, in effect, of the few mosses which characteristically establish themselves on the raw humus arising from deep leaf litter on a shallow, sheltered slope under beech. They are not numerous but they include Leucobryum glaucum, Polytrichum formosum and a few others. By this route one returns to the mixed 'plateau woodland' from which the detour began.

The majority of our NHS walks, at least in recent years, have not included this detour - larch plantation, rendzina slope, chalk grassland and Leucobryum site. They have simply proceeded through the woodland, along the top path, where much can be seen on logs, stumps and tree boles, quite apart from the ground flora mentioned above (see later for a consideration of these elements). As we leave the main area of woodland behind, and move on down towards Elvendon road, opposite Elvendon Priory, we skirt a narrow strip of woodland that amounts to little more than a shelter belt. The rather exposed substratum is thick with flints and chalk fragments. There is a little shelter and shade. In this, the fifth kind of woodland encountered on the walk, the prevailing moss is Rhynchostegium (Eurhynchium) confertum, but on moist shaded chalk 'pieces' we have sometimes turned up the minute Seligeria paucifolia, and - equally small - Fissidens pusillus. But it is too exposed a site to be very promising bryologically.

Our sixth and final example consists of a very small area of what can be called rich 'bottom land' at the extreme edge of Park Wood, a short way up the road from Elvendon Priory. Instantly we recognise the presence of a much richer, more varied (as well as more luxuriant) bryophyte flora than anything seen hitherto. In addition to several very common species, such as Brachythecium rutabulum and Eurhynchium swartzii which grow strongly here, we have never had difficulty in finding, in some quantity, Thuidium tamariscinum, Plagiomnium (Mnium) undulatum and Cirriphyllum piliferum, three species which impart character to this community. The moss flora is that of a substratum which is moist, well sheltered and reasonably base rich.

As we might expect, it is the first and last examples of woodland site which offer us the best chance of seeing interesting epiphytes, especially in sheltered places where old elders occur. The abundantly fruiting Dicranoweisia cirrata is more widespread, but it is on old elders that we have most frequently been able to see small amounts of several species of Orthotrichum, Zygodon viridissimus and the leafy liverworts Frullania dilatata and Radula complanata. Although we have little in the way of quantitative data, it seems fairly certain that most epiphytic species have decreased markedly in our district within the past thirty to forty years on account of various forms of atmospheric pollution.

If an extensive epiphytic flora is nowhere easy to come by on the Cleeve walk, logs and tree stumps are a different matter. They often support a rich cover of bryophytes. Old logs and long-dead stumps are often well-draped in moss mats. Yet close inspection, in these woods at least, usually reveals only limited variety. It is here that members have often seen superb fruiting mats of Brachythecium rutabulum and Hypnum cupressiforme and those unfamiliar with leafy liverworts have observed for the first time the developing capsules of Lophocolea heterophylla, each enveloped in its tubular 'perianth', along with some lengthened silver-white setae and cruciform empty capsules. On decaying stumps too, we have sometimes found several species of Plagiothecium; Isothecium myosuroides and I. myurum both occur locally.

Finally, on this walk, the earthy banks of Elvendon road itself provide an interesting and fruitful habitat. It is a far from homogeneous one; for different sections of the two-mile long road offer conditions optimal for different groups of species. Thus, in a section near the top is a fine colony of the tall, handsome moss, Rhytidiadelphus triquetrus. A little further down, on more markedly clacareous soil, can be found the dendroid Thamnobryum (Thamnium) alopecurum - with its tendency to form loose 'moss balls', and tufts of the liverwort Plagiochila porelloides. At other points, for example in deepest shade near the 'bottom land' wood described above, we have sometimes found Eurhynchium schleicheri and almost always E. pumilum. Elsewhere, forming cushions directly on the calcareous soil, there is Barbula cylindrica. A few years ago we would meet plenty of B. recurvirostra (with older parts of shoots rust-red) but of late it has become scarce.

On numerous occasions some study of the bryophytes of my own garden, at Little Court, has formed an integral part of this walk, but they will have to form the subject of a separate article on another occasion. So, too, will a consideration in any depth, of certain other 'Chiltern edge' localities which have been visited in some years. The chief of these are Bottom Wood, Mapledurham, which we visited in 1968 and 1981, College (or Abbot's Wood), NW. of Cane End (visited 12th November 1977) and Nippers grove, Hook End, which we explored all too briefly on 18th February 1984. Suffice it to add here the briefest word on each. Bottom Wood, on the Hardwick estate, offers varied habitats and supports an extensive bryophyte flora. Thirty to forty years ago it was much studied by parties from Reading University and it was here that Professor T. M. Harris discovered the liverwort, Blepharostoma trichophyllum in 1940 - still its only locality in our area. College wood, being up on the 'plateau', where the chalk lies far below the surface, bears a prevailingly calcifuge bryoflora. Here in November 1977 we found the liverwort Gymnocolea inflata, new to Oxfordshire. Our visit to Nippers grove in February 1984 served to confirm that Bartramia pomiformis still grew on the same stretch of bank where I had found it more than thirty years ago. All three are potentially interesting areas bryologically.

Although many other localities with considerable

bryological potential clearly exist within the Reading area it is arguable that the greatest satisfaction can be derived from a close long-term study of a chosen few. Hence this article has concentrated on just two such places, the two that have been most frequently visited by NHS parties over the years. Turning his attention to Reading town itself, M. V. Fletcher has reported (Reading Naturalist 1973, 1983) remarkable finds in what might appear to be decidedly umpromising terrain. His work shows how, with plants so inconspicuous as many of the smaller bryophytes, close scrutiny will almost invariably bring unexpected rewards. This must be true of Mortimer and Cleeve, where detailed investigation must surely bring fresh things to light.

*Nomenclature, for mosses, is that of Smith, A. J. E. Moss Flora of Britain and Ireland; for liverworts, that of Watson, E. V. British Mosses and Liverworts. 3rd Edn.

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The Recorder's Report for Botany 1983-84

B. M. Newman

The many records sent in by members are gratefully acknowledged and a selection is listed below.

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

Ceterach officinarum DC. — Rustyback
One plant in the Roman wall, Silchester (WGH).

Polypodium vulgare L. — Polypody
Brimpton, near the River Enborne, 2.8.84 (AB).

AZOLLACEAE

*Azolla filiculoides Lam. — Water Fern
Basingstoke canal, Greywell, 6.4.84 (AB).

OPHIOGLOSSACEAE

Ophioglossum vulgatum L. — Adder's-tongue
Tadley meadow, 10.6.84 (AB); several spikes reappeared in 1984 at the Transport and Road Research Laboratory, Crowthorne (MJD); large quantity in a horse-grazed field near Pangbourne (MRH).

BERBERIDACEAE

Berberis vulgaris L. — Barberry
One bush at Aston Upthorpe Downs, (HJMB).

PAPAVERACEAE

*Papaver somniferum L. — Opium Poppy
Edge of Wasing Estate, 18.7.84 (AB).

CRUCIFERAE

Arabis hirsuta (L.) Scop. — Hairy Rock-cress
Old Burghclere pit, 9.6.84 (AB).

POLYGALACEAE

Polygala calcarea F. W. Shultz — Chalk Milkwort
Hartslock and Great Chalk Wood, 28.5.84 (AB)

HYPERICACEAE

Hypericum pulchrum L. — Slender St. John's-wort
Padworth Gully, 7.7.84 (AB).

Hypericum elodes L. — Marsh St. John's-wort
Padworth Gully, 7.7.84 (AB).

CARYOPHYLLACEAE

*Agrostemma githago L. — Corncockle
Whiteknights, 26.6.84 (RJG).

Cerastium arvense L. — Field Mouse-ear
Old Burghclere Lime pit, 16.6.84 (AB).

AMARANTHACEAE

*Amaranthus hybridus L.
A bird seed alien, Eastbury, Mrs. M. Thomas (HJMB).

MALVACEAE

*Lavatera thuringiaca L.
Whiteknights Park, Reading (HJMB).

LINACEAE

Radiola linoides Roth — Allseed
Wokefield Pond, 8.84 (WGH).

GERANIACEAE

Geranium lucidum L. — Shining Crane's-bill
Speen Lane, Newbury, 7.84 (RJG).

PAPILIONACEAE

*Cytisus multiflorus (Aiton) Sweet — White Broom
New roadside near St. Ann's, Wokingham (HJMB).

Medicago arabica (L.) Huds. — Spotted Medick
Verge of Ferry Road, South Stoke, 7.5.84 (HHC).

*Melilotus alba Medic. — White Melilot
Wargrave, 25.7.84 (RJG).

Vicia tenuissima (M. Bieb.) Schinz & Thell. — Slender Tare
Arable land, Aston Upthorpe, M. J. Senior (HJMB).

Lathyrus nissolia L. — Grass Vetchling
Meadow near Tadley, 10.6.84 (AB).

Lathyrus montanus Bernh. — Bitter Vetch
Meadow near Tadley, (MRH).

ROSACEAE

Geum rivale L. — Water Avens
Near Sole Common Pond; Rack Marsh, Bagnor (HJMB); Freeman's Marsh, Hungerford (MRH).

Alchemilla vestita (Buser) Raunk. — Lady's Mantle
Greenfield Wood, 10.6.84 (HHC).

*Pyrus pyraster Burgsd. Wild Pear
Aston Upthorpe, NHS walk, 4.8.84 (AB).

CRASSULACEAE

Sedum telephium L. Orpine
Old Copse, Beenham; Padworth Gully, NHS walk, 7.7.84 (HJMB); between Nuney Green and Goring Heath, 3.6.84; Bix, 15.7.84 (AB).

Sedum anglicum Huds. English Stonecrop
Baynes Reserve, 30.6.84 (AB).

Umbilicus rupestris (Salisb.) Dandy Navelwort
Five plants at Silchester, two flowering, 5.84 (WGH).

SAXIFRAGACEAE

Saxifraga tridactylites L. Rue-leaved Saxifrage
Eight plants in flower on Silchester church wall and Roman wall, 5.84 (WGH).

LORANTHACEAE

Viscum album L. Mistletoe
On Salix fragilis, Moor Copse near Tidmarsh (MRH).

UMBELLIFERAE

Myrrhis odorata (L.) Scop. Sweet Cicely
Bix, 15.7.84 (AB).

Apium graveolens L. Wild Celery
Padworth Common, 4.4.84 (AB).

EUPHORBIACEAE

Euphorbia platyphyllos L. Broad-leaved Spurge
Waste ground, Newbury, 26.7.84 (RJG).

POLYGONACEAE

*Polygonum pennsylvanicum L.
Greenham tip, R. S. R. Fitter (HJMB).

SALICACEAE

Salix repens L. Creeping Willow
Tadley Common, 8.6.84 (AB).

PRIMULACEAE

Anagallis tenella (L.) L. Bog Pimpernel
Tadley meadow, 10.6.84 (AB); Pamber, 8.84 (WGH).

GENTIANACEAE

Gentiana pneumonanthe L. Marsh Gentian
Chobham Common, NHS walk, 18.8.84 (RJG).

Gentianella x pamplinii (Druce) E. F. Warb. (G. amarella x germanica)
Turville Hill (MRH).

MENYANTHACEAE

Nymphoides peltata (S. G. Gmel.) O. Kuntze Fringed Water-lily
South Hill Park, Bracknell, 28.6.84 (RJG).

BORAGINACEAE

*Trachystemon orientalis (L.) G. Don Abraham-Isaac-Jacob
On bank near Earley Station, J. A. Keroyd (HJMB).

*Mertensia virginica (L.) Pers.
In disturbed ground on the Surrey side of Virginia Water (HJMB).

SCROPHULARIACEAE

*Scrophularia vernalis L. Yellow Figwort
Aldermaston Court, 6.6.84 (AB).

*Erinus alpinus L. Fairy Foxglove
Wall of Welford House (HJMB).

Melampyrum pratense L. var. laurifolium Beauv.
Common Cow-wheat
Calcareous hedgebank, Elmore Park wood, Woodcote, Oxon. (HJMB).

OROBANCHACEAE

Lathraea squamaria L. Toothwort
Near White Shute Hill, on hazel in sunken lane (HJMB).

*Lathraea clandestina L. Purple Toothwort
Brimpton, near river Enborne, 2.6.84 (AB).

Orobanche elatior Sutton Knapweed Broomrape
Old Burghclere chalk pit (MRH).

VERBENACEAE

Verbena officinalis L. Vervain
Bix, 15.7.84 (AB).

LABIATAE

Acinos arvensis (Lam.) Dandy Basil Thyme
Chalkpit in Crowsley Forest, 4.7.84 (HHC).

Scutellaria minor Huds. Lesser Skullcap
Many plants in flower, Silchester Common; one plant in flower, Wokefield, 8.84 (WGH).

PLANTAGINACEAE

Littorella uniflora (L.) Aschers. Shoreweed
Many plants at Wokefield Pond (WGH). This confirms an old record.

CAMPANULACEAE

Campanula latifolia L. Giant Bellflower
Whiteknights Park Wilderness, confirming an old record (HJMB).

COMPOSITAE

Senecio integrifolius (L.) Clairv. Field Fleawort
Old Burgholere Lime pit, 16.6.84 (AB).

Gnaphalium sylvaticum L. Heath Cudweed
Padworth Gully, NHS walk, 7.7.84; on wall, Christchurch Road, Reading (HJMB).

Cirsium eriophorum (L.) Scop. Woolly Thistle
Aston Upthorpe, NHS walk, 4.8.84 (AB).

Cirsium dissectum (L.) Hill Meadow Thistle
Tadley meadow, 10.6.84 (AB).

*Silybum marianum (L.) Gaertn. Milk Thistle
Between Bucklebury and Hermitage, Sarah Webster (HJMB)

Serratula tinctoria L. Saw-wort
Aston Upthorpe, NHS walk, 4.8.84 (AB).

*Hieracium aurantiacum L. Fox and Cubs
Kennet west from Old Mill, Aldermaston, 22.8.84 (AB).

HYDROCHARITACEAE

Stratiotes aloides L. Water-soldier
Pond near Pinkneys Green, Sarah Webster (HJMB).

LILIACEAE

*Allium paradoxum (Bieb.) G. Don Few-flowered Leek
A large patch in a grass verge near Fawley, 20.4.84 (BK).

TRILLIACEAE

Paris quadrifolia L. Herb-Paris
Ash wood near canal, Thatcham, R. J. Hornby (HJMB).

AMARYLLIDACEAE

*Galanthus elwesii Hook. Giant Snowdrop
Above old tunnel workings, Greywell, N. Hants. (HJMB).

*Narcissus bulbocodium L. Hoop Petticoat Daffodil
Naturalised by Virginia Water and seeding well (HJMB).

ORCHIDACEAE

Epipactis helleborine (L.) Crantz Broad-leaved Helleborine
Hurley chalk pit, 24.6.84 (RJG); appeared following coppicing at Moor Copse near Tidmarsh, the first record for the Reserve (MRH).

Epipactis purpurata Sm. Violet Helleborine
Four groups with three to five flowering spikes at Hannington, Hants. 9,84 (WGH).

Epipactis leptochila (Godf.) Godf. Narrow-leaved Helleborine
Wolverton Road, Baughurst, 6.8.84 (AB).

Epipactis phyllanthes G. E. Sm. Green-flowered Helleborine
Roadside verge near Tadley water tower, 2.8.84 (AB).

Gymnadenia conopsea (L.) R. Br. Fragrant Orchid
Aston Upthorpe, NHS walk, 4.8.84 (AB).

Platanthera chlorantha (Cust.) Rchb. Greater Butterfly Orchid
Chalk downland at Woodcote, 1.7.84 (AB).

Orchis mascula (L.) L. Early-purple Orchid
One flowering spike at Transport and Road Research Laboratory, Crowthorne, 23.5.84 (MJD); a great increase in numbers following coppicing at Moor Copse near Tidmarsh (MRH).

Dactylorchis incarnata (L.) Vermeul. Early marsh-orchid
Freeman's Marsh, Hungerford (MRH).

SPARGANIACEAE

Sparganium angustifolium Michx. Floating Bur-reed
Meadows at the Old Mill, Aldermaston, 8.8.84 (AB).

TYPHACEAE

Typha angustifolia L. Lesser Bulrush
Caversham Mill stream, 24.7.84. Last recorded at Caversham Bridge in 1967 (HHC).

CYPERACEAE

Carex demissa Hornem. Common Yellow-sedge
Tadley meadow, 10.6.84 (AB).

Carex pseudocyperus L. Cyperus Sedge
Clayfield Copse, 6.7.84 (HHC).

Carex strigosa Huds. Thin-spiked Wood-sedge
Old Copse, Beenham; Padworth Gully, NHS walk, 7.7.84 (HJMB).

Carex pallescens L. Pale Sedge
Tadley meadow, 10.6.84 (AB).

Carex echinata Murr. Star Sedge
Tadley meadow, 10.6.84 (AB).

GRAMINEAE

Sieglingia decumbens (L.) Bernh. Heath-grass
Padworth Gully, 7.7.84 (AB).

*Festuca heterophylla Lam. Various-leaved Fescue
Old lane below Padworth Gully, NHS walk, 7.7.84 (HJMB).

Contributors:

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Correction to report in Reading Naturalist 1984 No. 36 page 38:

Spiranthes spiralis (L.) Chevall. A single flowering spike (not 19 as stated) was seen near the Transport and Road Research Laboratory, Crowthorne.

The Recorder's Report for Entomology 1983-84

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.

ORTHOPTERA Grasshoppers, Bush Crickets, Ground-Hoppers

Meconema thalassinum (Deg.) Oak Bush-Cricket
Crawshay Drive, Emmer Green, 14.8.84 (JHFN); Padworth, 18.11.84, female ovipositing under oak bark (BRB).

Pholidoptera griseoaptera (Deg.) Dark Bush-Cricket
Chambers Copse, Emmer Green, 26.8.84, waste ground near Caversham Park, 25.8.84 (JHFN).

Leptophyes punctatissima (Bosc) Speckled Bush-Cricket
Chambers Copse, Emmer Green, 26.8.84, waste ground near Caversham Park, 25.8.84 (JHFN).

ODONATA Dragonflies

Agrion splendens (Harris) Banded Agrion
Matlock Road, Caversham, 29.6.84, one male, evidently a wanderer from the Thames (BRB).

Gomphus vulgatissimus (L.) Club-Tailed Dragonfly
Thames side at Hurley Lock, 20.5.84, one female (BRB)

Libellula quadrimaculata L. Four-Spotted Libellula
Emerging from Sole Common Pond, 9.6.84 (HJMB).

LEPIDOPTERA Butterflies and Moths

Hepialus fusconebulosa (Deg.) Map-Winged Swift
Unhill Wood, 15.6.84 (PAD).

Zeuzera pyrina (L.) Leopard Moth
Surley Row, Caversham, 6.7.84 (PS); Wellington Country Park, 21.7.84 (NMH).

Apoda limacodes (Hufn.) The Festoon
Wellington Country Park, 21.7.84 (NMH).

Synanthedon formicaeformis (Esp.) Red-Tipped Clearwing
Richfield Avenue, Reading, 24.4.84, 8.5.84, bred from cankerous growths on Salix caprea (BRB).

Thymelicus lineola (Ochs.) Essex Skipper
Bracknell, 28.7.84, 29.7.84, Crowthorne, 3.8.84 (RAR); Crowthorne, 1.8.84, 8.8.84 (MJD); Owlsmoor, 9.8.84 (BRB, NMH). (Until this year this species had only been reliably reported from the Ascot area but a note in Reading Naturalist No. 31 suggested that it might be worth looking in the Bracknell-Wokingham district). New records would be welcomed but a single voucher specimen should accompany each new record.

Erynnis tages (L.) Dingy Skipper
North End, Bucks, 3.6.84, Cleeve Hill, 9.6.84, Aston Upthorpe, 10.6.84, Swyncombe, 16.6.84 (HJMB).

Pyrgus malvae (L.) Grizzled Skipper
Swyncombe, 16.6.84 (HJMB); Aldermaston, 11.5.84 (PS).

Gonepteryx rhamni (L.) Brimstone
Warren Hill, 28.4.84, Swyncombe, many pairs 16.6.84, Pamber Forest, 2.6.84, Aston Upthorpe, 10.6.84 (HJMB); Aldermaston, 13.4.84 (PS); Tilehurst, 12.4.84 (SW); Charvil, 20.4.84, Earley, 25.4.84, Bix, 10.6.84 (RJG); Emmer Green, 12.4.84 (JHFN); Caversham, 10.11.84 very late record (HGB); Purley, 6.3.84, Blenheim Road, 14.10.84 (MRH).

Anthocharis cardamines (L.) Orange-Tip
Pamber Forest, 2.6.84, Assendon, 3.6.84 (HJMB); Earley, frequently between 30.4.84 and 9.6.84; High Wood, Woodley, 5.5.84, Tidmarsh, 13.4.84, near Bix, 10.6.84 (RJG); Emmer Green, 2.5.84 (JHFN); Surley Row, 27.4.84 (PS).

Callophrys rubi (L.) Green Hairstreak
Old Burghclere Limeworks, 9.6.84 (SW); Aldermaston, 23.5.84 (PS); Owlsmoor, 2.6.84 (BRB).

Quercusia quercus (L.) Purple Hairstreak
Tanners Lane near Emmer Green Golf Course, 11.8.84 (JHFN).

Celastrina argiolus (L.) Holly Blue
Dunsden, 29.4.84, Pamber Forest, 2.6.84, Glebe Road, Reading, 29.7.84 (HJMB); High Wood, Woodley, 5.5.84 (RJG); Caversham, 24.4.84, 28.4.84, 22.7.84, 23.7.84 (BRB); Tadley Common, 24.4.84, Aldermaston, 2.5.84 (PS).

Hamearis lucina (L.) Duke of Burgundy Fritillary
Cleeve Hill, 9.6.84, Aston Upthorpe, 10.6.84 (HJMB).

Ladoga camilla (L.) White Admiral
Chambers Copse, Emmer Green, 22.7.84 (JHFN); Padworth Common, 7.7.84 (HJMB).

Apatura iris (L.) Purple Emperor
Near Baughurst, 19.7.84, 3.8.84 (PS); Padworth, 29.7.84 (BRB).

Vanessa atalanta (L.) Red Admiral
Glebe Road, Reading, 18.8.84 (HJMB); Harcourt Drive, Earley, 8.7.84, 18.7.84, 18.8.84, 2.9.84, 26.9.84, 1.10.84, 20.10.84, 21.10.84, 26.10.84, 27.10.84, 1.11.84, Twyford Gravel Pits, 22.7.84 (RJG); Surley Row, 10.8.84, 17.8.84, 27.10.84, 3.11.84, 24.11.84 (PS); Caversham, 28.9.84, 29.9.84, 30.9.84, 20.10.84, 23.10.84, 10.11.84, near Baughurst, 8.7.84 (BRB); Tilehurst, 26.10.84 (SW).

Cynthia cardui (L.) Painted Lady
Harcourt Drive, Earley, 5.9.84, 6.9.84 (RJG).

Polygonia c-album (L.) Comma
Reading, 7.7.84, 29.7.84, Ufton Nervet, feeding on blackberries, 16.9.84 (HJMB); Emmer Green, 12.4.84 (JHFN); Harcourt Drive, Earley, 6.7.84, 27.7.84, Dinton Pastures, 7.7.84 (RJG); Crowsley Park, 14.4.84 (SW); Caversham, 28.9.84 (HGB).

Boloria selene (D. & S.) Small Pearl-Bordered Fritillary
Padworth, 3.7.84 (BRB).

Melanargia galathea (L.) Marbled White
Woodcote, 8.7.84 (HJMB); Aldermaston, 16.7.84, near Baughurst, 19.7.84 (PS); in garden of 16, Crawshay Drive, Emmer Green, 13.7.84 (JHFN).

Hipparchia semele (L.) The Grayling
Crowthorne, 21.8.84 (HJMB).

Pyronia tithonus (L.) The Gatekeeper
Nuney Green Chalkpit, a gynandrous form, left forewing reduced and with female marking, other wings with male markings, 12.8.84 (JHFN).

Lasiocampa quercus (L.) Oak Eggar
Owlsmoor, 28.7.84 (NMH).

Cyclophora porata (L.) False Mocha
Owlsmoor, 28.7.84 (NMH).

Idaea straminata (Borkh.) Plain Wave
Owlsmoor, 28.7.84 (BRB).

Thera firmata (Hubn.) The Pine Carpet
Bracknell, 2.10.84, 13.10.84, 16.10.84 (MJD); Owlsmoor, 28.7.84, Wellington Country Park, 21.7.84 (NMH).

Rhodometra sacraria (L.) The Vestal
Aldermaston, 23.8.84, a single specimen of this periodic migrant (PS).

Xanthorhoe biriviata (Borkh.) Balsam Carpet
Bracknell, 25.8.84, new County record (MJD); near Hurley, 25.8.84. larvae (BRB, PAD); 3.9 84, further larvae (BRB, TJGH).

Mesoleuca albicillata (Hubn.) Beautiful Carpet
Surley Row, 7.8.84 (PS).

Rheumaptera hastata (L.) Argent and Sable
Owlsmoor, 2.6.84 (TJGH); Aldermaston, 31.5.84, 8.6.84 (PS).

Chesias rufata (Fabr.) Broom-Tip
Owlsmoor, 28.7.84 (DR).

Aleucis distinctata (H.-S.) Sloe Carpet
Mortimer, 25.4.84 (BRB).

Hyloicus pinastri (L.) Pine Hawk-Moth
Owlsmoor, 28.7.84 (NMH); Baynes Wood Nature Reserve, 29.6.84 (BRB, NMH); Wellington Country Park, 21.7.84 (BRB, NMH).

Macroglossum stellatarum (L.) Humming-Bird Hawk-Moth
Glebe Road, Reading, 7.7.84, 29.7.84 (HJMB); Tilehurst, 21.7.84 (AB).

Dasychira fascelina (L.) Dark Tussock
Owlsmoor, 2.6.84, one larva (TJGH); Owlsmoor, 28.7.84 (NMH).

Rhyacia simulans (Hufn.) Dotted Rustic
Bracknell, 7.7.84 (MJD).

Xestia ditrapezium (D. & S.) Triple-Spotted Clay
Wellington Country Park, 21.7.84 (NMH).

Naenia typica (L.) The Gothic
Surley Row, 16.8.84 (PS); Greenham Common, 17.8.84 (BRB)

Lacanobia contigua (D. & S.) Beautiful Brocade
Owlsmoor, 28.7.84, Wellington Country Park, 21.7.84 (NMH).

Hadena compta (D. & S.) Varied Coronet
Surley Row, 20.6.84 (PS)

Mormo maura (L.) Old Lady
Wellington Country Park, 21.7.84 (NMH); Greenham Common, 25.8.84 (PAD).

Dicycla oo L. Heart Moth
Wellington Country Park, 21.7.84 (NMH);

Tyta luctuosa (D. & S.) Four-Spotted
Surley Row, 22.7.84 (PS). This is a species which has much declined in recent decades although in the early fifties it was not uncommon on the downs between Streatley and Blewbury. Although regarded as an occasional immigrant it is to be hoped that the specimen recorded above may indicate the resurgence of a local colony.

Parascotia fuliginaria (L.) Waved Black
Bracknell, 2.8.84 (MJD); Wellington Country Park, 21.7.84 (NMH)

COLEOPTERA Beetles

Leistus rufomarginatus (Duftschmid)
Leighton Park, 5.10.83 (TDH).

Patrobus atrorufus (Strøm.)
Near Shinfield, 7.9.84 (TDH)

Bembidion properans Steph.
Swyncombe House, near Cookley Green, 25.2.84 (TDH).

B. bruxellense Wesm.
Near Aldermaston Wharf, 4.4.84 (TDH).

B. tetracolum Say
Near Searles Farm, Pingewood, 17.3.84 (TDH).

Bembidion aenum Germar
Near Shinfield Grange, 1.2.84 (TDH).

B. lunulatum (Fourc.)
Near Searles Farm, Pingewood, 17.3.84 (TDH).

Agonum assimile (Paykull)
Heckfield Heath, 16.12.83 (TDH).

A. moestum (Duft.)
Near Shinfield Grange, 1.2.84 (TDH).

Acupalpus consputus (Duft.)
Leighton Park, 16.9.84 (TDH).

Chlaenius vestitus (Paykull)
Near Aldermaston Wharf, 4.4.84 (TDH).

Saprinus aeneus (Fabr.)
Leighton Park, 6.7.84, in carcase of blackbird (TDH).

Carcinops pumilio (Erich.)
Leighton Park, 5.9.84 (TDH).

Nicrophorus investigator Zett.
Emmer Green, 12.6.84 at light trap (JHFN).

Platydracus stercorarius (Oliv.)
Leighton Park, 11.9.84 (TDH).

Lucanus cervus (L.) Stag Beetle
Wessex Hall, Whiteknights, 18.6.84 (HJMB), Blenheim Road, 19, 27.6.84 (MRH).

Silis ruficollis (Fabr.)
Child-Beale Wildlife Trust, near Lower Basildon, 11.7.84 (TDH).

Lampyris noctiluca (L.) Glow Worm
Warren Hill, 28.4.84, larva (HJMB), Chambers Copse, Emmer Green, 2.11.84, larva (JHFN).

Ptinus sexpunctatus Panz.
Emmer Green, 19.10.84, bred from cell of Osmia rufa (L.) built into window frame (JHFN).

Pocadius ferrugineus (Fabr.)
Chambers Copse, Emmer Green, 7.2.84, bred from Lycoperdon pyriforme (JHFN).

Tytthaspis sedecimpunctata (L.)
Chambers Copse, Emmer Green, 23.12.83, hibernating on fence posts in large numbers (JHFN).

Scaphidema metallicum (Fabr.)
Near Shinfield, 22.2.84 (TDH).

Pyrochroa serraticornis (Scop.) Cardinal Beetle
Chambers Copse, Emmer Green, 5.4.83, bred from rotting elm bark (JHFN).

Prasocuris junci (Brahm)
Kennet & Avon Canal near Tyle Mill, 2.6.84 (TDH).

Galerucella calmariensis (L.)
Near Shinfield, 22.6.84 (TDH).

Barynotus moerens (Fabr.)
Near Hall Farm, Shinfield, 7.3.84 (TDH).

Notaris scirpi (Fabr.)
Near Hall Farm, Shinfield, 7.3.84 (TDH).

Ceutorhynchus cochleariae (Gyllenhal)
Leighton Park, 13.5.84 (TDH).

HYMENOPTERA Sawflies, Ichneumons, Bees and Wasps

Urocerus gigas (L.) Giant Woodwasp or Giant Horntail
Circuit Lane, Reading, 25.7.84. Specimen submitted to Reading Museum and then released.

Sirex noctilio Fabr.
Road Research Laboratory, Crowthorne (MJD); Rosehill Park, Emmer Green, 28.8.84 (JHFN).

Arge ustulata (L.)
Crowsley Forest, 23.5.84 (HHC).

Heptamelus ochroleucus (Steph.)
Baynes Wood Nature Reserve, 16.6.84, last record Reading 1933 (HHC).

Phyllocolpa leucaspis (Tisch.)
Great Hazes (DG).

Nematus cadderensis Cam.
Great Hazes (DG).

Nematus leucotrochus Hartig
Great Hazes (DG).

N. viridis Steph.
Baynes Wood Nature Reserve, 16.6.84 (HHC).

Pachynematus truncatus Benson
Great Hazes (DG).

Stenichneumon rufinus (Grav.)
Bred from pupa of Common Emerald, 11.7.82 (DN).

Andrena helvola (L.)
Crowsley Forest, 23.5.84 (HHC).

DIPTERA True Flies

Psychoda cinerea Banks
Crowsley Forest, 5.4.84 (HHC).

Rhamphomyia sulcatella Collin
Crowsley Forest, 15.5.84 (HHC).

Phalacrotophora berolinensis Schmitz
Reading, 11.7.84. On leaves of Lime in Forbury Gardens. This species is said to be a parasite of the ladybird Adalia bipunctata (L.) (HHC).

Chaetopleurophora erythronota (Strobl)
Reading, 25.3.74 (EB).

Triphleba papillata (Wingate)
Caversham Park below reservoir, 29.3.84 (HHC).

Volucella inanis (L.)
Windsor Forest, 27.8.83; Tilehurst, 8.84 (RL).

Minettia longiseta (Loew)
Baynes Wood Nature Reserve, 16.6.84 (HHC).

Neoleria propinqua Collin
Crowsley Forest, 5.4.84 (HHC).

Leptocera leucoptera (Hal.)
Caversham, 22.3.84 (HHC).

Amiota alboguttata (Wahlb.)
Baynes Wood Nature Reserve, 16.6.84 (HHC).

Chirosia albitarsis (Zett.)
Baynes Wood Nature Reserve, 9.8.84 (HHC).

Lasiomma anthomyinum (Rdn.)
Kennylands, 23.5.84 (HHC).

Fannia speciosa (Ville.)
Baynes Wood Nature Reserve, 16.7.84. Last recorded Wytham c. 1920 (HHC).

Helina vicina (Czerny)
Baynes Wood Nature Reserve, 9.8.84 (HHC).

The Society's Entomological Night

This annual event was held at Wellington Country Park on 21st July 1984 and we are indebted to John Davison for making the arrangements to visit this splendid locality and for showing us the extensive grounds during the hours of daylight. The Barbeque, organised this year by Jocelyn Whitfield and valued helpers Dr. Alan and Mrs. Ivy Brickstock, made an enjoyable and lengthy interlude taking us up to the time of mothing activity. In almost 20 years of mothing evenings the 1984 event was probably the best we have ever held; the weather conditions were just right and the species list of 116 was the highest we have ever recorded. The specialities are embodied in the foregoing report and speak for the richness of the locality. Special thanks are due to Sheila Ward for much writing of names and to Norman Hall for the laying on of sugar and supplying and operating an abundance of equipment without which we would almost have been in the dark.

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), the late Dr. E. Burtt (EB), H. H. Carter (HHC), P. A. Davey (PAD), Dr. M. J. Dumbleton (MJD), D. Gibbs (DG), Dr. R. J. Grayer (RJG), N. M. Hall (NMH), T. D. Harrison (TDH), T. J. G. Homer (TJGH), M. R. Hughes (MRH), J. H. F. Notton (JHFN), David Notton (DN), R. Leeke (RL), D. Rees (DR), R. A. Ramsdale (RAR), P. Silver (PS), Mrs. Sheila Ward (SW).

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

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The Recorder's Report for Fungi 1984.

A. Brickstock

1984 was another good year for fungi, many species persisting until the end of November, despite two rather heavy frosts earlier that month. The final tally for the year was 347 species.

The Society's Forays produced 64 species at Fence Wood, Hermitage on 29.9.84; 35 species at the Warburg Reserve on 6.10.84, a low total, but including two outstanding *Amanita* species, the very uncommon *A. echinocephala* and *A. solitaria*; and 71 species at Harpsden on 20.10.84, the most interesting

find here being the uncommon yellow-ringed variety of Amanita rubescens var. annulosulphurea.

There was an interesting record from Pamber Forest, a Buff Tip caterpillar on which was growing a white mould, Beauvaria bassiana, upon which were growing minute black fruiting bodies of Melanospora parasitica.

Six of the species found at Ashampstead, denoted by *, were new records for Berkshire.

Special thanks once again to Mary and Neville Diserens for their records, and help with identifying many of the species, to the other contributors and to Pat Andrews for identifying several species.

Names of Agarics and Boleti are as given by Moser, others from Phillips.

Records have been included (a) for species not recorded in the last few years, or (b) for relatively uncommon species recorded at fresh localities, even though recorded recently from other localities.

AGARICALES

Agaricus abruptibulbus
Ashampstead Common, 6.10.84 (B, H & F).

Agaricus porphyrizon
Sulham, 14.10.84 (B).

Amanita echinocephala
Warburg Reserve, Bix, 6.10.84 (NH).

Amanita porphyria
Sulham, 14.10.84 (B).

Amanita rubescens var. annulosulphurea
Harpsden, 20.10.84 (NH).

Amanita solitaria
Warburg Reserve, Bix, 6.10.84 (NH).

Boletus porosporus
Ashford Hill, 20.10.84 (D).

Boletus queletii
Bulmershe College, 6.11.84 (SS).

Clitocybe dicolor
Ashampstead Common, 6.10.84 (B, H & F).

Collybia confluens
Ashampstead Common, 6.10.84 (B, H & F); Great Wood, Hambledon, 3.11.84 (D, B).

Conocybe rugosa
Nettlebed, 11.11.84 (D).

Coprinus angulatus
Nettlebed, 21.10.84 (D).

Coprinus impatiens
Harpsden, 20.10.84 (NH).

Coprinus lagopides
Nettlebed, 21.10.84 (D).

Cortinarius pholideus
Newtown Common, Newbury, 14.10.84 (D).

Drosella fracida
Warburg Reserve, Bix, 6.10.84 (NH).

Entoloma rhodopolium
AWRE, 31.10.84 (B).

Hebeloma radicosum
Wasing Wood, 20.10.84 (D).

Hohenbuehelia geogenia
Harpsden, 20.10.84 (NH).

Hohenbuehelia rickenii
Warburg Reserve, Bix, 6.10.84 (NH)

Inocybe griseolilacina
Ashampstead Common, 29.9.84 (B & H); Newtown Common, Newbury, 14.10.84 (D).

Inocybe pyriodora var. incarnata
Ashampstead, 11.11.84 (B).

Lactarius controversus
AWRE, 31.10.84 (B).

Lactarius zonarius
Ashampstead, 11.11.84 (B).

Leccinum roseofractum
AWRE, 17.10.84 (B); Newtown Common, Newbury, 14.10.84 (D).

Lepiota friesii
Harpsden, 20.10.84 (NH); Great Wood, Hambledon, 3.11.84 (D, B).

Lepiota ignivolvata
Sulham, 13.11.84 (B).

*Lepiota konradii
Ashampstead Common, 29.9.84 (B & H).

*Lepiota marriagei
Ashampstead Common, 6.10.84 (B, H & F).

*Lepiota subgracilis (probably)
Ashampstead Common, 6.10.84 (B, H & F).

Lepiota ventriosospora
Path Hill, Hardwick Estate, 21.10.84 (B); Great Wood, Hambledon, 3.11.84 (D, B).

Leptonia lampropus
AWRE, 10.10.84 (B).

*Marasmius bulliardii
Ashampstead Common, 29.9.84 (B & H).

Marasmius cohaerens
Ashampstead Common, 29.9.84 (B & H).

*Marasmius lupuletorum
Ashampstead Common, 6.10.84 (B, H & F).

Melanophyllum echinatum
Path Hill, Hardwick Estate, 21.10.84 (B).

Micromphale brassicolens
Great Wood, Hambledon, 3.11.84 (D, B).

Mycena epipterygioides
Virginia Water, 13.10.84 (MS).

Mycena leptocephala
Ashampstead Common, 29.9.84 (B & H).

Mycena olida
Ashampstead Common, 6.10.84 (B, H & F).

Mycena rorida
Ashampstead Common, 29.9.84 (B & H).

Nolanea hirtipes
Great Wood, Hambledon, 3.11.84 (D, B); Garden Cockney Hill, Tilehurst, 17.11.84 (B).

Panaeolus sphinctrinus
Ashampstead Common, 6.10.84 (B, H & F).

Panellus serotinus
The Chase, Woolton Hill, 28.10.84 (B).

Pholiota alnicola
AWRE, 31.10.84 (B).

Pholiota aurivella
Nettlebed, 11.11.84 (D).

Pholiota carbonaria
Nettlebed, 21.10.84 (D).

Pholiota gummosa
Virginia Water, 13.10.84 (MS).

Pleurotus cornucopiae
Whiteknights Park, 10.10.84 (B).

Pluteus leoninus
Great Wood, Hambledon, 3.11.84 (D, B).

Pluteus umbrosus
Prospect Park, 17.10.84 (B).

Psathyrella pennata
Nettlebed, 21.10.84 (D).

Psathyrella spadiceogrisea
Path Hill, Hardwick Estate, 21.10.84 (B).

Rhodotus palmatus
Sulham, 23.11.84 (B).

Russula emetica var. longipes
Virginia Water, 13.10.84 (MS).

Russula pseudointegra
Ashampstead Common, 6.10.84 (B, H & F).

Russula sororia
Padworth Gully 27.10.84 (B).

Suillus aeruginascens
Sulham, 14.10.84 (B).

Tricholoma carneum
Virginia Water, 13.10.84 (MS).

Tricholoma columbetta
Ashford Hill, 20.10.84 (D).

Volvariella speciosa
Ashampstead Common, 6.10.84 (B, H & F); Prospect Park, 23.10.84 (B).

*Xerocomus armeniacus
Ashampstead Common, 6.10.84 (B, H & F).

APHYLLOPHORALES

Auriscalpium vulgare
Virginia Water, 13.10.84 (MS).

Clavariadelphus fistulosus
The Chase, Woolton Hill, 28.10.84 (B).

Inonotus radiatus
Padworth Gully, 27.10.84 (B).

GASTEROMYCETALES

Cyathus striatus
Ashampstead Common, 29.9.84 (B & H).

Geastrum triplex
Ashampstead Common, 29.9.84 (B & H).

ASCOMYCETES

Chlorosplenium aeruginascens
Fence Wood, Hermitage, 29.9.84 (NH).

Claviceps purpurea
Virginia Water, 13.10.84 (MS).

Humaria hemisphaerica
Harpsden, 20.10.84 (NH); AWRE, 7.11.84 (B).

Peziza anthrocophila
Nettlebed, 21.10.84 (D).

Peziza echinospora
Nettlebed, 21.10.84 (D).

Contributors

Ivy and Alan Brickstock (B), Barry Bristow and Alec Henrici (B & H), B & H plus Virginia Field (B, H & F), Mary and Neville Diserens (D), Siobhan Skeggs (SS), Society Forays are denoted by (NH) and the Mycological Society Foray at Virginia Water by (MS).

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The Recorder's Report for Vertebrates 1983-1984

H. H. Carter

FISH

Cyprinus carpio L. — Carp
Mirror Carp in ponds on Greenmore Hill, Woodcote (SP)

Tinca tinca (L.) — Tench
In ponds on Greenmore Hill, Woodcote (SP)

Gobio gobio (L.) — Bullhead
Sul brook, 12.83 (BRB)

Gasterosteus aculeatus L. — Three-spined Stickleback
Sul brook, 12.83 (BRB)

Pygosteus pungitius (L.) — Ten-spined Stickleback
Sul brook, 12.83 (BRB)

Nemacheilus barbatula (L.) — Stone Loach
Sul brook, 12.83 (BRB)

Anguilla anguilla (L.) — Eel
Three in R. Loddon near Twyford, 8.7.84 (RP)

AMPHIBIANS

Triturus vulgaris (L.) — Smooth Newt
Bred in garden pond, Tilehurst; young newts emerged in July and returned to the pond in early December (PRC).

Triturus helveticus (Raz.) — Palmate Newt
Bred in garden pond, Tilehurst (PRC). Adults in pond on Snelsmore Common, March to July (WW).

Triturus cristatus (Schr.) — Crested Newt
Bred in garden pond, Tilehurst; several overwintered as tadpoles (PRC).

Rana temporaria L. — Frog
No data on spawning dates this year.
Abundant in Tilehurst, where 10 new garden ponds were stocked with spawn (PRC). 15 mated pairs in pond at Fairford House, Spencers Green (PG). Newly metamorphosed frogs seen leaving pond on Snelsmore Common, 5.7.84 (WW). One in garden at 16 Crawshay Drive, Emmer Green, 1.7.84 and throughout September (MAN).

Bufo bufo (L.) — Toad
Seen at all usual sites but less abundant than Frog (PRC). Dead on roads in the Sonning Common area during Spring migration 26.3.84, 2 Binfield Heath Lane, 14 Kiln Road, one by Coach and Horses ponds, during Autumn migration 28.8.84, one Kennylands Road, one Binfield Heath Lane, 16 Kiln Road, mainly young of the year. Evidently the species still breeds in these ponds but I have not been able to obtain direct evidence as access is restricted. Many tadpoles at 79 Cockney Hill, 9.5.84 (HW). One in garden at Harcourt Drive, Earley, 22.7.84 and 29.9.84 (RJG). None seen at Snelsmore (WW).

REPTILES

Lacerta vivipara L. Common Lizard
Common on heathland areas of Snelsmore Common, 1982-1984 (WW). Present at Aston Upthorpe reserve, 10.6.84 (HJMB).

Natrix natrix (L.) Grass Snake
A small colony at the Snelsmore Common pond seen April to August 1983-1984 (WW). One at Fairford House, Spencers Wood, 7.84 (CG).

Vipera berus (L.) Adder
Adults and juveniles common on heathland, Snelsmore, 1982-1984; 5 to 9 individuals might be seen in the course of a day during the summer months (WW).

MAMMALS

Talpa europaea L. Mole
Molehills at Pishill, 15.1.84, Marsh Lane near Henley, 11.2.84, Dinton Pastures, 12.2.84, Crowsley Park, 12.3.84.

Sorex araneus L. Common Shrew
One found dead at Dry Sandford pit, 9.4.83 (HJMB). Calls heard in Sonning Common area on several dates 4 to 6.84. One found dead in Chambers Copse, Emmer Green, 4.7.84 (MAN).

Erinaceus europaeus L. Hedgehog
Hibernating in observer's garden, 3.84 (MJA). Adult in spring, adult and juvenile in 9.84 at 332 London Road (ME). One near Theale, 16.5.84 (HJMB). A large one 16 Crawshay Drive, Emmer Green, 27.7.84 (MAN). Two dead on road in Woodley, 3.7.84. One alive, 8 dead on road in Sonning Common-Emmer Green area between 19.10.83 and 11.8.84, mainly in May, June and August.
A juvenile in the garden of 16 Harcourt Drive, Earley, 7-9.9.84 seemed sickly, was found dead 13.9.84 and eaten by a scavenger next day (RJG).
One in Reading town centre, 24.5.84 wandering in street (MRH).

Myotis daubentoni (Kuhl) Daubenton's Bat
Often seen in summer, but no summer roosts located; hibernating in chalk caves at Henley (PRC).

Pipistrellus pipistrellus (Schr.) Pipistrelle
108 Berkshire summer roosts located, chiefly between tiles and roofing felt or in cavity walls (PRC). One found in hibernation during building work at Rose Farm, Mapledurham, 3.1.84. Present at Wood Vale, Spencers Green for the last ten years (PG). At Theale, 16.5.84 (HJMB). Seen in garden at Harcourt Drive, Earley, 27.7.84 and 17.8.84; 2 around boiler house at Whiteknights, 8.9.84 (RJG).

Plecotus auritus (L.) Long-eared Bat
Five Berkshire roosts located in roofs, one in a porch (PRC).

Nyctalus noctula (Schr.) Noctule
Four Berkshire roosts located, all in hollow trees (PRC). At Theale, 16.5.84 (HJMB).

Vulpes vulpes (L.) Fox
One in Warwick Road, Reading last week of 10.84 (CG). One seen at Padworth, 29.12.83; one dead on road at Round Oak, Padworth, 10.4.84 (MJH). One dead on road north of Round Oak

29.7 84 (BRB). One resident next door to 164 Kidmore End Road, Emmer Green, 12.83 (TW). Two in garden at Harcourt Drive, Earley, adjoining Leighton Park School, 21.2.84 (RJG). One in Hurdle Shaw, 1.4.84 in daylight (HJMB). One calling in Bur Wood, Sonning Common, 22.9.84. Several around Circuit Lane, Southcote, 2.10.84 (CAS).

Meles meles (L.) Badger
A sett by the Bailey bridge in Rose Kiln Lane, Whitley. One dead on Burghfield Road between the railway and the River Kennet, 9.5.84. A juvenile dead on Tidmarsh Road near a runway, 30.5.84. One dead in Mill Lane, Calcot, 26.6.84 (Little Heath School per SYT). One dead on M4 by Burghfield gravel pits, 30.6.84 (PRC).

Mustela erminea L. Stoat
One on Garson's Hill, 29.4.84 (HJMB). Two at Moor Copse, 8.9.84 (MRH).

Mustela nivalis L. Weasel
One at 164 Kidmore End Road first week of 12.83 (TW). One on Henley Road north of Playhatch, 22.1.84 (MAN). One dead on Watlington Hill, 8.4.84 (MJC). One caught at Whiteknights, 5.6.84 (DR).

Dama dama (L.) Fallow Deer
Three at Padworth, 15.1.84 (MJH). Slots north of Pishill on the same date. Two does at Crowsley Forest, 19.5.84.

Capreolus capreolus (L.) Roe Deer
Total of 30 at Bearwood, 23.1.84 (BTP). Present throughout the year at Moor Copse (MRH).

Muntiacus reevesi Ogilby Muntjac
Two seen on several dates at 164 Kidmore End Road, Emmer Green, 12.83 (TW). One crossing Kennylands Road, Sonning Common, 10.45 p.m. 25.1.84 and one there 24.5.84. Slots at Star Brick Works, Knowl Hill, 22.2.84. One in garden at Ridgmount Close off Long Lane, Tilehurst, 5.3.84 (DL). Droppings on Silchester Common on the same date (Mr Pace). One calling in Crowsley Forest, 7.3.84. One at Upper Basildon and one in Sulham Woods, 3.84; one in Aldworth area, 13.4.84, 4.5.84 and 22.5.84; one in Arthur Newbury Park, Tilehurst, 4.84; one in Moor Copse, 12.5.84 (MRH). One watched for 5 minutes feeding in field by R. Pang, Moor Copse, 9.9.84 (PRC). One calling in Morgan's Wood, Sonning Common, 29.6.84, 31.6.84 and 2.7.84. One calling at Chalkhouse Green, 4.7.84.

Lepus capensis Pallas Brown Hare

One in field at Comp Farm, Sonning Common, 18.10.83 hunted at night with gun and land-rover; one on Bryant's Farm, Sonning Common, 9.2.84; one on north side of Bishopsland Farm, 10.2.84 and two there 14.3.84. One at Upper Basildon, 13.4.84 (MRH).

Oryctolagus cuniculus (L.) Rabbit
Sightings in usual places, many on grassland at Hardwick Stud (PRC). Numbers still increasing in the Sonning Common area; 3 Bryant's Farm, 9.2.84; 3 Pack Saddle and 6 Crowsley Park, 23.5.84; 18 at old pit, Chalkhouse Green, 27.5.84; 44 in fields west of this, 24.5.84; 34 in fields by Cucumber Plantation, 18.5.84; 3 Morgan's Wood, 9.9.84 conforming to the usual pattern of seasonal increase and decrease; total sightings 600.

Clethrionomys glareolus Schr. Bank Vole
Seen on several occasions in suitable habitat, trapped during survey work (PRC). A male killed by cat, 16 Crawshay Drive, Emmer Green, 31.7.84 (MAN)

Apodemus sylvaticus (L.) Wood Mouse
Trapped at Padworth, 13.1.84 (MJH). Breeding in garden shed, Tilehurst (PRC). One killed by cat, 16 Crawshay Drive, 21.8.84 (MAN).

Rattus norvegicus Berk. Brown Rat
Abundant in log pile at New Copse near Sonning Common, 11.83 (EMC). One in ditch by Richfield Road where rubbish is dumped, 19.1.84. One dead on road, Emmer Green, 26.1.84. Two dead on Kiln Road, Emmer Green, 28.9.84. Breeding in air raid shelter, Tilehurst; two attempts by pest officer failed to eliminate these (PRC) - perhaps a Warfarin-resistant strain.

Sciurus carolinensis Gmelin Grey Squirrel
Bred in horse chestnut tree in garden, Tilehurst, where one to three were present most months (PRC). One in Emmer Green, 14.2.84 and 3.4.84, dead on road, 24.4.84. One in Reade's Lane, Gallowstree Common, 15.4.84. One dead at Sulham, 9.5.84 (CB). One in St. Laurence's Churchyard, 31.5.84.

Thanks are due to the following contributors:

Martin Andrews (MJA); Brian Baker (BRB); Humphry Bowen (HJMB); Cyril Bulmer (CB); Elizabeth Carter (EMC); Mary Carter (MJC); Paula Cox (PRC); Marjorie East (ME); Renee Grayer (RJG); Cilla Green (CG); Patricia Green (PG); Malcolm Hitchcock (MJH); Dora Lucy (DL); Margaret Notton (MAN); Mr. Pace; Basil Parsons (BTP); Stephen Pitt (SP); R. Prior (RP); David Rees (DR); Helen White (HW); Trevor Wilton (TW); Wolfgang Wüster (WW).

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WEATHER RECORDS : 1984

contributed by M. Parry

STATION: READING UNIVERSITY (WHITEKNIGHTS)

		Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Year
Mean Daily Temperatures °C	Max.	7.6	6.8	8.2	13.9	14.4	20.5	23.2	23.5	17.9	14.9	11.4	8.3	14.2
	Min.	1.1	0.9	2.[illegible]	2.[illegible]	6.1	10.3	11.2	12.9	10.5	8.1	5.9	2.4	6.2
	Mean	4.4	3.9	5.1	8.5	10.3	15.4	17.2	18.2	14.2	11.5	8.7	5.4	10.2
	Range	6.5	5.9	6.2	10.9	8.3	10.2	12.0	10.6	7.4	6.8	5.5	5.9	8.0
Extreme Temperatures °C	Extreme Max.	12.5	12.2	13.5	21.7	21.8	26.0	30.0	29.6	24.3	18.8	17.9	13.0	30.0
	Date	12, 13	3	6	21	24	20	8	21	2	8	1	1	July 8
	Extreme Min.	-4.0	-3.9	-1.5	-3.5	-0.8	4.0	6.1	6.5	6.1	-1.5	0.0	-2.2	-4.0
	Date	20	13	19	3	9	4	3	11	25	27	15	29	Jan 20
	Ext. Grass Min.	-9.1	-10.5	-7.5	-10.0	-7.4	-1.9	-1.5	0.8	1.0	-7.2	-7.0	-8.5	-10.5
	Date	20	13	19	3	9	4	3	11	26	27	26	26	Feb 13
Days with frost		10	10	3	7	1	0	0	0	0	1	0	10	42
Days with ground frost		24	16	20	26	6	2	1	0	0	6	9	21	125
Sunshine Hours	Sum	91.2	63.6	59.1	234.0	144.6	237.9	230.3	195.4	105.9	83.3	59.4	51.7	1556.4
	% of possible	35	22	16	56	30	48	46	43	28	25	22	21	35
	Daily Mean	2.9	2.2	1.9	7.8	4.7	7.9	7.4	6.3	3.5	2.7	2.0	1.7	4.3
Precipitation	Amount in mm	89	30	67	4	79	36	19	32	91	55	88	60	650
	Rain Days	21	15	13	5	13	7	7	12	13	17	18	19	160
Maximum rain in one day mm		18.1	7.2	23.8	1.8	17.6	11.3	4.6	12.7	18.9	14.3	12.7	8.9	23.8
	Date	16	22	23	11	21	17	12	3	17	24	2	15	Mar 23
Longest Run of Consecutive Rain Days		5	7	9	3	4	2	2	3	4	4	6	7	9
Longest Run of Consecutive Dry Days		4	12	10	14	9	10	7	6	4	6	2	4	14
Days with snow or sleet		5	1	2	1	0	0	0	0	0	0	0	0	9
Days with snow lying		2	0	0	0	0	0	0	0	0	0	0	0	2
Visibility	Days with fog at 0900 GMT	0	1	2	0	0	0	0	1	0	1	1	4	10
Thunderstorm Activity	Days of thunder	0	0	1	0	1	3	2	5	1	0	0	0	13
	Days with hail	2	0	2	1	0	0	0	1	0	1	0	0	7

MONTHLY WEATHER NOTES - 1984

JANUARY	Milder than usual, though with the coldest night of the year. Rainfall well above average, but some sunny days too.
FEBRUARY	Average temperatures, only $\frac{2}{3}$ normal rainfall, but cloudy with sunshine a little below average.
MARCH	Slightly on the cool side. Rather wet (including the wettest day of the year), though most of the rain fell in the last week. Sunshine hours well down.
APRIL	Near average temperatures. Hardly any rain - the driest April since 1938; an absolute drought began on 12th and lasted into May. Unusually sunny.
MAY	The absolute drought continued until 10th, but thereafter very wet, making the total 70% above average. Dull and cool, its warmest day little warmer than April's.
JUNE	Fairly average temperatures, a little on the dry side, quite sunny.
JULY	Rather warm, with the year's hottest day, sunny and rainfall 70% below average.
AUGUST	Continued warm, dry and sunny; rainfall less than $\frac{1}{2}$ normal, though thunder heard frequently.
SEPTEMBER	Average temperatures, but very wet (70% above average); dullest September since 1956.
OCTOBER	Near normal temperatures, but rainfall and sunshine both somewhat below normal values.
NOVEMBER	Mild (2°C above average), but rather wet and lacking in sunshine.
DECEMBER	Average temperatures and rainfall, a little sunnier than usual.

M. Parry