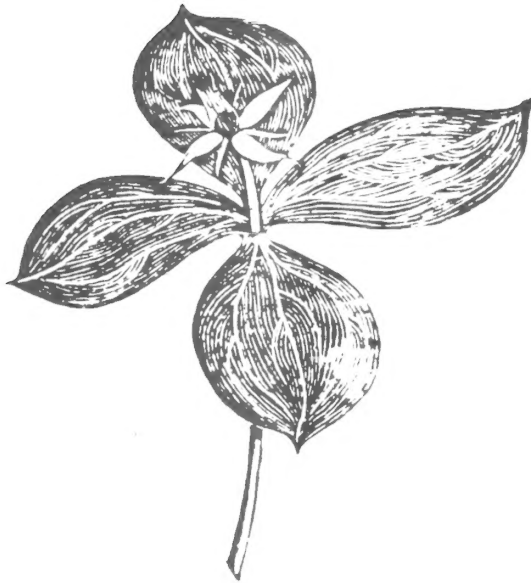


S. 339 B

BRITISH MUSEUM
(NATURAL HISTORY)
21 MAR 1990
PRESENTED
GENERAL LIBRARY

The Reading Naturalist

No. 42



Published by the Reading and District
Natural History Society
1990

Price to Non-Members £2.50



THE READING NATURALIST

No. 42 for the year 1989



The Journal of
The Reading and District Natural History
Society

President

Mr. J. N. Diserens

Hon. General Secretary:

Mrs. M. Beek
29 Morecambe Avenue
Caversham
Reading

Hon. Editor

Mrs. H.D. Lambden
74 Beech Lane
Earley
Reading

Editorial Sub-Committee:

The Editor, B.R. Baker, H.H. Carter,
Mrs. B.M. Newman, Dr. A. Brickstock,

Honorary Recorders:

Botany: Mrs. B.M. Newman, Earley Cottage, 25 Beech Lane, Earley, Reading
Entomology: Mr. B.R. Baker, 25 Matlock Road, Caversham, Reading
Vertebrates: Mr. H.H. Carter, 10 Northbrook Road, Caversham Park Village
Fungi: Dr. A. Brickstock, 25 Cockney Hill, Tilehurst, Reading

CONTENTS

	Page
Editorial	2
Meetings and Excursions 1988-1989	3
Presidential Address "Getting High in the Alps"	J.N. Diserens 5
A Desirable Residence	B.R. Baker 8
Plants at Benham Valence	C. Grayer 10
Pythagoras and Sunsets	M. Fletcher 13
The Role of Soils in Assessing Woodland History	B.R. Wilson 15
Honorary Recorders' Reports	
Botany Report	B.M. Newman 20
Entomology Report	B.R. Baker 31
Fungi Report	A. Brickstock 39
Vertebrate Report	H.H. Carter 46
Weather Records	R.D. Thompson 49

EDITORIAL

The Society has had a very successful year of really interesting and informative meetings organised by Sheila Ward. Walks and Excursions organised by Brian Reed have been reasonably well attended and much enjoyed.

Humphry Bowen, having retired from his post at Reading University, has left Reading and moved to Dorset. We have lost a most valuable member - certainly Berkshire's loss is Dorset's gain. We wish him and Muriel a long, happy and healthy retirement and thank him for all the good work he has done for us over the past years. Hopefully we shall meet up with them on future excursions.

A List of members is available with this number for members only.

MEETINGS

The Annual General Meeting of the Society was held on October 6th 1988. The Presidential Address, given by Miss Eileen Holly, was entitled "A Scamper through the Years", (attendance 41).

On October 20th, Dr. Maurice Moss made a Fungi Foray from an Armchair (31) and on November 3rd Dr. Elizabeth Wood talked on the Language of Fishes (29); Hugh Carter on Moving Continents on November 17th (49) and Dr. Michael Keith-Lucas on Bees, Pollen & Honey on December 1st (47). These meetings and the Members' Evening meeting were all held at the Abbey Room of Reading Central Library.

In 1989 the venue changed to the Abbey Baptist Church Hall as the Abbey Room at the Library was closed for the whole of 1989. On January 12th 1989 Dr. Alan Brickstock gave us an account of his visit to Botswana and Zimbabwe (58); Dr. E.V. Watson described his visit to S.E. Asia and Australasia (56) on February 9th, and the last ordinary meeting was on Wildlife Gardening on February 23rd by Tom Maxwell (48). All talks were admirably illustrated by colour slides and diagrams.

Two Members' Evenings were held - on December 13th 1988 and March 9th 1989 when refreshments were kindly provided by Ivy and Alan Brickstock. At these meetings individual members gave short talks with illustrative slides and specimens and their organisation was by Hugh Carter.

WALKS AND EXCURSIONS

Winter Walks

The first fungus foray was held jointly with Newbury Field Club on 7th October 1988 and led by Barry Bristow (30). Alan Brickstock and Neville Diserens led an all-day excursion on 22nd October to Nuney Green (24). Another full-day excursion to the South Coast on 7th January 1989 was led by Martin Sell for birds (18).

All other winter walks were afternoon walks - on 12th November 1988 a Tree Walk in the Greys Court area was led by Jocelin Whitfield (17); 11th February 1989 to Lavell's Lake with Norman Hall for birds (20); on February 25th for Mosses and Liverworts with Dr. E. Watson (16); and to a Crocus Field at Inkpen with Dr. M. Keith-Lucas (22).

Half-day Summer Excursions

The summer season started with a walk led by Meryl Beek to Swyncombe on April 1st 1989 for general interest and hopefully for the rarity Asarabacca - and they did! (22); on 15th April to Morgastor Wood with Norman Shaw for Spring flowers and birds (28); with Colin Grayer to pay a return visit to Benham Park on 29th April for Spring flowers including bluebells and Town Hall Clocks (8); on 13th May to Frensham Ponds with Jim Newman for a variety of waterside plants (15); to Old Burghclere with Sheila Ward on 27th May for general interest including Fly Orchids (21); to Wittenham Clumps on 17th June with Michael Fletcher - an area of rough pasture and woodland (11); on 1st July with Neville Diserens to Buttler's Hanging and Bradenham Wood for flowers (15); on 15th July Doug Hambleton led the walk to Greywell Fen for Southern Marsh Orchids (11); for butterflies and various flowers, Brian Reed led to the Nuffield area on 22nd July - this walk was at the suggestion of Walter and Nora Dunn (13); Ken Horswell led in the Warburg Reserve on

5th August (8) and finally Dr. Foley-Fisher led to Marsh Meadow and Cock Marsh on 2nd September for general interest (23).

Evening Excursions

Norman Hall led the first walk to Bulmershe area to listen to bird song on 20th April (8); on 17th May Martin Sell led to Woolhampton hopefully for nightingale song (20); Meryl Beek led to Mapledurham on 8th June for general interest(6); & again for general interest, with Michael Fletcher on 20th June to Crowsley Park (8).

A Nothing Evening/Barbecue was held on July 7th at Ambarrow Court, Bracknell at a site which was new to our Society. This was led by Brian Baker and Roland Ramsdale with catering in the capable hands of Jocelin Whitfield (25).

Full-day Excursions

The Full-day Annual Coach Excursion was on Sunday July 9th to Porton Down where we were welcomed by a member of staff and conducted throughout by him and a few helpers. This is a Conservation Area of unspoilt Chalk Grassland with a great variety of plant life. Some Bustards nest there and one was seen by Martin Sell - well in the distance! (40).

Other Full-day excursions were:- to Pitstone Fen and College Lake at Tring led by Mr. G. Atkins on 10th June. This is a small BBONT reserve with lots of orchids and much of general interest (20); and on 19th August to Pamber with Martin Sell for heathland plants and birds (20) and finally to Watlington Hill with Alan Brickstock for chalkland plants and small trees (18).

BBONT OPEN DAY at Wasing Place, Aldermaston was very well attended by members. Guided walks around the gardens were led by Dr. Michael Keith Lucas.

Presidential Address 12 October 1989

Getting High in the Alps

J.N. Diserens

Before any of you are tempted to reach for a copy of the Trades Description Act I should explain that we are not tonight going to be struggling over icefields or clinging to rock walls by the tips of our fingers. Mary and I do not do that sort of thing! But if you detect in my title a hint of intoxication, of excitement at being in the Alps, you are on the right track. Tonight I would like to give you just a flavour of the richness and variety of the Alpine flora and a little of its fauna too.

The Alps are, of course, a large and complex mountain range, stretching for some 5 to 6 hundred miles from south-east France across Switzerland, Northern Italy and Austria to Yugoslavia, and in places they are a hundred or so miles wide. Within that range there is a vast number of mountains and valleys and of habitats and aspects and I cannot hope to touch on more than a small fraction of the species. In any case, our experience is limited. Because we cannot get away until the schools break up at the end of July we do not arrive until the best is over. We have never seen the drifts of crocuses and narcissi in May nor the lower hay meadows in full flower in June. But even in late July and early August there is enough left to show just how colourful it must have been a month earlier, and much of what could be found lower down in June can still be seen in flower higher up in August.

Tonight I propose taking you on a walk with me; starting in an Alpine village, taking the path along the valley bottom then up through the hay meadows and into the woods; up again through the high Alpine pastures, having a quick look at a damp area, a glacier, a scree slope and a snow patch before getting on to the barer stony slopes and eventually achieving the summit.

Because the slides I have chosen to illustrate my talk come from a variety of locations it would not be possible to see in one walk all that I am going to show you tonight. But that does not matter. You can walk almost anywhere in the high Alps in the summer and see far more species than you will tonight. My only regret is that I have had to omit so much in order to get my talk down to an hour or so. We had better make a start or we shall never make it.

Leaving the village we note the houses bedecked with geraniums - really Pelargoniums - its woodpile well stocked ready for the long winter ahead. We set out along the banks of the glacier fed mountain stream with its fast flowing milky water. The river gravels are sheltered from the more extreme conditions higher up and plants which find a niche here include some of the taller species such as the pink Alpine Willowherb (Epilobium fleischeri), the white Aconite-leaved Buttercup (Ranunculus aconitifolius), several species of Adenostyles, Swallow-wort (Vincetoxicum hirundinaria) with its tiny yellow flowers and elongated pod, Monkshood (Aconitum tauricum), its close relative the yellow Wolfsbane (Aconitum vulparia) and the deciduous shrub Red-berried Elder (Sambucus racemosa) in fine fruit at this time of year.

At a slightly higher level we find ourselves in the hay meadows which are such a feature of the Alpine valleys. The deeper soils and the protected position permit a rich and varied vegetation which in the summer is alive with the noise and movement of insects.

Plant species include the Martagon, Orange and St Bernard's Lilies (Lilium martagon, Lilium bulbiferum and Paradisea liliastrum). Gentians are relatively common and at this level can be found the tall growing

Greater Yellow Gentian (Gentiana lutea), the Purple Gentian (Gentiana purpurea) and the sprawling blue and violet Willow-leaved Gentian (Gentiana asclepiadea). The alpine anemone in its white and yellow forms (Pulsatilla alpina) is by now mainly in seed but here and there can be found in good flower. Other striking plants include the Purple Lychnis (Lychnis flos-jovis), Jacob's Ladder (Polemonium caeruleum), Jupiter's Distaff (Salvia glutinosa), the impressive white False Helleborine (Veratrum album) and a number of pinks such as Wood Pink (Dianthus sylvestris). The Alpine Columbine (Aquilegia alpina) is another plant which is generally over by the time of our arrival but is always well worth finding. Orchid species are common in the hay meadows including the small white orchid (Pseudorchis albida) and the short-spurred Fragrant Orchid (Gymnadenia odoratissima) but less frequently found is the Globe Orchid (Traunsteinera globosa) which looks like a tasselled, round-headed version of our own Pyramidal Orchid (Anacamptis pyramidalis).

The hay meadows belong to the insects, particularly the grasshoppers, which can have vivid white, blue or red wings. Even more colourful are the butterflies which are present in incredible numbers. Numerous species of fritillaries include the distinctive Queen of Spain Fritillary (Issoria lathonia); the coppers are represented by the scarce copper (Heodes virgaureae) which is by no means scarce, and most elegant of all is the Scarce Swallowtail (Iphiclides podalirius). By the time we get to the Alps at the end of July the lower meadows have already changed from summer feed for the insects into winter feed for the cattle.

As we climb higher we enter woodland which at this height is coniferous. The ground flora contains a number of interesting species, some of which can be found rarely in the remnant Scottish pine woods. Wintergreens include Yavering Bells (Orthilia secunda) and St Olaf's Candlestick (Moneses uniflora). Twinflower (Linnaea borealis) is much more common than in Britain as is May Lily (Maianthemum bifolium). One of the most attractive of these woodland plants is the Wild Cyclamen (Cyclamen purpurascens), not found at the highest levels, whilst the Alpine Clematis (Clematis alpina) can occasionally festoon a tree like a Christmas decoration.

We emerge from the woodland on to the high alpine pastures. Plants here have to survive great extremes of wind, snow, sleet, rain and intense heat even during the summer months and adopt various strategies to do so. Almost all are low-growing perennials and at first sight the short turf looks unpromising. But there is a wealth of species here. Commoner plants include the Alpine Moon Daisy (Leucanthemopsis alpina), the Dwarf Eyebright (Euphrasia minima) and the Alpine Clover (Trifolium alpinum) which is said to give the turf a fruity smell. Louseworts (Pedicularis sp.) are very common and difficult to separate. We have two species in Britain, there are some 30 here in the Alps. We hardly stop to look at the Ragworts at home but the Grey Alpine Groundsel (Senecio incanus) would not be out of place in anyone's garden. Mezerium (Daphne mezereon) is in fruit at the lower levels but up here its close relative the Garland Flower (Daphne cneorum) is still in bloom.

The Heather family is well represented in the Alpine pastures as one might expect but it comes as a surprise to find the two Rhododendrons, known as Alpenroses (Rhododendron ferrugineum and R. hirsutum) on acid and limy soils respectively and the more slender Dwarf Alpenrose (Rhodothamnus chamaecistus). The two Mountain Avens (Geum montanum and Geum reptans) provide a bright splash of yellow, as do several species of Cinquefoil (Potentilla sp.) which need close examination to separate. As in the hay meadows, Gentians are by no means uncommon and come in various sizes. The Snow Gentian (Gentiana nivalis) is shorter and generally a paler blue than the Bavarian Gentian (Gentiana bavarica)

and both have smaller flowers than the Trumpet Gentian (Gentiana clusii). But perhaps the most famous Alpine flower of all is the Edelweiss (Leontopodium alpinum). A composite with white woolly bracts it has not yet been collected out of existence in the wild. The Black Vanilla Orchid (Nigritella nigra) is in no danger of extinction and in places is very common. The Rosy Vanilla Orchid (Nigritella rubra) on the other hand is found only locally in the Eastern Alps.

A number of plants thrive in the wetter areas. Starry Saxifrage (Saxifraga stellaris) likes to have its feet in water as does the Yellow Mountain Saxifrage (Saxifraga aizoides) which in spite of its name is as likely as not to be orange or even red. The Butterworts are represented by the white Alpine Butterwort (Pinguicula alpina) and the orchids by the oddly named False Orchid (Chamorchis alpina). We are too high here for the Marsh Gentian (Gentiana pneumonanthe) but its place is taken by the Marsh Felwort (Swertia perennis) which we first saw in a milk carton serving as a hotel vase!

The scree slopes too have their specialist plants. The terrain appears hostile to any species but there is plenty of ground water and where there is some stability certain plants are able to maintain a good footing. The classic scree plant is the Alpine Toadflax (Linaria alpina) but others include Fairy's Thimbles (Campanula cochlearifolia), the Alpine Poppy (Papaver rhaeticum) and the beautifully scented pink crucifer Round-leaved Pennycress (Thlaspi rotundifolium).

A place always worth a detour to visit is a shady hollow with summer snow. Even as the patch shrinks some flowers are pushing their heads up through the snow. The Red Least Primrose (Primula minima) and the purple Sticky Primrose (Primula glutinosa) can be found here but one always hopes, and is often not disappointed, to see one of the several species of Soldanella.

The plants do not have it all to themselves here. There are, of course, butterflies such as the Apollo (Parnassius apollo) and the Mountain Clouded Yellow (Colias phicomone) but some mammals manage to survive well here too. The Alpine Marmot (Marmota marmota) hibernates for seven months of the year. You will hear its warning whistle more often than you will see it. The Alpine Ibex (Capra ibex), like the Chamois (Rupicapra rupicapra), is a member of the goat family. It faced extinction at one time but has been re-introduced into a number of places and now spends virtually all the year above the tree line.

We can now make our final assault on the summit up through the barer rocky zone. Conditions here are even more exposed. Plants adopt a creeping or cushion form, they often have a dense covering of hairs to avoid dessication in the keen winds and they look for cracks and crevices in the rocks to get a hold with their roots and to obtain what protection they can. A number of families thrive here. The House-leeks (Sempervivum sp.) are more commonly found in red but here and there one of the yellow species is seen. This is the ideal place for Saxifrages. They come in a variety of sizes, forms and colours. The drooping Livelong Saxifrage (Saxifraga paniculata) has small pores in the leaves through which it exudes lime. Musky Saxifrage (Saxifraga moschata) is yellow tinged with red whilst Purple Saxifrage (Saxifraga oppositifolia) has flowers which look far too large for the plant.

Other flowers found amongst the rocks include several species of Primrose. The yellow Bears-Ear (Primula auricula) has grey-green rounded leaves, which presumably give it its name; the Red Alpine Primrose (Primula hirsuta) has sticky glandular hairs on its leaves. Up here too we can find the delicate Snowdon Lily (Lloydia serotina). I always feel it is a cheek for us to give it such a name when it is so rare in Britain whilst being comparatively common in the Alps.

We are nearing the summit now and the home of the Rock-Jasmines (*Androsace* sp). Also members of the Primrose family, they form dense rosettes of small leaves & white, pink or red flowers. Finally, if we are lucky, we shall see the plant that all Alpine botanists hope to find - the King of the Alps (*Eritrichium nanum*). It has the appearance of a dwarf cushion forming Forget-me-not with large bright blue flowers and is only ever found at these higher levels.

Now we are at the top do take time to look around. The view is breathtaking and you should see as well as hear both the Chough (*Pyrrhocorax pyrrhocorax*) with its red legs and red bill and the Alpine Chough (*Pyrrhocorax graculus*) which also has red legs but with a yellow bill.

It is time to return. Take care going down.

A Desirable Residence

B.R. Baker

The building is still there on the edge of the reedbed. The clear waters of the river Kennet still slip past one of its knife-edged corners, but the alder tree near the door is many feet higher than in those late winter days of 1960.

Reedbeds, treasures wherever situated, may not raise eyebrows under the wide skies of East Anglia, but in Berkshire they are decidedly scarce. This one was inviting, unexplored ground. Many a day had been spent upstream among the mayflies and caddis, many a night at the moth lamp until the early hours with only the whirring of the grasshopper warbler for company, but time was always pressing. To be able to sleep there would be the answer but that reality seemed remote. With the exception of locks the banks were free of buildings. As for the reedbeds, the high water table had discouraged any but the occasional withy shed.

Then, in the spring of 1957, there it was! A reminder of the uncertain days of 1939, the small, grey, hexagonal blockhouse still mounted silent guard over this quiet marsh. The five slit windows still commanded thin views of river and reedbed, the open doorway revealed a strength and solidity within, and all had now developed a slight list towards the river.

I enquired at a cottage away up on the Bath Road as to the ownership and possible use of the little building and by so doing I came to know an elderly, but active countryman whose friendship I still value today. In earlier years he had worked the osier beds of the valley, supplying the basket trade. Now, with a few cattle, a tractor and a fine assortment of bits and pieces, he could turn his hand to most odd jobs in the village. He also had the greenest of fingers and rows of sticks pressed into Kennet soil invariably prospered. I knew it would be best to come to the point quickly so explained what I required. This direct approach worked and with little fuss I was allowed open access and storage facilities almost at the river's edge.

Yet twenty years of neglect could not be smoothed over quickly - the building needed help before the dark, cool interior contrasted less fiercely with the sunlight dancing on the river outside. My requirements were simple - but what does one do with a hexagon seven feet high, whose five

windows are slits of twelve inches by six, whose massive shelves each have a small wooden gun-pit, whose single room has an almost complete concrete division centrally and whose open doorway is only twenty inches wide?

That following winter saw changes - arms which had cut osiers showed me the best way to sledge concrete and by late March all was ready.

A worktable fitted one wall, a campbed unfolded against another, primus and Tilley lamp graced a vanished gun-pit and an ancient Valor stove would glow when a chill came from the marsh.

The plan was to sleep there regularly twice a week for several months, regardless of weather. On each occasion a moth-trap would operate up on the flat roof but simpler methods would be used over the surrounding eighteen acres.

Just after midnight on that first April visit I walked to the swingbridge downstream from the blockhouse. The pressure lamp, lowered to just above the fast moving river, revealed bright yellow stoneflies newly released from empty skins which still grasped the bridge piles. One transformation lasted about ten minutes - the bright yellow would have dulled by daybreak. I retraced my steps, bolted the door on the inside and went to bed.

Sunrise was at 05.26, the air was reasonable at 10°C. and, on silencing the generator, nightingale and grasshopper warbler were heard saluting the new day.

These early April visits were not all sweetness and light. Outside in the marsh, winter's sharp corners had yet to be smoothed away, and generators have a habit of running dry before dawn! A long cable from cottage to blockhouse was later draped through the trees and helped operations immensely - its passage across the West of England main line called for ingenuity!

As the weather became warmer insect activity increased but the novelty of counting numbers every Thursday and Sunday morning wore thin. Recording was essential but, after unplugging the cables, hiding reels, brewing tea, counting the catch and finally locking the shop, three hours would have slipped by. The results were eventually written up but it was the in-between times which stay in the memory.

The evening when, laden with rucksack and eyes on ground, the reedbed seemed suddenly wide open. My door, normally screened until the last few feet, was clearly visible from the swingbridge and an acrid scent hung over the marsh. These were the days of steam trains - not only did they gently swing my camp bed at night but occasionally sparked off a devastating swathe through the reeds. It was a hazard through which all life in such specialised surroundings managed to survive. Within ten days new reed growth reached upwards, the sedge warblers built new homes and insect losses were made good from neighbouring undamaged stems.

In high summer when the river ran lazily, the bridge piles were draped with rafts of water buttercup across which moorhens and water voles walked with ease. At such times the river banks, blue-clouded with damselflies and high with willowherb and purple loosestrife, had secret hollows along their lengths. Here, among the enormous upturned palms of the butterbur leaves were the hideaways of the Kennet angler.

One August night, after fetching water from the cottage pump, I paused at the railway crossing to enjoy a quiet pipe before turning in. About a mile down the straight track was a bright light, rising and falling with regularity. As it very slowly grew closer a single light became many. Then a regular, metallic sound of boots on clinker could just be heard and fifty nightshift

platemens, each with a Tilley lamp, passed by. They wondered at the blue, mercury vapour haze silhouetting the reeds, little realising each man had crossed my supply line!

By autumn the reeds were ten feet high and at night it was easy to get lost in this enclosed, green world. One October evening I was trying to find the way out when the glare of the Tilley dazzled a small bird which dropped momentarily at my feet. Then, all around were others, fluttering and chattering, and I learnt that reedbeds shelter not only insects and harvest mice but large flocks of pied wagtails.

On the last Saturday of October the river broke its banks, the blockhouse had fifteen inches of water inside and the light was run with trepidation. That night, the last of my seven months, was spent on the cottage floor.

I still occasionally revisit the marsh and my old friend, now much frailer, has welcomed other naturalists there. They go when the weather is good, and enjoy a night's mothing. None has stayed longer.

The blockhouse is empty and doorless, but rusty hooks in the wall still invite rucksack and anorak. Perhaps one day someone will stay there again.

Plants at Benham Valence

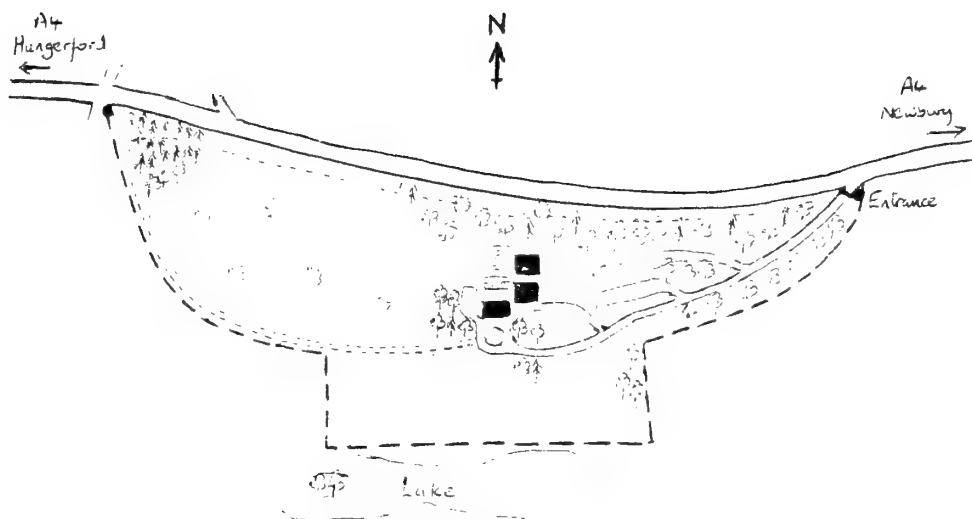
Colin Grayer

For the past four years I have been fortunate enough to work in the pleasant surroundings of Benham Valence near Newbury. I have spent many happy lunchtimes exploring the park and recording the flora. This article tries to give some idea of the park and the interesting plants that can be found there.

Firstly a brief history of Benham. The manor is mentioned in the Domesday Book, and in 1251 was presented by the king to William de Valence: hence the present official name of the estate. Over the centuries it passed through a number of hands, until it was sold in 1630 to the Craven family, who retained it for two hundred years. In 1774 the manor house burned down, and the present house was built in 1775-80 for Lord Craven by Henry Holland, the parkland being laid out at the same time by Holland's famous associate Capability Brown. In 1862, Benham was bought by the Sutton family, who continued to occupy it until the Second World War, when it was requisitioned by the army. After the war the house remained unoccupied and was left to decay, though the estate itself continued to be managed.

In the early 1980s, the estate was divided into lots, and put up for sale. The house and much of the land surrounding it was bought in 1983 by Norsk Data, a Norwegian computer company, as its UK headquarters. By 1985 the house had been repaired and restored to largely its original state, and modern offices in a sympathetic style built into the hillside behind it.

Benham Valence lies about two miles west of Newbury. The present estate owned by Norsk Data covers roughly 50 ha. (120 acres), comprising the northern part of the original estate bordering the A4. It is 1.3km from east to west, and a maximum of 0.5km from north to south. The ground slopes down from the A4 towards the water meadows of the Kennet valley, and consists of a sort of gravelly clay. It is generally neutral, though some parts near the A4 boundary appear to be slightly acid.



The current plant list records over 300 flowering plants (including long-established garden plants), plus a few conifers, ferns and horsetails. The RNHS visited Benham in July 1986, and Humphry Bowen found many things that I had completely overlooked, so my plant list grew quite considerably. He also recorded a number of lichens and mosses around the house, but this list is undoubtedly incomplete for the whole estate. No records of fungi have been made, due to my ignorance of this group.

The best way to describe some of the botanical interest of Benham is to take you on an imaginary guided tour. From the main entrance in the north-east corner the drive descends obliquely across the north-south slope through mixed woodland consisting largely of Oak, Ash, Beech, Birch and Sycamore, with occasional other trees such as Lime, Wild Cherry, Scots Pine and Mountain Ash. The main shrubs are Elder, Hawthorn, Holly and (naturalised) Cherry Laurel, with Brambles everywhere. Near the entrance lodge there is some Wild Privet (presumably planted) and a few Rhododendrons, but these are fortunately not aggressive weeds at Benham. The common woodland herbs include Wild Daffodil (naturalised), Primrose, Bluebell, Dog's Mercury, Enchanter's Nightshade, Yellow Archangel, Ground Ivy and Male Fern. Stinging Nettles dominate in summer. In places you can find Wood Sorrel, Town Hall Clock and Hemp-Nettle, and there are fine clumps of Wood Spurge along the main drive. One plant notable by its absence is Wood Anemone.

As we go down the drive, the woods open out and we get a view of the lake. The field to the left of the drive was used as a dumping ground for earth excavated when the new buildings were put up. In autumn 1985 it gave a magnificent show of rare weeds such as Corn Cockle, Cornflower and Corn Marigold. Presumably these had remained dormant since the garden was last cultivated at least 50 years ago! The field was subsequently sown with grass and the weeds disappeared.

The drive turns a corner, and we suddenly see the splendid classical front of Benham House. It is flanked on the east by Yew trees and Rhododendrons, and on the west by a group of trees including Holm Oak, Wellingtonia and other exotics. Passing round to the back of the house, we come to a sunken garden which currently contains some rather pathetic rose beds (the roses are apparently eaten by deer), backed by an impressive formal limestone staircase leading up the steep hill. The limestone supports a number of interesting plants, including Hartstongue Fern, Wall Rue, Maidenhair

Spleenwort, Arenaria balearica (a tiny but beautiful rock garden plant), Mimulus moschatus, and especially the rare and attractive Cymbalaria pallida, an alien toadflax. This is the only known occurrence of this plant in Berkshire. Part-way up the formal steps is a water basin containing the Stonewort Chara vulgaris, and further up is an area where the unusual and striking Great Horsetail is abundant. Near here is a small pond with Yellow Flag, Fool's Watercress, Purple Loosestrife and Water Figwort, along with an exotic Gunnera and Pampas Grass. In February a clump of Winter Aconite is very conspicuous.

As we climb the hill, the garden merges gradually into the woodland. Daffodils and Snowdrops are abundant, and there are some especially fine mature oaks with tall straight trunks with buttresses at their base. Soon we reach the top, and turn left onto a path with runs parallel to the wall forming the boundary with the A4. Along this path the ground appears to be somewhat more acid, with Bracken, Wood Sage, Heath Speedwell and Gorse. After about half a mile it enters a small plantation of Larch and Norway Spruce. Primroses are abundant under the conifers, and there are also many plants of Solomon's Seal. The lichens and mosses also look interesting in this area but have not yet been recorded.

The path ends at a track, and we find ourselves at the western extremity of the estate. The track here contains Whitlow Grass and Centaury, both not found elsewhere in Benham. Turning left we soon leave the conifers and enter the open parkland. Just at this point there is a small spring-fed stream running through a group of 20-30 Alder trees. The ground cover is dominated here by Golden Saxifrage (Chrysosplenium oppositifolium). Other plants in this area include Marsh Marigold, Brooklime and the grass Alopecurus geniculatus.

The parkland is grazed regularly by cattle and is rather poor botanically, though it is pleasant enough and contains scattered groves of trees, largely Oak and Ash. The track leading back to the house contains Sand Spurrey, and Yellow Oat Grass grows along the edge. Across the field on the right is the lake, which is unfortunately not part of the Norsk Data property and is fenced off, so I have not been able to record plants there. The track takes us through some wrought iron gates back to the house, and thence up the main drive to the entrance gates again.

Hopefully this article has given you some idea of Benham, and the plants that grow there. Of course I have not been able to describe everything, otherwise the article would fill the whole book!

Pythagoras and Sunsets

Michael Fletcher

Poets, artists and photographers, even if they don't know the difference between stratus and cumulus, often notice sunsets. The ones with lots of blue sky and red edges are the favourites. Sunsets also give us the only piece of weather lore which is still familiar to a generation of TV watchers:

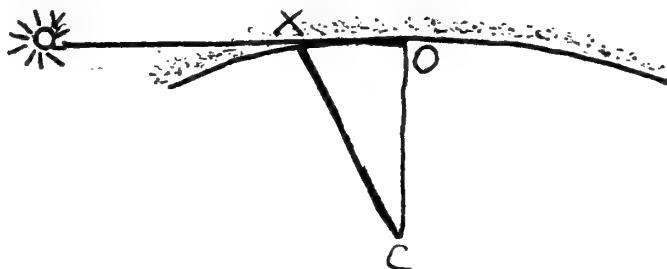
Red sky at night, shepherd's delight;
Red sky in the morning, shepherd's warning.

The implication is that shepherds don't like rain. However there is a simple explanation for the red colour of many sunsets, and a reason why certain types of red sunset foretell dry weather next day.

Of the wide range of light emitted by the sun, from far infra-red to hard X-rays, only wavelengths in certain narrow bands penetrate the atmosphere. Most important are the colours of visible light. However the shorter visible wavelengths, the blues and violets, are scattered far more in clear air than the longer ones, the reds and oranges. The observer on earth therefore sees a sun which is redder than it should be, and a sky which, even when clear of cloud or haze, is brilliant blue with scattered light.

As the sun moves lower in the sky its beams pass a greater distance through the atmosphere, and a higher proportion of its blue light is scattered. The light which penetrates directly therefore has less blue in it, and the image of the sun becomes progressively redder towards sunset.

At the moment of sunset the sun's rays (if the sun is considered as a point source) are by definition horizontal, with the sun just appearing to touch the horizon. The situation lends itself to some basic geometry.



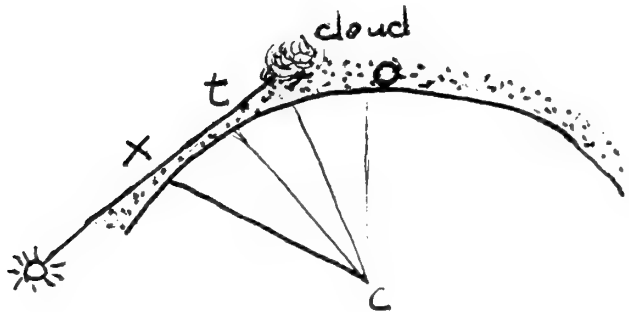
"O" is the observer. "C" is the centre of the earth. "X" is the point where the sunbeam which the observer is watching has entered the atmosphere. The angle XOC, by definition, is a right angle, and therefore by Pythagoras' theorem:

$$CX^2 = OC^2 + OX^2$$

If we take the earth's radius as 4,000 miles, and the depth of the atmosphere as 5 miles, both very approximate figures, then the distance OC is 4,000 miles, and CX is 4,005 miles. The distance OX must be 200 miles. The exact distance is not very sensitive to assumptions about the other figures.

In other words, an observer in Reading watching the sun's disc disappear over an unobstructed horizon (if he can find one), will see sunlight

which entered the atmosphere over west Wales. However the moment when the sun disappears is not the end of a sunset. If there is a cirrus cloud at point X, somewhere over Wales at a height of five miles, then the observer will be able to see it on the horizon. If the sky is clear the sun will illuminate it for about ten minutes longer, and the observer will see it illuminated by direct sunshine until the moment when this next situation occurs.



The sunbeam enters the atmosphere at X, grazes the earth at a tangent at t then strikes the cloud 200 miles west of the observer.

There are three triangles in this picture, each of the same dimensions. The sunlight reflected down by the high cloud has therefore entered the atmosphere 600 miles to the west of the observer. With almost all the blue light filtered out, this light will be an almost pure brilliant red. Such deep red cirrus clouds, hanging low in the western sky at sunset are a sign that the air is largely clear of clouds far out to the west of Ireland. With a west wind blowing, and next day's weather approaching at less than thirty miles an hour, this suggests that fine weather is likely. If there is a large cloud mass within 600 miles, the cirrus will fade more quickly into shadow, and will become a less pure red colour before fading. A yellow sunset which fades rapidly on a West wind is a sign of thickening and approaching cloud, which is likely to give rain.

However even the most vivid red sunset is not an infallible sign. A red sunset with an easterly airstream gives no information about approaching cloud. Such sunsets can herald heavy persistent rain. Nor is a red sunset, however clear the sky, a proof that cumulus clouds and showers will not develop in a cold unstable airstream as the sun warms the land next day. A very showery unsettled day can sometimes follow even a "classic" red sunset, in unstable air.

A quite different kind of red sunset can develop in hazy air, especially in an easterly wind which brings hydrocarbon haze from London or Europe. The sun becomes a red or bleary disc while still clear of the horizon. In such polluted air visibility may be only a few miles, rather than several hundred, and little can be deduced about any approaching weather.

Certainly there is no infallible rule for forecasting weather from sunsets. However cloud structures are highlighted and silhouetted, making them far easier to observe at sunrise and sunset than at any other time. If interpreted with care, observations of sunsets can be a useful guide to next day's weather.

The Role of Soils in Assessing Woodland History

Brian R. Wilson

University of Reading, Department of Soil Science

In recent years ancient woodland in Britain has attracted considerable interest due to its importance to nature conservation. This has culminated in the present compilation of national inventories of ancient woodland by the Nature Conservancy Council. Ancient woodland can fall into one of two categories. First there is ancient 'semi-natural' woodland. This is considered to be a relic of the natural forest which developed after the last glaciation 10,000 years ago. Sites with such woodland will thus have had continuous woodland cover since that time. Ancient semi-natural woodland is considered to have greatest value for nature conservation due to its diversity of species and the limited disturbance which it has undergone.

Alternatively ancient 'secondary' woodland exists on land which was cleared for cultivation during the Neolithic or Bronze Age but which has regrown since that time and has had continuous woodland cover since at least 1600 AD. Ancient secondary woodland has thus had considerable time to develop stable floral and faunal communities and is still of considerable nature conservation value. Woodland which does not fall within one of these categories is considered to be 'recent' and generally of lesser nature conservation importance.

In the absence of direct historical records it is no simple task to determine the category into which existing woodland sites fall. The determination of woodland continuity and age thus utilizes a wide range of information sources.

Evidence from published maps can be most useful by showing the location of woodland areas in the past. In Berkshire we are most fortunate to have the map of the county produced by John Rocque in 1761. This map provides a detailed picture of the land use in Berkshire during the mid eighteenth century. Plantation woodland was not common at this time and it is probable that any surviving woodland areas which were included on maps of this age have an ancient origin. First edition maps published by the Ordnance Survey, in the early nineteenth century, are also of considerable help in tracing the continuity of woodland at a particular location.

Additional clues to the origin of woodland sites comes from their boundary form and shape. Sinuous woodland boundaries and an irregular woodland shape often suggest that a woodland is ancient. Woodland names can however give clues to alternative land uses on a site in the past.

Of great interest is also a woodland's species composition and stand structure. Features common to many ancient woodland sites are a strong natural element in their underwood and canopy species and diverse plant and animal communities. Indicator species with an intolerance of disturbance and poor powers of dispersal are often used to classify woodland as ancient.

Soil data has been used in the past to illustrate the influence of soil type on the species composition of woodlands. It has also been shown that ancient woodland tends to survive not on soils which are good for growing trees but on those soils which are of least value for agriculture. Research presently being carried out at Reading University, Department of Soil Science suggests, however, that soil data is an important and much neglected source of evidence in determining woodland history.

A study has recently been carried out on the soils of Clayfield Copse, a woodland of approximately 8ha to the north east of Reading. (Grid Reference SU 725772). The woodland is widely thought to be ancient semi-natural and is noted in the Reading area for its nature conservation interest. Tree cover is dominated by native Oak (Quercus robur) and Ash (Fraxinus excelsior) although much invasive Sycamore (Acer pseudoplatanus) is also common. Underwood consists of much Ash, Sycamore and Hazel (Corylus avellana) with an additional variety of native species such as Hawthorn (Crataegus monogyna), Blackthorn (Prunus spinosa) and Holly (Ilex aquifolium). Field layer is composed of a dense mat of Bramble (Rubus fruticosus), Ivy (Hedera helix) with Dogs Mercury (Mercurialis perennis) in places.

Map 1 illustrates that Clayfield Copse can conveniently be grouped into three areas, Areas A and B appear on the Rocque map of Berkshire (1761) and the First Edition Ordnance Survey map (1830). These areas are of irregular shape and would appear to have an ancient origin. In these areas of the woodland the stand structure is dense and uneven aged as would be expected in an ancient wood which has received little disturbance.

Area C however does not appear on either of these maps and first appears on 1893 Ordnance Survey map. Personal observations in this area of the woodland suggest that the structure is rather ordered and even aged and has a considerably greater proportion of invasive Sycamore than the other areas. It could be suggested then that this part of the woodland recolonised between 1830 and 1893 either naturally or due to planting. In this area of the woodland Dogs Mercury is also common. This species is normally associated with areas of base rich soil and not the acid London Clay of this site. Map and floral evidence would thus appear to cast some doubt on the ancient origin of area C of the woodland. Examination of the soil underlying the woodland adds considerably to this.

The Geological Survey, Reading map shows the entire woodland as standing upon London Clay with the exception of the southern end of the woodland which stands on the more sandy Reading Beds. Soils of the woodland have been mapped by the Soil Survey of England and Wales as Swanmore Series (Non Calcareous Surface Water Gley). Soils were examined at two sites in the woodland (Map 1, sites 1 and 2) and one site on the adjacent agricultural land (Map 1, site 3) which is presently cultivated for cereals. All sample sites were on the area mapped as London Clay. Soil profiles were recorded from pits at three locations within each sampling site and generalised profiles are shown in Figure 1.

The soil profiles revealed some characteristics of considerable importance. Site 1 in the woodland shows a typical acid (pH 5.07 at 5-10 cm and 5.11 at 25-30 cm) Non Calcareous Surface Water Gley with a very thin organic surface layer (Figure 1a). This soil shows no evidence of disturbance and this would seem to lend support to the ancient origin of this part of the woodland.

The soil at Site 2 however has a quite different character. This soil is near neutral with pH 6.34 at 5-10 cm and 7.51 at 25-30 cm depth. The organic surface layer has a considerably greater depth of 17 cm with a very clear boundary between this and the subsoil (Figure 1b). Such a distinct surface layer is often associated with land which has been ploughed. The significance of the contrast between the soils at Sites 1 and 2 is illustrated when the woodland soil of Site 2 is compared to the agricultural soil at site 3. The soil at Site 3 is very similar to Site 2 with pH of 7.96 at 5-10 cm and 7.97 at 25-30 cm depth with an organic surface layer of 20 cm depth (Figure 1c).

Many even sized fragments of chalk (6mm) are present in the soil at sites 2 and 3. These chalk fragments concentrated in a discreet layer about 10cm thick at the base of the organic surface layer of site 2 and are evenly distributed through the organic surface layer of site 3. Such chalk fragments were a common addition to heavy clay soils which were cultivated, particularly during the nineteenth century. It is thus suggested that site 2 has at some time been ploughed and that applied chalk fragments have accumulated at the base of the ploughed layer. The even mixing of chalk fragments through the surface layer of the agricultural soil at site 3 will be due to later deeper ploughing.

Existing evidence would thus suggest an ancient origin for areas A and B in Clayfield Copse and these areas are perhaps examples of ancient semi-natural woodland. Map evidence, however, suggests that area C of the woodland was cleared in the past and only recolonised with trees between 1830 and 1893. The floral structure of the stand also casts some doubt on the ancient origin of this part of the woodland.

Examination of the soils of the woodland and adjacent agricultural land provides very strong evidence to suggest that area C has been ploughed in the past and has received a treatment of crushed chalk. It is probable that the land was finally abandoned to woodland, in the mid nineteenth century, perhaps due to its very poor drainage. If this is the case, area C of Clayfield Copse must be considered to be 'recent' woodland.

The study at Clayfield Copse illustrates the considerable value of soil data in determining woodland history. In this instance information regarding the soil component of the woodland provides invaluable information regarding its age and continuity of woodland cover. The evidence presented here must therefore provide an added dimension to the evaluation of the nature conservation value of this area of Clayfield Copse.

Map 1

Clayfield Copse

(A) Woodland Area

1 Sample Site

Woodland

Agriculture

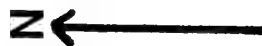
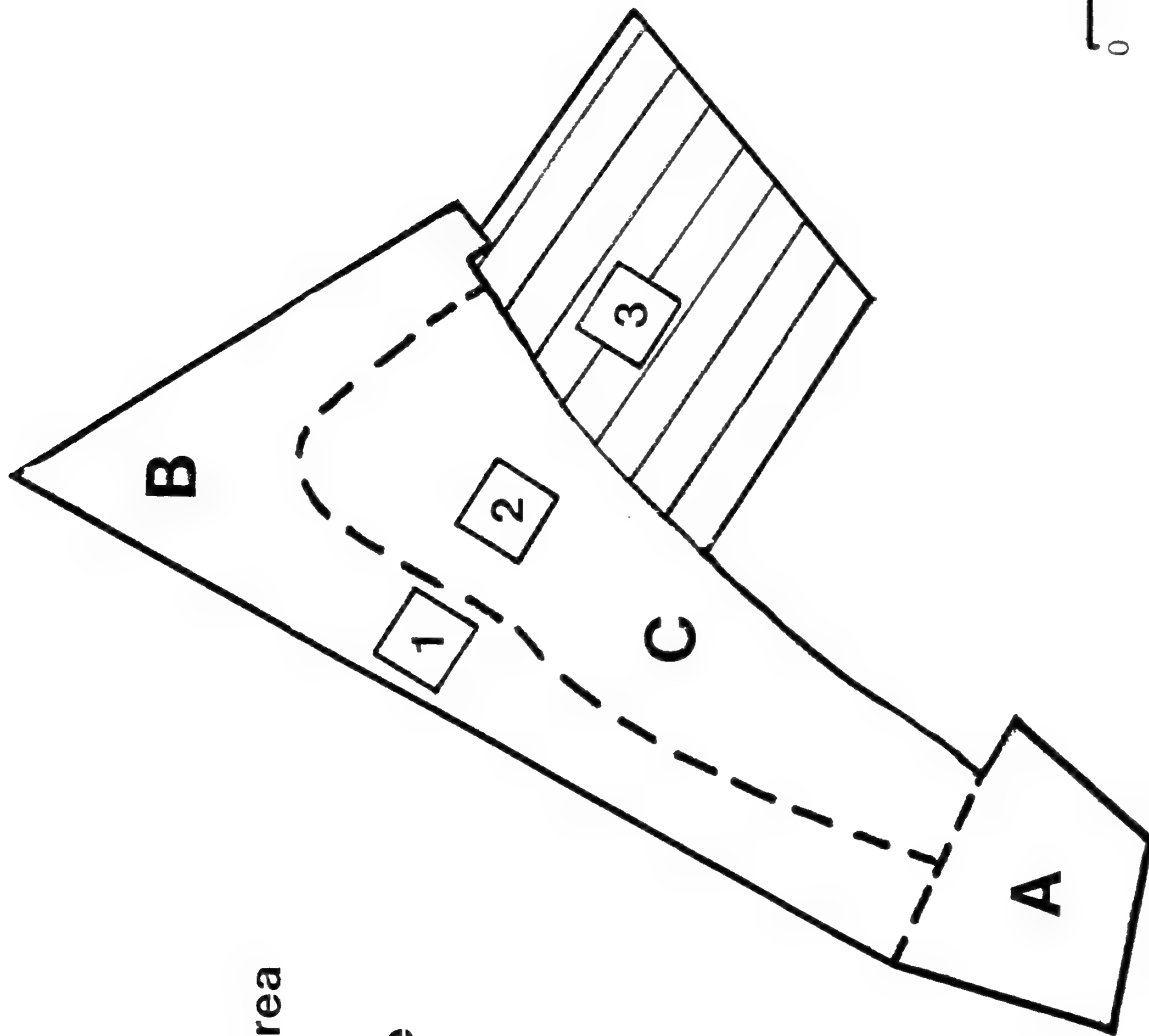
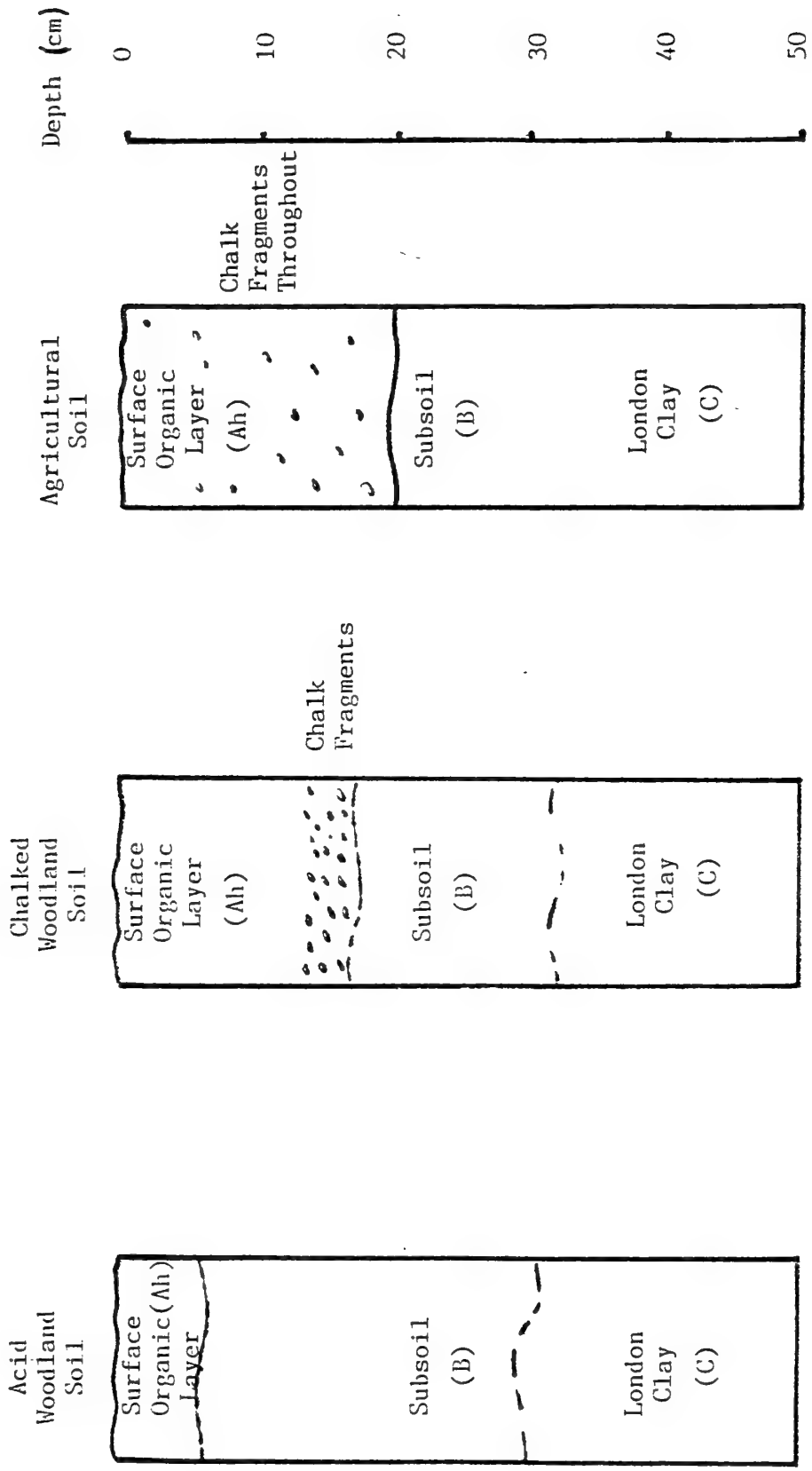


Figure 1 Soil Profiles : Clayfield Copse



a

b

c

THE RECORDER'S REPORT FOR BOTANY 1989

B.M. NEWMAN

The summer of 1989, said to be the warmest for three hundred years and preceded by a mild winter, did not appear to produce more records than usual, but plants bloomed earlier and matured and seeded quickly. Mr. and Mrs. Diserens reported Chrysanthemum segetum (Corn Marigold) flowering in Holyport, E. Berks. on 31st December 1988, Dr. Bowen found Caltha palustris (Marsh Marigold) fully out at Welford on 29th January 1989 and Mrs. Foley-Fisher saw Leucojum aestivum (Loddon Lily) in flower at Sandford Mill on 21st February 1989.

A selection from the records sent in by members and found within a twenty mile radius of Reading, is printed below. The nomenclature and order are those of the "Flora of the British Isles" by Clapham, Tutin & Moore 1987. An alien taxon is indicated by an asterisk (*). The English names are from "English Names of Wild Flowers" by Dony, Jury & Perring, second edition 1986.

LIST OF MEMBERS' RECORDS FOR 1989

Mosses of Reading, update, 1989 (MVF)

Barbula hornschuchiana

Abundant on coal-waste soil between old gasworks and Thames. Sharp tapering yellow-green leaves give the plant a starry appearance when seen from above.

Barbula trifaria

On ledges by Abbey Ruins. Leaves dull green, tapering, but wider and blunter than in other similar Barbulas.

Campylopus introflexus in Reading Cemetery. Another record on roof of aluminium greenhouse near London Road.

Cirriphyllum crassinervum by Abbey ruins. Rather stunted material but increasing again after 'cleaning' operations. Porella platyphylla is also increasing, despite the dry summer.

Add Dicranum scoparium Abundant on granite chippings on some tombs in the cemetery at Cemetery Junction.

Fissidens polyphyllus. A few shoots in tufa under the railway bridge of Kennet Mouth. Normally found on stones at or below water level in rivers.

Polytrichum formosum Abundant in the same habitat as the Barbula hornschuchiana in company with P. piliferum. Slightly larger than this and with a reddish hairpoint.

Tortula latifolia, a very distinctive wide-leaved plant normally found on muddy trees by rivers, but also rare on mossy pavements, as near Erleigh Road.

Delete Tortula ruralis from record for 1972-73. All specimens checked are Tortula intermedia, with a less tapering leaf. This species now frequent on undisturbed tarmac throughout Reading.

ADIANTACEAE

*Pteris cretica L.

Many plants still on basement wall, South Street, Reading, not visible from the road; two small plants visible on another wall nearby (MVF).

POLYPODIACEAE

Polypodium vulgare L.

Polypody

Several small plants on walls in South Street, Reading, probably sporelings from my own garden. This species has long been extinct in Eldon Gardens' rockery (MVF).

ASPLENIACEAE

Asplenium ruta-muraria L.

Wall-rue

A single plant on side of brick wall, the Grove, central Reading; a few plants among a large colony of Asplenium trichomenes L. (Maidenhair Spleenwort) by Park Congregational Church, Wokingham Road, Reading (MVF).

Asplenium ceterach L.

Rustyback

Ten or more plants on brick wall of bridge west of Pangbourne, June 1989; no longer found by the Thames at Kings Meadow, or on the limestone wall of a basement in Eldon Square, where one fine plant was found in the summer of 1988, but later removed by cleaners (MVF).

ATHYRIACEAE

Athyrium filix-femina (L.) (Roth
Moor copse 21.5.89 (AB).

Lady-fern

ASPIDIACEAE

Dryopteris affinis (Lowe) Fraser-Jenkins
Admoor Copse, Berks (HJMB).

Scaly Male-fern

RANUNCULACEAE

Aconitum napellus L.

Nuffield area 22.7.89 (JLW).

Monk's-hood

Aquilegia vulgaris L.

Between Pangbourne and Tidmarsh 14.5.89 (VG).

Columbine

NYMPHAEACEAE

Nymphaea alba L.

California Country Park 17.6.89; in the grounds of AWE Aldermaston (AB).

White Water-lily

PAPAVERACEAE

*Papaver somniferum L.

Nuffield area 22.7.89 (JLW).

Opium Poppy

FUMARIACEAE

Corydalis claviculata (L.) DC

Between Pangbourne and Tidmarsh 14.5.89 (VG).

Climbing Corydalis

Fumaria officinalis L.

In a field at Mapledurham 8.6.89 (MMB).

Common Fumitory

CRUCIFERAE

*Rhynchosinapis cheiranthos (Vill.) Dandy Wallflower Cabbage
Near Great Western Centre, Didcot, R.C. Palmer (HJMB).

*Cordaria draba (L.) Desv. Hoary Cress
Wittenham Clumps NHS walk 17.6.89 (HHC); spreading in car park in
Beech Lane, Earley (BMN).

Cardamine amara L. Large Bitter-cress
Moor Copse 30.4.89 (SW).

Nasturtium microphyllum (Boenn.) Reichenb. Narrow-fruited Water-cress
Childe Beale Trust Park, Pangbourne (HJMB).

RESEDACEAE

Reseda lutea L. Wild Mignonette
In a hedgerow at Mapledurham 8.6.89 (MMB); Hartslock Reserve 19.6.89;
Bix 13.8.89; Cookham NHS walk 2.9.89; the Holies, Streatley 3.9.89 (AB).

VIOLACEAE

Viola reichenbachiana Jordan ex Boreau Early Dog Violet
In a wood near Cleeve, Oxon; Kiln Copse, Bradfield; Bere Court,
Berks; Remenham (HJMB); Swyncombe 1.4.89 (JLW); Morgastor Wood 15.4.89 (AB).

Viola tricolor L. Wild Pansy
Swyncombe NHS walk 1.4.89 (AB).

Viola arvensis Murray Field Pansy
In a field at Mapledurham 8.6.89 (MMB).

POLYGALACEAE

Polygala vulgaris L. Common Milkwort
In chalk grassland Mapledurham 8.6.89 (MMB); Old Burghclere chalk pit
NHS walk 27.5.89; Tadley Common 14.6.89; Hartslock Reserve 19.6.89 (AB).

Polygala calcarea F.W. Schultz Chalk Milkwort
Old Burghclere chalk pit, NHS walk 27.5.89 (VG).

HYPERICACEAE

Hypericum androsaemum L. Tutsan
In felled woodland near Mapledurham, Oxon; Stonor Park, Oxon. (HJMB).

CISTACEAE

Helianthemum nummularium (L.) Miller Common Rock-rose
In chalk grassland, Mapledurham 8.6.89 (MMB).

CARYOPHYLLACEAE

Saponaria officinalis L. Soapwort
Pincent's Lane 26.8.89 (AB).

Stellaria neglecta Weihe Greater Chickweed
By the river Loddon near Wyvols Court, Berks (HJMB).

Arenaria serpyllifolia L. Thyme-leaved Sandwort
Morgastor Wood NHS walk 15.4.89; the Holies, Streatley 3.9.89 (AB).

Arenaria serpyllifolia subsp. leptoclados (Reichenb.) Nyman

PORTULACACEAE

Montia fontana L. Blinks
Near north-east gate of Whiteknights park (HJMB).

PHYTOLACCACEAE

*Phytolacca americana L. Pokeweed
One plant on waste ground near Cemetery Junction, Reading August
1989 (MVF).

GERANIACEAE

Geranium pyrenaicum Burm.fil. Hedgerow Crane's-bill
On grass verge, The Murren, Winterbrook, Wallingford (MB); Nuffield
Area 22.7.89 (JLW).

Geranium lucidum L. Shining Crane's-bill
Along railway fence, Pond Head Lane, Earley (MB).

BALSAMINACEAE

*Impatiens capensis Meerburgh Orange Balsam
Silchester Common, NHS walk 9.8.89; gravel pits and canal, Theale
28.8.89; Cookham, NHS walk 2.9.89 (AB).

*Impatiens parviflora DC Small Balsam
Whiteknights Lake and elsewhere in the Park (MB).

CELASTRACEAE

Euonymus europaeus L. Spindle
In hedgerow, Mapledurham 8.6.89 (MMB); Moor Copse 30.4.89 (SW);
Hartslock Reserve 29.5.89; Warburg Reserve, Bix 5.8.89; Pincents
Lane 26.8.89 (AB).

LEGUMINOSAE

Vicia hirsuta (L.) S.F. Gray Hairy Tare
Wittenham Clumps, NHS walk 17.6.89 (HHC).

Melilotus altissima Thuill Tall Melilot
Wittenham Clumps, NHS walk 17.6.89 (HHC).

Medicago sativa L. Lucerne
Brimpton gravel pits 24.8.89 (AB).

*Trifolium hybridum L. Alsike Clover
By Little Wittenham pond, NHS walk 17.6.89 (HHC); Brimpton gravel pits,
24.8.89 (AB).

Trifolium campestre Schreber Hop Trefoil
In chalk grassland, Mapledurham 8.6.89 (MMB); Hartslock Reserve
29.5.89; Cookham, NHS walk 2.9.89 (AB).

Hippocrepis comosa L. Horseshoe Vetch
Bix 13.8.89 (AB).

ROSACEAE

Rubus caesius L. Dewberry
Cookham, NHS walk 2.9.89 (AB); Old Burghclere chalk pit, NHS walk 27.5.89 (VG).

*Alchemilla mollis (Buser) Rothm.
Seeding in Bearwood churchyard (HJMB)

*Prunus cerasifera Ehrh. Cherry Plum
Burghfield road, just past the canal bridge 9.2.89 (AB)

Sorbus torminalis (L.) Crantz Wild Service-tree
Silchester Common, NHS walk 19.8.89 (AB)

Malus sylvestris Miller Crab Apple
Swyncombe, NHS walk 1.4.89 (AB)

CRASSULACEAE

Sedum telephium L. Orpine
Large plants in a rough field near Wargrave, Berks (HJMB);
Silchester Common, NHS walk 19.8.89 (AB)

Umbilicus rupestris (Salisb.) Dandy Navelwort
Dorchester Abbey, Oxon (HJMB)

SAXIFRAGACEAE

Saxifraga granulata L. Meadow Saxifrage
Near the river Enborne 19.4.89 (AB)

THYMELAEACEAE

Daphne laureola L. Spurge-laurel
Morgastor Wood, NHS walk 15.4.89 (KNH)

ONAGRACEAE

Epilobium palutre L. Marsh Willowherb
Silchester Common, NHS walk 19.8.89; Brimpton gravel pits 24.8.89 (AB)

HIPPURIDACEAE

Hippuris vulgaris L. Mare's-tail
Old Burghclere chalk pit, NHS walk 27.5.89; Sulham 11.6.89 (VG)

LORANTHACEAE

Viscum album L. Mistletoe
On apple tree and Crataegus monogyna at Knowl Hill 4.2.89 (N&MD)

UMBELLIFERAE

Sanicula europaea L. Sanicle
Bottom Wood, Mapledurham 8.6.89 (MMB); Sulham 8.5.89; Moor Copse 21.5.89;
Warburg Reserve, Bix 5.8.89 (AB)

*Myrrhis odorata (L.) Scop. Sweet Cicely
Warburg Reserve, Bix NHS walk 5.8.89 (AB)

*Heracleum mantegazzianum Sommier & Levier Giant Hogweed
At the corner of James Lane and Grazeley Road 26.6.89 (AB);
Streatley 19.2.89 (N&MD)

CUCURBITACEAE

Bryonia cretica L. subsp. dioica (Jacq.) Tutin White Bryony
In hedgerow, Mapledurham 8.6.89 (MMB); Pincents Lane 26.8.89;
Cookham NHS walk 2.9.89 (AB); Wittenham Clumps NHS walk 17.6.89 (HHC).

ARISTOLOCHIACEAE

Asarum europaeum L. Asarabacca
Swyncombe NHS walk 1.4.89 (JLW).

EUPHORBIACEAE

Mercurialis annua L. Annual Mercury
In a garden in Sidmouth Street, Reading, September (JA).

POLYGONACEAE

*Polygonum polystachyum Wall. ex Meissner Himalayan Knotweed
Bearwood Churchyard (HJMB).

*Reynoutria japonica Houtt Japanese Knotweed
Burghfield gravel pits 23.4.89 (AB).

ULMACEAE

Ulmus glabra Hudson Wych Elm
In a little copse at Mapledurham 8.6.89 (MMB).

CORYLACEAE

Carpinus betulus L. Hornbeam
Warburg Reserve, Bix 5.8.89 (AB); between Pangbourne and Tidmarsh
14.5.89 (VG).

FAGACEAE

*Quercus cerris x Q. suber L. (Q. x hispanica Lam.)
Three trees in a narrow wood near Yeldhall Manor, Bowsey Hill (HJMB).

SALICACEAE

*Populus alba L. White Poplar
Wittenham Clumps NHS walk 17.6.89 (HHC).

Salix alba L. White Willow
Wittenham, by the Thames, NHS walk 17.6.89 (HHC).

*Salix daphnoides Vill.
Planted near Lavells Lake, Woodley, and at Whiteknights (HJMB).

Salix viminalis L. Osier
Moor Copse 30.4.89 (SW).

ERICACEAE

Calluna vulgaris (L.) Hull Heather
College Wood; Ipsden Heath, rare (HJMB).

PRIMULACEAE

Hottonia palustris L. Water Violet
Cookham, NHS walk 2.9.89 (AB).

GENTIANACEAE

Blackstonia perfoliata (L.) Huds. Yellow-wort
Old Burghclere chalk pit, NHS walk 27.5.89 (VG); Hartslock Reserve
29.5.89; Warburg Reserve, Bix 5.8.89; The Holies, Streatley 3.9.89 (AB).

Gentianella germanica (Willd.) E.F. Warburg Chiltern Gentian
Bix 13.8.89 (AB); Gomm Valley Reserve, two flowering shoots (BMN).

Gentianella amarella (L.) Börner Autumn Gentian
Cookham, NHS walk 2.9.89 (AB).

MENYANTHACEAE

Menyanthes trifoliata L. Bogbean
California Country Park 11.6.89 (AB).

BORAGINACEAE

Cynoglossum officinale L. Hound's Tongue
Stonor Park, Oxon; Bere Court, Berks., rare (HJMB).

Symphytum x uplandicum Nyman Russian Comfrey
Wittenham, NHS walk 17.6.89 (HHC).

*Symphytum ibericum Steven Creeping Comfrey
On a tip in Fence Wood, Berks; Brocas Lands Farm, near Mortimer (HJMB).

*Pentaglottis sempervirens (L.) Tausch Green Alkanet
Burghfield gravel pits 23.4.89; Hartslock Reserve 19.6.89 (AB).

Lithospermum officinale L. Common Gromwell
Bix 13.8.89 (AB).

SOLANACEAE

Atropa bella-donna L. Deadly Nightshade
Bixmoor Wood, Oxon; Stonor Park (HJMB); Hartslock Reserve 29.5.89;
Bix 13.8.89 (AB); Bottom Wood, Mapledurham, in leaf only (MMB).

*Datura stramonium L. Thorn-apple
In front garden, Crescent Road, Reading; also in my own garden in
South Street where the young seedlings only survive slug and
snail attacks in a dry summer (MVF).

SCROPHULARIACEAE

Verbascum thapsus L. Great Mullein
Growing in a crack in the paving stones in Queen Street, a terraced
street in central Henley with no evidence of it being a garden escape
(KMH); Bix 13.8.89; The Holies, Streatley 3.9.89 (AB).

Verbascum nigrum L. Dark Mullein
Hartslock Reserve 19.6.89; Warburg Reserve Bix, 5.8.89 (AB).

- *Linaria purpurea (L.) Miller Purple Toadflax
Bix 13.8.89; Sulham Woods 29.10.89 (AB).
- Kickxia elatine (L.) Dumort Sharp-leaved Fluellen
Ufton Nerve 23.7.89 (N&MD); near Rotherfield Greys; Hammonds Farm,
Checkendon (HJMB).
- *Scrophularia vernalis L. Yellow figwort
By the canal between the Fox and Hounds and Tyle Mill Lock 22.4.89 (AB).

OROBANCHACEAE

- Orobanche minor Sm. Common Broomrape
Wittenham Clumps, NHS walk 17.6.89 (HHC).
- Orobanche elatior Sutton Knapweed Broomrape
Old Burghclere pit, NHS walk 27.5.89 (AB).

LABIATAE

- Mentha suaveolens Ehrh. Round-leaved Mint
Nettlebed, Oxon (KMH).
- Calamintha sylvatica Bromf. subsp. *ascendens* (Jordan) P.W. Ball
Common Calamint
Dysons Wood, Tokers Green, Oxon. (HJMB).
- Stachys arvensis (L.) L. Field Woundwort
Ufton Nerve 23.7.89 (N&MD).
- Lamium amplexicaule L. Henbit Dead-nettle
Swyncombe, NHS walk 1.4.89; Cookham, NHS walk 2.9.89 (AB).
- Nepeta cataria L. Cat-mint
Gangsdon Hill, Huntercombe, Oxon. 22.7.89 (KMH).
- Scutellaria galericulata L. Skullcap
Whiteknights lake, by the path near Whiteknights Road (MB); gravel
pits and canal, Theale 28.8.89; Cookham, NHS walk 2.9.89 (AB).

CAMPANULACEAE

- Campanula trachelium L. Nettleleaved Bellflower
Warburg Reserve, Bix 5.8.89; Cookham, NHS walk 2.9.89 (AB).
- *Lobelia erinus L.
The common small bedding lobelia, established for the third year
in pavement cracks in Watlington Street, and now on gravel covered
waste ground nearby. Originating from hanging baskets, it does not
normally persist. Perhaps a harbinger of the greenhouse effect? (MVF).

ADOXACEAE

- Adoxa moschatellina L. Moschatel
Morgastor Wood, NHS walk 15.4.89; by the river Enborne 19.4.89 (AB).

VALERIANACEAE

- Valerianella locusta (L.) Laterrade Common Cornsalad
An abundant weed in Eldon Square gardens, Reading (HJMB).

COMPOSITAE

Senecio viscosus L. Sticky Groundsel
In a gravel pit, Twyford, Berks 27.8.89 (KMH); in the grounds of
AWE, Aldermaston (AB).

Inula conyza DC Ploughman's spikenard
Cookham, NHS walk 2.9.89 (AB); Buttlers Hangings 1.7.89 (BMN).

Solidago virgaurea L. Goldenrod
Silchester Common, NHS walk 19.8.89 (AB); Nuffield area 22.7.89 (JLW).

Achillea ptarmica L. Sneezewort
Silchester Common, NHS walk 19.8.89 (AB).

Centaurea cyanus L. Cornflower
Old Burghclere chalk pit, NHS walk 27.5.89 (VG).

Picris echiodes L. Bristly Oxtongue
Moatlands gravel pit 24.6.89; Soke Road, Tadley 16.8.89 (AB).

Lactuca serriola L. Prickly Lettuce
Brimpton gravel pits 24.8.89; in the grounds of AWE, Aldermaston (AB).

Mycelis muralis (L.) Dumort Wall Lettuce
Warburg Reserve, Bix, NHS walk 5.8.89 (AB).

ALISMATACEAE

Sagittaria sagittifolia L. Arrowhead
Gravel pits and canal, Theale 28.8.89 (AB).

BUTOMACEAE

Butomus umbellatus L. Flowering Rush
By canal, Old Mill, Aldermaston 2.8.89; gravel pits and canal,
Theale 28.8.89 (AB).

LILIACEAE

Convallaria majalis L. Lily-of-the-valley
Silchester Common, NHS walk 19.8.89 (AB).

Polygonatum multiflorum (L.) All. Solomon's-seal
Loor Copse 30.4.89 (SW); Morgastor Wood, NHS walk 15.4.89; Sulham
8.5.89; Silchester Common, NHS walk 19.8.89 (AB).

Ruscus aculeatus L. Butcher's-broom
Whitchurch 9.4.89 (JLW); Nuney Green 15.10.89 (BMN).

JUNGACEAE

*Juncus tenuis Willd. Slender Rush
Along rides in Fence Wood, Berks (HJMB).

Luzula sylvatica (Hudson) Gaudin Great Wood-rush
Stonor Park (HJMB).

AMARYLLIDACEAE

*Galanthus nivalis L. Snowdrop
Cookham, NHS walk 2.9.89 (AB).

IRIDACEAE

Iris foetidissima L. Stinking Iris
Swyncombe, NHS walk 1.4.89 (AB); plants with yellow flowers in a garden in Wokingham Road, Reading (MB).

*Crocus tommasinianus Herbert
Roadside near Fleet Copse; near Frieth, Bucks (HJMB).

ORCHIDACEAE

Cephalanthera damasonium (Miller) Druce White Helleborine
Old Burghclere chalk pit, NHS walk 27.5.89 (VG).

Epipactis purpurata Sm. Violet Helleborine
Warburg Reserve, Bix NHS walk 5.8.89 (AB).

Epipactis leptochila (Godfery) Godfery Narrow-lipped Helleborine
Bix 13.8.89. (AB).

Neottia nidus-avis (L.) L.C.M. Richard Bird's-nest Orchid
Sulham 8.5.89 (AB).

ARACEAE

*Lysichiton americanus Hultén & St. John
Planted, but well-established, near Ufton Court, Berks (HJMB).

LEMNACEAE

*Lemna minuscula Herter Least Duckweed
Abundant in a pond near Whitehouse Farm, Spencers Wood; in the canal at Woolhampton; Ufton Court (HJMB).

TYPHACEAE

Typha angustifolia L. x latifolia L.
River Thames near Shillingford (R.C. Palmer), this should be looked for elsewhere on the river (HJMB).

CYPERACEAE

Eriophorum angustifolium Honckeney Common Cottongrass
California Country Park 11.6.89 (AB).

Schoenoplectus lacustris (L.) Palla Common Club-rush
Wittenham Clumps, NHS walk 17.6.89 (HHC).

Carex echinata Murray Star Sedge
California Country Park 11.6.89 (AB).

Carex curta Good. White Sedge
California Country Park in swamps (HJMB).

Carex binervis Sm. Green-ribbed Sedge
Gibbet Piece, Mortimer (HJMB).

Carex demissa Hornem. Common Yellow-sedge
Snelsmore Common, on boggy path (HJMB).

Carex pilulifera L. Pill Sedge
In College Wood, Oxon. with Calluna; Fence Wood, Berks; Gibbet Piece, Mortimer (HJMB).

THE RECORDER'S REPORT FOR ENTOMOLOGY 1989

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 Order and Hemiptera, 1964; Part 2: Lepidoptera, 1972; Part 3: Coleoptera, 1977; Part 4: Hymenoptera, 1978 and Part 5: Diptera, 1975.

ORTHOPTERA Grasshopper, Bush Crickets, Crickets etc

Metrioptera roeselii (Hagenbach)
Wraysbury Gravel Pits (LM)

ODONATA Dragonflies

Platycnemis pennipes (Pallas)
Sonning, 24.6.89 (N&MD)

Pyrrhosoma nymphula (Sulzer)
Bramshill, 11.6.89 (N&MD); 25 Beech Lane Earley, large numbers noted pairing and egg laying in the garden pond (BMN)

Ischnura elegans (van der Lind.)
Bramshill, 11.6.89; Dinton Pastures, 24.6.89; Sonning, 24.6.89 (N&MD)

Enallagma cyathigerum (Charp.)
Bramshill, 11.6.89; Dinton Pastures, 24.6.89; Sonning, 24.6.89 (N&MD)

Coenagrion puella (L.)
Bramshill, 11.6.89 (N&MD)

Agrion splendens (Harris)
Dinton Pastures, 24.6.89; Sonning, 24.6.89 (N&MD)

Aeshna cyanea (Mull.)
25, Beech Lane, Earley, Reading, ten nymphs noted in the garden pond 12.6.89, and emergences of adults observed on 3, 4, and 10.7.89 (BMN)

A. grandis (L.)
Dinton Pastures, 24.6.89 (N&MD)

Anax imperator Leach
Bramshill, 11.6.89, a male, and a female egg laying (N&MD)

Cordulia aenea (L.)
Bramshill, 11.6.89, a male, and a female egg laying (N&MD)

Orthetrum cancellatum (L.)
Bramshill, 11.6.89; Dinton Pastures, 24.6.89 (N&MD)

Libellula depressa L.
Dinton Pastures, male, 24.6.89 (N&MD)

L. quadrimaculata L.
Bramshill, 11.6.89 (N&MD)

Sympetrum striolatum (Charp.)
Bucklebury, 6.10.89 (N&MD)

PSOCOPTERA

Psocids, Book Lice

Badonellia titei Pearman

Old Town Hall, 10.2.89. A most odd-looking Psocid (HHC)

HEMIPTERA

Plant-bugs, Water-bugs, Leaf-hoppers, Aphids,
Scale insects

Phylus coryli (L.)

Bowdown Wood N.R., a male, 27.6.89 (HHC)

LEPIDOPTERA

Butterflies and Moths

Gonepteryx rhamni (L.)

The Brimstone

25, Beech Lane, Earley, Reading, 6.3.89 (BMN); 25, Matlock Road,
Caversham, 26.3.89 (HGB)

Lycaena phlaeas (L.)

Small Copper

25, Beech Lane, Earley, Reading, 24.9.89 (BMN); Bucklebury, 6.10.89 (N&MD)
This butterfly had a good year the warm weather allowing a third brood
to appear in the autumn.

Celastrina argiolus (L.)

Holly Blue

Allcroft Road, Reading, 14.4.89 (BMN); 25, Matlock Road, Caversham,
3.5.89 (HGB); 25, Beech Lane, Earley, Reading, 6.5.89 (BMN). Several
recorders have commented on the abundance of this species in 1989.
Eggs and larvae were common on ivy bushes at Caversham (many of the
larvae being parasitised), and butterflies of a third brood were flying
as late as 29th September (BRB).

Lysandra bellargus (Rott.)

Adonis Blue

Berks Downs, 12.6.89 (BRB)

Ladoga camilla (L.)

White Admiral

Pamber Forest, 18.6.89, a very early date (BTP); Ashford Hill, 10.7.89,
in good numbers (BRB); Pamber Forest, 29.9.89, one feeding on over-ripe
blackberries (MD). The last record is a most unusual one, second brood
White Admirals were reported by Frohawk in 1911 but no mention is made
in the most recent work on British butterflies (Moths and Butterflies
of Great Britain and Ireland. Vol.7 (1) Harley. 1989).

Apatura iris (L.)

Purple Emperor

Pamber Forest, 28.7.89, a female feeding at a damp patch on a ride (BRB)

Vanessa atalanta (L.)

Red Admiral

Dinton Pastures, 24.6.89 (N&MD); Ashford Hill, 10.7.89, Pamber Forest,
23.7.89 (BRB); 25, Beech Lane Earley, Reading, 17.8.89, 6.11.89 (BMN);
25, Matlock Road, Caversham, 5.11.89 (HGB); 27, Fernbrook Road, Caversham,
11.11.89 (MRWS)

Cynthia cardui (L.)

Painted Lady

25, Beech Lane, Earley, Reading, 12.8.89 (BMN). Scarce this year with
only this one record.

Inachis io (L.)

The Peacock

Bere Court, 26.3.89 (HJMB); 25, Matlock Road, Caversham, 26.3.89 (HGB);
25, Beech Lane, Earley, Reading, 31.3.89 (BMN). Three early records
of hibernated specimens.

Lasiommata megera (L.)

The Wall

Unhill Wood, 16.5.89, only one specimen and the first observed for
several years (BRB)

- Rhometra sacraria (L.) The Vestal
Burghclere, 30.10.89, one male (GGE-F)
- Catarhoe cuculata (Hufn.) Royal Mantle
Burghclere, 23.6.89 (GGE-F)
- Lampropteryx otregiata (Metcalf) Devon Carpet
Burghclere, 21.5.89, 3, 10, 11.8.89 (GGE-F)
- Eupithecia plumbeolata (Haw.) Lead-coloured Pug
Burghclere, 12.6.89, new to the Burghclere list (GGE-F)
- E. abietaria (Goeze) Cloaked Pug
Burghclere, 29.5.89, new to the Burghclere list (GGE-F). A rarely recorded species whose larvae feed in cones, high up on well grown Norway spruces.
- E. irriguata (Hb.) Marbled Pug
Burghclere, 22.4.89, 7, 10, 14, 20.5.89 (GGE-F)
- E. phoeniceata (Ramb.) Cypress Pug
Burghclere, 19.8.89 (GGE-F). This species was first recorded near Penzance in 1959 and has since worked its way steadily eastwards along the coast. There are inland records from Surrey and Hampshire but the Burghclere record is an indication that this moth may soon be discovered over the county border into Berkshire.
- Plagodis pulveraria (L.) Barred Umber
Burghclere, 20.5.89 (GGE-F)
- Deileptenia ribeata (Cl.) Satin Beauty
Burghclere, 1,7,15,16,21.7.89 (GGE-F); Ambarrow Court, 7.7.89 (DAY, NMH); Warburg N.R. 21.7.89 (MA, PH)
- Xestia ditrapezium (D. & S.) Triple-spotted Clay
Ambarrow Court, 7.7.89 (NMH, DAY); Warburg N.R. 21.7.89 (MA, PH)
- Lithophane socia (Hufn.) Pale Pinion
Burghclere, 27.3.89, 8,9,19,28.5.89 (GGE-F)
- Conistra rubiginea (D. & S.) Dotted Chestnut
44, Harcourt Drive, Earley, 5.3.89 (NMH); Bowsey Hill, one at sallow, 11.3.89 (BRB, NMH, PW)
- Normo maura (L.) The Old Lady
Burghclere, 25.7.89 (GGE-F)
- Ipimorpha retusa (L.) Double Kidney
Burghclere, surprisingly abundant in 1989, 7,21,22,23,24,25,26,27,30.7.89, 6.8.89 (GGE-F)
- Cosmia affinis (L.) Lesser Spotted Pinion
Warburg N.R. 21.7.89 (Ma, PH)
- Arenostola phragmitidis (Hb.) Fen Wainscot
Burghclere, 23.7.89 (GGE-F). A notable record of a species mentioned as rare in the Victoria County History. It would be worthwhile working in Thatcham reedbeds to see if phragmitidis may have moved in as Archanara dissoluta (Treits.) did in the early 1970's.
- Chilodes maritimus (Tausch.) Silky Wainscot
Ambarrow Court, 7.7.89 (DAY, NMH).

<u>Parascotia fuliginaria</u> (L.) Burghclere, 16.7.89, 5.8.89 (GGE-F); Warburg N.R. 21.7.89 (MA,PH)	Waved Black
<u>Hypena crassalis</u> (Fabr.) Burghclere, 20.6.89 (GGE-F); Ambarrow Court, 7.7.89 (DAY,NMH)	Beautiful Snout
<u>Schrankia taenialis</u> (Hb.) Warburg N.R. 21.7.89 (MA,PH)	White-line Snout
<u>Hypenodes turfosalis</u> (Wocke) Ambarrow Court, 7.7.89 (DAY,NMH)	Marsh Oblique-barred

Early Emergence Dates The unusually mild winter induced several species to emerge long before springtime. The following selection is taken from a detailed list submitted by Col. Eastwick-Field:

<u>Alsophila aescularia</u> (D. & S.) Burghclere, 23.1.89	March Moth
<u>Apocheima pilosaria</u> (D. & S.) Burghclere, 8.12.88	Pale Brindled Beauty
<u>Biston strataria</u> (Hufn.) Burghclere, 15.1.89	Oak Beauty
<u>Agriopsis leucophaeria</u> (D. & S.) Burghclere, 20.12.88	Spring Usher
<u>Orthosia stabilis</u> (D. & S.) Burghclere, 6.1.89	Common Quaker
<u>O. gothica</u> (L.) Burghclere, 1.1.89	Hebrew Character

COLEOPTERA

Beetles

Mr. T.D. Harrison, in submitting this year's detailed list, says that a number of his older records have now been re-identified and consequently re-named. Details are given in the following text - for the pre-selection of species therein my thanks go to HHC.

Asaphidion curtum Heyden
Leighton Park, 10.10.84 (TDH). Previously identified as A. flavipes (L.)

Pterostichus nigrita sensu stricto (Paykull)
Near Shinfield Grange, Reading, 1.2.84 (TDH)

Gyrinus substriatus Stephens
Near Pingewood, 17.5.89. Netted from the surface of a water-filled gravel pit (TDH)

Helochares lividus (Forster)
Heckfield Heath, 31.3.87 (TDH). Previously identified as H. obscurus (Muller).

Eusphalerum primulae (Stephens)
Hogmoor Copse, Moor Copse N.R. 30.4.89, on and inside flowers of Primula vulgaris (TDH)

Phloenomous punctipennis Thomson, C.G.

Pamber Forest, 28.12.88. One male under a log in a log pile of deciduous wood (TDH)

P. pusillus (Gravenhorst)

Benyon's Inclosure, Mortimer West End, 4.1.89. Under bark of conifer logs in a log pile (TDH)

Platystethus nitens (Sahlberg C.R.)

Shinfield, near Reading, 17.12.87, in grass under the bark of a decaying branch on the ground in deciduous wood. Identification confirmed by P.M. Hammond (TDH)

Stenus canaliculatus Gyllenhal

Sheffield Bottom near Theale 19.6.89. Under stones in area of bare mud in gravel pit (TDH)

Stenus formicetorum Mannherheim

Leighton Park School, Reading, 30.8.88. Previously identified as S. opticus Gravenhorst.

Nudobius lentus (Gravenhorst)

Benyon's Inclosure near Mortimer West End, 4.1.89, under bark of conifer logs in a log pile (TDH)

Erichsonius cinerascens (Gravenhorst)

Near Pingewood, 15.8.89, on bare mud at margin of water-filled gravel pit (TDH)

Philonthus micantoides Benick & Lohse

Near Shinfield, 31.3.88, under bark of branch on the ground in small deciduous wood. Identified by P.M. Hammond (TDH)

Heterothops minutus Wollaston

Leighton Park, Reading, 5.4.87. Previously recorded as H. dissimilis (Gravenhorst).

Quedius aridulus Jansson

Near Mortimer West End, 25.3.87, under heather in conifer plantation. Identification confirmed by P.M. Hammond (TDH)

Sepedophilus marshami (Stephens)

Five Oaken, near Burghfield Common, 25.3.87. Previously recorded as S. testaceus (Fabr.)

Tachyporus dispar Paykull

Leighton Park, Reading, 30.3.87. Previously recorded as T. chrysomelinus (L.)

Tachinus pallipes (Gravenhorst)

Benyon's Inclosure, near Mortimer West End, 20.6.88, in horse dung. Identification confirmed by P.M. Hammond (TDH)

Deinopsis erosa (Stephens)

Near Pingewood, 27.9.89, on bare mud on bank of water-filled gravel pit (TDH)

Autalia impressa (Olivier)

Heckfield Heath, 18.11.87, on gills of rotting fungus. Identification confirmed by P.M. Hammond (TDH)

A. longicornis Scheerpeltz

Heckfield Heath, 18.11.87, inside old paper fertiliser bag on border of ploughed field. Identification confirmed by P.M. Hammond (TDH)

Heterocerus marginatus (Fabr.)

Near Shinfield, 15.6.88, on bare mud at margin of a river (TDH)

Carpophilus sexpustulatus Fabr.

Pamber Forest, 28.12.88, under bark of felled decaying oak, woodland (TDH)

Omosita discoidea (Fabr.)

Leighton Park, Reading, 30.4.89, on the carcass of a starling, on a compost heap (TDH)

Rhizophagus depressus (Fabr.)

Benyon's Inclosure, near Mortimer West End, 20.6.88, under bark of felled conifer tree, in log pile (TDH)

Uleiota planata (L.)

Pamber Forest, 28.12.88, under bark of felled decaying oak, in deciduous wood (TDH)

Telmatophilus typhae (Fallén)

Sheffield Bottom, near Theale, 19.6.89, on leaves of plants of *Typha* sp. in a gravel pit (TDH)

Symbiotes latus Redtenbacher

Leighton Park, Reading, 23.12.88, under bark of decaying but still standing deciduous tree (TDP)

Cis setiger Mellié

Pamber Forest, 4.1.89, under bark of dead standing oak (TDH)

Colydium elongatum (Fabr.)

Pamber Forest, 27.6.89, under oak log in a log pile, in oak woodland (TDH)

Apion pallipes Kirby W.

Near Hambleden, 2.10.88, on leaves of *Mercurialis perennis*, in beechwood (TDH)

A. tenue Kirby W.

Near Gatehampton Farm, near Goring, 26.3.89, on picnic blanket on calcareous grass slope (TDH)

Scolytus intricatus Ratzeburg

Pamber Forest, 27.6.89, sweeping young birch in oak woodland (TDH)

Orthotomicus suturalis (Gyllenhal)

Benyon's Inclosure, near Mortimer West End, 4.1.89, under bark of conifer logs (TDH)

HYMENOPTERA

Sawflies, Ichneumon-flies, Ants, Bees and Wasps

Some old records appear here following publication of a Royal Ent. Soc. key to Pimplinae

Scambus annulatus (Kiss)

Wokefield Common, 29.7.72; Goring Heath, 13.11.71 (EB)

S. buolianae (Hartig)

Wokefield Common, 5.9.72 (EB)

S. sagax (Hartig)

Wokefield Common, 19.9.71 (EB)

Apechthis compunctor (L.)

Wokefield Common, 30.6.71, 19.8.72; Reading, 7.9.73; Woolhampton, 3.7.73; Crowsley Forest, 20.9.79; Goring Heath, 31.7.71, 1.7.72 (EB,HHC)

A. quadridentata (Thomson)

Reading, 26.9.72 (EB)

Pimpla spuria Gravenhorst

Fence Wood, 4 males, 25.5.82 (HHC)

Acropimpla didyma (Gravenhorst)

Caversham Park, 30.7.70 (HHC)

Gregopimpla inquisitor (Scop.)

Goring Heath, 30.9.67 (EB)

Stenomalina liparae (Giraud)

Cothill (Parsonage Moor), emerged April, 1989 from galls of Lipara lucens Meigen and L. rufitarsis (Loew) (JWI)

DIPTERA

True Flies

Boletina plana Walker

Bowdown Wood N.R. 15.9.89 (HHC)

Campsicnemus scambus (Fallén)

Bowdown Wood N.R. 15.5.89 (HHC)

Neocnemodon brevidens (Egger)

Denford, 13.7.89 (AS)

Myopa fasciata Meigen

Yateley, on Cirsium arvense, 8.8.89 (MO)

Sapromyza hyalinata (Meigen)

Windsor Forest (Highstanding Hill), 8.6.85 (SJF). Last recorded c.1920, Bagley Wood.

Meroplius minutus (Wiedemann)

In field by Upper Hartslock Wood, 26.8.85 (AP)

Lonchaea laxa Collin

Sonning Common (Bird Wood), 26.4.89 (HHC)

Agromyza albitarsis Meigen

Emmer Green (Rose Hill pond), 23.6.89 (HHC)

Lipara rufitarsis (Loew.)

Dry Sandford (marsh by Lashford Lane), May, 1978, from galls on Phragmites australis (Cavara) (JWI)

Calamonoc sis minima (Strobl.)

Dry Sandford (marsh by Lashford Lane), 3.5.78, from galls of Lipara lucens Meigen on Phragmites australis (Cavara) (JWI)

Tropidoscinis zuercheri (Duda)

Cothill (Parsonage Moor), March, 1989, from galls of Lipara lucens Meigen and L. rufitarsis (Loew) (JWI)

Cryptonevra flavitarsis (Meigen)

Cothill (Parsonage Moor), April, 1989, from galls of Lipara lucens Meigen, L. rufitarsis (Loew) and lepidoptera (JWI)

C. nigratarsis

Cothill (Parsonage Moor), May, 1980, from Phragmites australis (Cavara) attacked by lepidoptera, April, 1980. New to Britain (JWI)

Parallelomma albipes (Fallén)

Moor Copse N.R. 15.5.89 (HHC)

Campylochaeta praecox (Meigen)

Sonning Common (Bird Wood), 23.3.89 (HHC)

Fannia atripes (Stein)

In garden, Gatehampton Road, Goring, 15.6.89, 19.7.89 (AP)

Axelia trigonica Hennig

West of Hartslock Hill, 13.6.89 (AP)

The Society's Entomological Evening, 7th July, 1989

We are indebted to Bracknell District Council for their permission to hold our barbecue and mothning night at Ambarrow Court, a recently opened country park of considerable interest to naturalists. It was miraculous that we did anything, for a series of thunderstorms had been threatening for hours and we almost cancelled the event. Fortunately we were spared the rain and, after the barbecue, expertly provided by Jocelin, we were able to record one hundred and fifteen species of macro-moths. This is the second highest total we have ever recorded, only bettered by Wellington country park in 1984, and then only by one species! Species of special interest are included in the fore-going report but the Recorder has the complete list for anyone interested. I would like to thank Ronald Parfitt for coming to Ambarrow and telling us of its wartime history as an out-station of The Royal Aircraft Establishment, Farnborough. Also my thanks to Normal Hall and David Young for setting up their mercury vapour equipment for the pleasure of all present.

Contributors

The Recorder would like to thank: M. Albertini (MA); Mrs. H.G. Baker (HGB); Dr. H.J.M. Bowen (HJMB); the late Dr. E. Burtt (EB); H.H. Carter (HHC); M. Davey (MD); N. & M. Diserens (N&MD); Lt.Col. G.G. Eastwick-Field (GGE-F); S.J. Falk (SJF); N.M. Hall (NMH); P.Hall (PH); T.D. Harrison (TDH); J.W. Ismay (JWI); L. Matthews (LM); Mrs. B.M. Newman (BMN); M. Oates (MO); B.T. Parsons (BTP); A. Pont (AP); M.R.W. Sell (MRWS); A. Stubbs (AS); P. Waite (PW); D.A. Young (DAY)

CHILOPODA

Centipedes

Strigamia acuminata (Leach)

Emmer Green (Clayfield Copse), 6.1.89, in leaf litter (HHC)

THE RECORDER'S REPORT FOR FUNGI 1989.

ALAN BRICKSTOCK

1989 was yet another 'odd' year - is any year 'normal'?. After a prolonged hot dry season, many species were very few and far between, and diligent searching was required on all of our forays. Families such as *Russula*, *Lactarius* and *Tricholoma* were often almost absent. Despite this, the total number of species found over the year, 361, was well over the average for the last eight years. The totals for nine of my twelve 'indicator' families of gill fungi were near to average, but two others were decidedly low: *Cortinarius* 7, compared with an average of 14, and *Tricholoma* 2, compared with 7. The '12 family' total was 140, accounting for a percentage of 38.8, well below the norm of 44.5. The high total and the lower percentage of gill fungi was due mainly to Paul Cook identifying more of the resupinates etc. which we would normally have passed rapidly by. Without these additions, the revised percentage almost exactly equals the average.

There were some very interesting finds, and some very rare ones; identification of most of these was due to Paul Cook, with some verifications by Derek Reid at Kew.

Three outstanding finds were the *Stereum*-like *Laxitextum bicolor*, a rare species, found on the Society foray at Nuney Green, and the even rarer *Basidiomycetes Tyromyces semisupinus*, which has very few British records, found at Ipsden, and *Tyromyces placenta*, found by Paul Cook at Whiteknights, this being only the second British record for the species..

It was definitely the year of the Honey Fungus, *Armillaria mellea*, which was abundant almost everywhere, perhaps a reflection of a large number of trees under stress from the extreme dryness?.

Volvariella speciosa was also unusually abundant. This normally uncommon species was found in large numbers in a stubble field at Holly Grove, and there were also hundreds of specimens in fields of winter grain at Ewelme.

Several unusually large specimens of the uncommon *Volvariella bombycina* were found growing on a roadside near Grazeley Green.

The joint foray with the Newbury Field Club, led by Barrie Bristow at Wasing on 7/10/89, by kind permission of Sir William Mount, was very successful, the 71 species including some nice finds, particularly the delightful little *Hymenoscyphus fructigenus*, growing on acorns, the uncommon *Ripartites tricholoma*, and the *Myxomycetes Tubifera feruginosa* and *Arcyria denudata*. Also found there was *Calocera pallido-spathulata*; first discovered in Yorkshire in 1969, and first recorded in Berkshire only about three years ago, this now appears on many of our forays, at numerous venues.

Our thanks to Barrie Bristow for leading this most enjoyable foray.

On the morning of 4/11, at Watlington Hill, the keen eyes of Ivy Brickstock made two very interesting finds; some fascinating little Birds-nest fungi, *Crucibulum laeve*, and also a hypogeous Gasteromycete, *Stephanospora caroticolor*, an orange 'ball' pushing through the turf. This is a rare species, recorded from only ten vice-counties, with no records from any of the BBONT counties, in Bruce Ing's 1984 census catalogue. Another uncommon find here was the strikingly blue-grey *Entoloma bloxamii*.

That afternoon several of us joined in a foray for the Oxfordshire fungus survey.

The 'double header' on 15/10 produced 78 species at Nuney Green, and 56 species at Ipsden. The total for the day was 111 species, only 23 species being found at both sites.

Thanks to all the contributors, especially Paul Cook, who has broadened our fungus horizons on a number of forays.

Agaricus abruptibulbus

Burnham Beeches, 29.10.89 (MS).

Has an abruptly marginate bulb at base of stipe

Agaricus bernardii

Redhatch Drive Earley, 27.09.89 (D).

No less than 44 specimens on one day!

Agaricus fissuratus

Wychwood Close Earley, 11.89 (A).

White to ochre, becoming yellow spotted. Margin with radial cracks.

Agaricus haemorrhoidarius

Ashampstead, 12.11.89 (B).

Reddens strongly on bruising. In coniferous woods.

Agaricus placomyces

Henley Area, 11.11.89 (NH); Cucumber Wood, Caversham, 05.11.89 (C).

Looks rather like the edible *A. sylvaticus*.

Has the same effects as yellow stainer on some people.

Agaricus xanthoderma

Caversham, 11.89; Blagdon Road, 24.11.89 (D).

Yellow stainer. Puts some people in coma. Others eat with impunity

A large boxful brought from Caversham to check on their edibility!

Amanita pantherina

Satwell, 16.09.89 (D).

Poisonous, perhaps deadly. Confusable with edible *A. rubescens*.

Amanita phalloides

Davenport Wood, 16.09.89 (D); Holly Grove, 01.10.89 (CW).

About 40 specimens at Davenport Wood.

Amanita porphyria

Wasing, 07.10.89 (NH).

A pale greyish-brown species, with a fragile ring.

Boletus impolitus

Pepper Lane/Copperdale Close Earley, 10.89 (A).

An uncommon species with ochre to brown pores

Clitocybe geotropa

Henley Area, 11.11.89 (NH).

Entoloma bloxamii (madidum)

Watlington Hill, 04.11.89 (B,D,C).

A striking violet-blue-grey species, with a cream coloured centre.

Gomphideus roseus

Virginia Water, 21.10.89 (MS); Ufton Nervet, 28.10.89 (D).

A viscid, coral to brick red species.

Hebeloma sacchariolens

Virginia Water, 17.09.89 (B,D).

Smells of burnt sugar.

Hygrocybe punicea

Henley Area, 11.11.89 (NH).

A blood-red species. Several specimens on a private lawn.

Hypholoma udum

Burnham Beeches, 29.10.89 (MS).

A slightly viscid 'brown job', with a long slender stipe.

Lactarius obscuratus

Whiteknights Park Woodlands (C).
Under Alder.

Leccinum oxydabile

Burnham Beeches, 29.10.89 (MS); Wellington Country Park, 09.10.89 (A).
Similar to *L. scaber*. Flesh flushes pale yellow-green in stipe.

Leucocoprinus brebisonii

Ashampstead, 12.11.89 (B).
A small, pale *Lepiota*, with dark brown centre.

Panus torulosus

Virginia Water, 21.10.89 (MS); Park Wood, Mapledurham, 10.12.89 (D).
A 'squat' species with very decurrent gills.
Reddish-brown, tinged lilac when young.

Pholiota alnicola

Virginia Water, 21.10.89 (MS); Whiteknights Park Woodlands (C).
An occasional, lemon-yellow species.

Pholiota myosotis (Hypholoma myosotis)

Padworth, 27.09.89 (B).

Pluteus aurantiorugosus

Nuney Green, 15.10.89 (NH); Virginia Water, 21.10.89 (MS).

Pluteus leoninus

Henley Area, 11.11.89 (NH).
A bright golden-yellow species, growing on wood.

Pluteus umbrosus

Whiteknights Park Woodlands (C).
Growing on Elm.

Psilocybe crobula

Virginia Water, 17.09.89 (B,D).

Ripartites tricholoma

Wasing, 07.10.89 (NH).
An uncommon species, identified afterwards by Barry Bristow.

Rhodotus palmatus

Holly Grove, 01.10.89 (CW); Nuney Green, 15.10.89 (NH).
An attractive apricot coloured species. Once rare, becoming common when Dutch Elm disease provided its host, lots of dead Elms.
Becoming less common again, as the dead Elms decay.

Russula caerulea

Burnham Beeches, 29.10.89 (MS).
A livid violet or wine coloured fungus.

Russula decolorans

Virginia Water, 17.09.89 (B,D).

Stropharia aurantiaca

Padworth Common, 27.09.89 (B); Padworth Common, 30.09.89 (MC);
Virginia Water, 21.10.89 (MS).

Stropharia coronilla

Wasing, 01.11.89 (B).
Light brown. White ring usually highlighted with dark spores.

Volvariella bombycina

Grazeley Green, 06.08.89 (PMRJ).
Several large specimens growing on the roadside.

Volvariella speciosa

Holly Grove, 01.10.89 (CW); Ewelme, 22.10.89 (D); Henley Area, 11.11.89 (NH).
White, with volva, no ring. Pink spores colour the gills.
Usually uncommon, but abundant in several locations this year.

Volvariella volvacea

Whiteknights Park Woodlands (C).

APHYLLOPHORALES

Amylostereum chailletii

Whiteknights Park Woodlands (C).
Growing on conifer

Amylostereum laevigatum

Ipsden Heath, 15.10.89 (NH); Watlington Hill, 04.11.89 (B,D,C).
Growing on Yew.

Antrodia albida

Nuney Green, 15.10.89 (NH).

Antrodiella semisupina

Ipsden Heath, 15.10.89 (C).

Bjerkandera fumosa

Nuney Green, 15.10.89 (NH).

Cerrena unicolor

Whiteknights Park Woodlands (C).
An uncommon but widespread polypore.

Coniophora puteana

Nuney Green, 15.10.89 (NH); Ipsden Heath, 15.10.89 (NH);
Watlington Hill, 04.11.89 (B,D,C).
Forms resupinate patches on decaying wood. White, becoming dirty yellowish-green. One of the major causes of wet rot.

Cristella candidissima

Nuney Green, 15.10.89 (NH); Burnham Beeches, 29.10.89 (MS).

Cristella sulphurea (Phlebia or Phlebiella vaga)

Nuney Green, 15.10.89 (NH); Burnham Beeches, 29.10.89 (MS).
A greyish-yellow resupinate, with warted ridges and fibrillose edge.
Growing on Beech.

Dendrothele aliacea

Nuney Green, 15.10.89 (C); Blackhouse Wood, 08.10.89 (C).
On bark of living Maple.

Eichleriella deglubens

Watlington Hill, 04.11.89 (B,D,C).

Hapalopilus nidulans

Redhatch Drive Earley, 09/11.89 (A).
An ochre to cinnamon fan-shaped bracket.

Hyphoderma setigerum

Burnham Beeches, 29.10.89 (MS); Whiteknights Park Woodlands (C);
Blackhouse Wood, 08.10.89 (C).
White, with yellow 'spines'.

Hypochnicium punctulatum

Burnham Beeches, 29.10.89 (C).

Inonotus radiatus

Burnham Beeches, 29.10.89 (MS).

Ischnoderma benzoinum

Whiteknights Park Woodlands (C).

Ischnoderma resinosum

Wasing, 07.10.89 (NH).

Laxitextum bicolor

Nuney Green, 15.10.89 (NH).

A rare species. Like a stereum, white underneath.

Leucoqyrophana pseudomollusca

Holly Grove, 01.10.89 (CW).

Merulius corium

Nuney Green, 15.10.89 (NH); Henley Area, 11.11.89 (NH).

Tan to ochre. Upper edge free and upturned. White and silky underneath.

Mycoacia uda

Nuney Green, 15.10.89 (NH); Ipsden Heath, 15.10.89 (NH);

Burnham Beeches, 29.10.89 (MS).

Peniophora cinerea

Burnham Beeches, 29.10.89 (C).

Peniophora eriksonii

Whiteknights Park Woodlands (C).

Growing on Alder

Peniophora incarnata

Burnham Beeches, 29.10.89 (C)

Peniophora proxima

Henley Area, 11.11.89 (NH); Whiteknights Park Woodlands (C).

Growing on Box at both sites.

Phanerochaete laevis

Burnham Beeches, 29.10.89 (C).

Phanerochaete velutina

Burnham Beeches, 29.10.89 (C).

Phellinus pomaceus

Watlington Hill, 04.11.89 (B,D,C).

Phlebia rufa

Watlington Hill, 04.11.89 (B,D,C).

Ptychoqaster albus

Virginia Water, 21.10.89 (MS).

Rigidoporus sanguinolentum

Nuney Green, 15.10.89 (NH); Queen Wood, 04.11.89 (OS).

Rigidoporus vitreus

Burnham Beeches, 29.10.89 (MS).

Growing on banks of streams and ditches.

Schizopora paradoxa

Nuney Green, 15.10.89 (NH); Virginia Water, 21.10.89 (MS);

Burnham Beeches, 29.10.89 (MS).

Sparassis crispa

Nuney Green, 15.10.89 (NH); Five Oaken, 23.10.89 (B).

Stereum rameale

Henley Area, 11.11.89 (NH).

Stereum subtomentosum

Clayfield Copse, 08.10.89 (C); Blackhouse Wood, 08.10.89 (C); Sonning (C).
Has thin flesh and bleeds yellow.

Trechispora candidissima

Nuney Green, 15.10.89 (NH).

Trechispora farinacea

Nuney Green, 15.10.89 (NH).

Tyromyces placenta

Whiteknights Park Woodlands (C).
Only the second British collection.

Tyromyces wakefieldiae

Whiteknights Park Woodlands, 14.11.89 (C); Cucumber Wood, 12.11.89 (C).

Tyromyces semisupinus

Ipsden Heath, 15.10.89 (NH).
Small whitish-cream fruit bodies, drying resinous brown at margin.
Very few British records.

GASTEROMYCETES

Crucibulum laeve

Watlington Hill, 04.11.89 (B,D,C); Halfridge Wood, Nettlebed, 18.11.89 (D).

Cyathus striatus

Virginia Water, 21.10.89 (MS).
Tiny, attractive 'birds nests', full of 'eggs'.

Scleroderma areolatum

Whiteknights Park Woodlands (C).
Not listed from Berkshire in Bruce Ing's 1984 catalogue.

Stephanospora caroticolor

Watlington Hill, 04.11.89 (B,D,C).
A rare hypogeous fungus. No prizes for guessing its colour.

HETEROBASIDIOMYCETES

Calocera pallido-spathulata

Clayfield Copse, 08.10.89 (UWG); Nuney Green, 15.10.89 (NH);
Virginia Water, 21.10.89 (MS); Burnham Beeches, 29.10.89 (MS).

Pistillaria quisquilaris

Queen Wood, 04.11.89 (OS).
Tiny white fungi growing on dead bracken stems.

Sebacina incrustans

Virginia Water, 21.10.89 (MS).

ASCOMYCETES

Hymenoscyphus fructigenus

Wasing, 07.10.89 (NH); Clayfield Copse, 08.10.89 (UWG);
Nuney Green, 15.10.89 (NH).
Tiny yellow cup fungi growing on acorns.

Hypocrea citrina

Christmas Common (C).

Hypocrea pulvinata

Burnham Beeches, 29.10.89 (MS).

Growing on old Piptoporus betulinus.

Peziza proteana var. sparassoides

Virginia Water, 21.10.89 (MS).

Looks, at first sight, very much like Sparassis crispa.

Peziza succosa

Virginia Water, 21.10.89 (MS).

Peziza vesiculosa

Henley Area, 11.11.89 (NH).

A nice colony growing on old straw.

MYXOMYCETES

Arcyria denudata

Wasing, 07.10.89 (NH).

Stemonitis axifera/fusca

Ipsden Heath, 15.10.89 (NH).

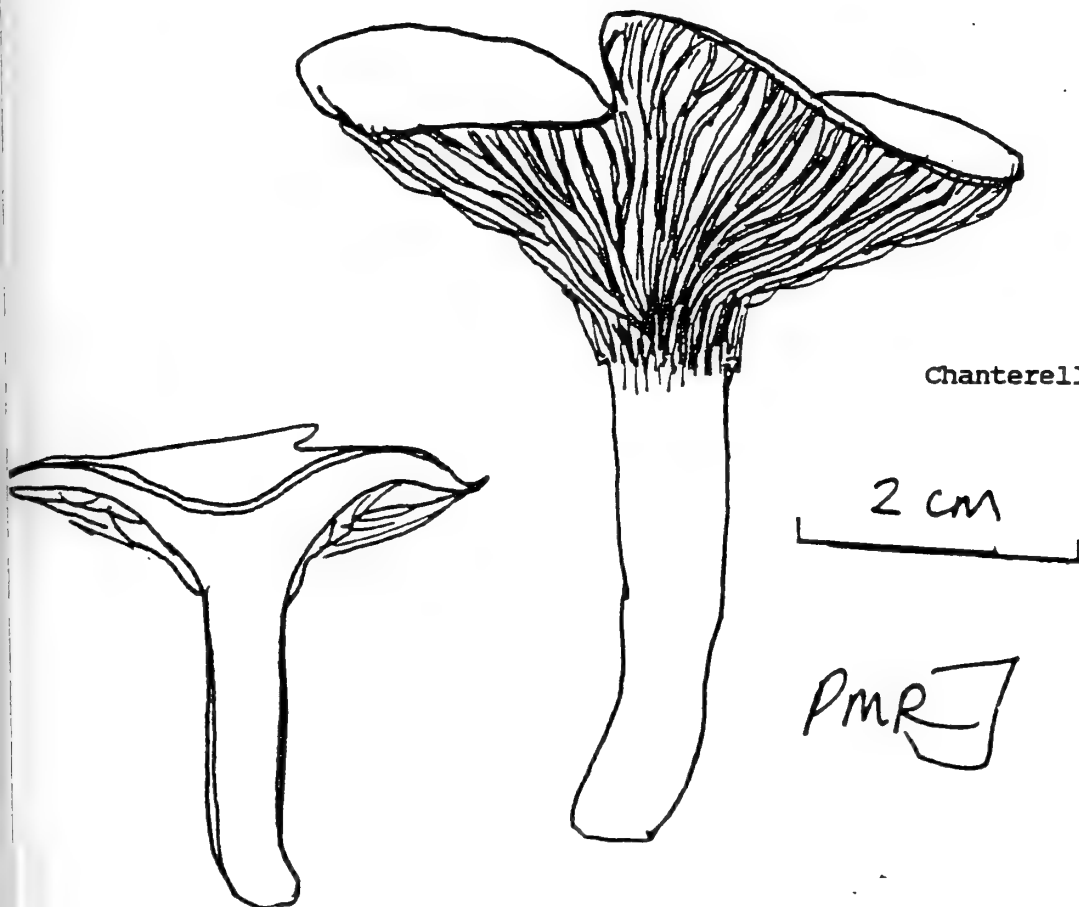
Forming tufts of chocolate-brown 'hairs'. Uncertain which of two species.

Tubifera feruginosa

Wasing, 07.10.89 (NH).

Contributors and Abbreviations.

Joyce and Pat Andrews (A), Ivy and Alan Brickstock (B), Frances and Paul Cook (C), Chiltern Walk (CW), Mary and Neville Diserens (D), Museum Club foray (MC), Mycological Society foray (MS), Society foray (NH), Oxford Survey (OS), Paul Jinks (PMRJ), Urban Wildlife Group foray (UWG).



RECORDER'S REPORT FOR VERTEBRATES, 1989

H.H. CARTER

FISH

Perca fluviatilis Linnaeus

Perch

1 caught by boys at Henley 10.9.89. 1 or more small ones (15-20 cm.) in Holy Brook at Central Library.

AMPHIBIANS

Triturus sp.

Newts

Undetermined species present in garden pond at Tilehurst (49 Lawrence Rd) 3.4.89 (RT)

Rana temporaria Linnaeus

Frog

Spawn at Tilehurst (Cockney Hill) 12.2.89 (AB). Frogs in pond at Kidmore End School 18.2.89 (KT). Frogs arrived in garden pond (built 1987 and colonised same year) at Bracknell (Twofield) 19.2.89 (A&DH). Ponds at Tilehurst containing frogs in March (Meadway and 196 Thirlmere Avenue, the latter originally stocked from 42 Russell St.) (Mrs.Marks). 10-12 pairs in amplexus and 1 clump of spawn in Kidmore End duckpond 6.3.89. About 5 pairs in amplexus and 8 clumps of spawn in smaller ponds at Coach and Horses 7.3.89 (see next species). Frogs croaking at night at Gallowstree Common (Horse Pond) 8.3.89. 3 litres of spawn in upper pond, 1 litre in lower pond at Woodcote (Greenmore Hill) 25.3.89. Spawn laid in garden pond at Emmer Green (68 Rosehill Park) over Easter (A&DH)

Bufo bufo (Linnaeus)

Toad

In garden pond at Emmer Green (68 Rosehill Park) 25.2.89 (A&DH). Absent in large pond at Binfield Heath (Coach and Horses) 7.3.89, 2 pairs in amplexus and some spawn (mostly infertile) there 29.3.89: this pond is almost drained and no longer a good habitat for this species. 3 dead in Binfield Heath Lane, 3 dead in Kiln Road, both near this site 7.3.89. 1 dead in Caversham Park Village (Lowfield Road) 20.10.89.

INSECTIVORES

Talpa europaea Linnaeus

Mole

Molehills in fields south of Thames between Pangbourne and Purley 2.1.89. Moles active in Knowl Hill area 9.12.89 (RDNHS Excursion). Moles active throughout the latter part of the year in Caversham Park (E. of Clayfield Copse).

Erinaceus europaeus Linnaeus

Hedgehog

1 dead on King's Meadow 24.4.89 and on Christchurch Meadow 3.6.89 (MJC). 1 dead on lawn at Yeomanry House 3.5.89. 1 alive in Sonning Common (Shiplake Bottom) 17.5.89 and nearby at Brind's Corner 12.6.89. 1 dead on road, Emmer Green (Rose Hill) 7.8.89, 1 alive (Kiln Road) 14.8.89, 1 dead there, 25.8.89. 1 dead there Caversham Park Road 23.8.89, 1 dead nearby in Northbrook Road 28.8.89 and 26.9.89. 1 dead in Shinfield Road (opposite Cros fields School) 30.9.89.

CARNIVORA

Vulpes vulpes (Linnaeus)

Fox

Vixen killed by car in Spencer's Wood 22.1.89 (Mr Cooke). 1 calling at Sonning Common (Kennylands) 24.1.89 and (Shaylor's Fightle) 31.7.89. 1 injured (probably by car on road) at Goring Heath (NW of Allnut's Hospital) dragged itself into a field attracting close attention of horses 4.2.89. 1 calling Kidmore End 1.3.89. Foxes calling Chalkhouse Green,

Crowsley Forest and Kidmore End 5-6.8.89. Juvenile in St. Giles's Close 3.10.89 (KT). 1 seen beginning of November on Reading West Station (member's obs. at meeting). Tracks and droppings seen at Knowl Hill (Star Brickworks) 9.12.89 (RDNHS Excursion). 1 in garden at lunch-time - Beech Lane 30.11.89 (HDL) and 1 in garden of Kendrick School 27.5.89 (HDL).

Meles meles (Linnaeus)

Badger

1 dead on A321 on the Reading side of Wellingtonia Avenue 4.3.89 (Mrs. Morton). 1 dead in Sonning Lane 21.3.89 (HL). 1 dead in Sulham Woods 22.3.89 (CJL): the species remains abundant here. Numerous trails, scrapes and 3 disused setts at Knowl Hill (Ashley Hill) 2.12.89.

Mustela erminea Linnaeus

Stoat

A footprint of a small carnivore, probably this species, at Knowl Hill (Star Brickworks) 9.12.89 (RDNHS Excursion).

Mustela nivalis Linnaeus

Weasel

1 flushed by dog on S. bank of Thames below Pangbourne 2.1.89. 1 at Tilehurst (Cockney Hill) 6.2.89 (AB).

ARTIODACTYLS

Dama dama (Linnaeus)

Fallow Deer

A buck and 2 does between Morgan's Wood and Binfield Heath 29.4.89 were probably of this species although the buck's antlers were described as "spiky" (MJC). 1 at Highmoor 21.10.89 (MJC). Abundant slots of both sexes at Knowl Hill (Star Brickworks) 9.12.89 (RDNHS Excursion).

Muntiacus reevesi Ogilby

Munjac

Droppings found in woods near Highmoor (Merrimoles) 5.3.89. 1 calling in Sonning Common (4 Acre Field) 6.3.89. Slots at Binfield Heath (Comp Farm) 29.3.89. 1 seen at Hardwick 10.6.89 (MJC). 2 calling in Crowsley Forest 19.6.89. Abundant slots and some droppings at Knowl Hill (Star Brickworks) 9.12.89 (RDNHS Excursion).

LAGOMORPHA

Lepus capensis Pallas

Hare

1 dead on Portway near Crowmarsh (S. of Carmel College) 13.5.89. 1 in field N. of Playhatch 28.5.89 (MJC).

Oryctolagus cuniculus (Linnaeus)

Rabbit

1 dead on Peppard Road (Chalkhouse Green) 20.2.89, 12.5.89, 2 dead there 18.5.89 and 9.7.89, 1 dead there 17.7.89. 1 on Abbey Football Ground nearby 1.6.89. 1 juvenile Sonning Common (Kennylands Field) 10.4.89, 10 there 2.6.89, 4 there 22.6.89, 14 there 25.6.89, 29 there 4.7.89, 15 there 16.7.89, 18 there 1.8.89. 1 Sonning Common (E. of Bird Wood) 16.7.89. 1 Sonning Common (dead on Kennylands Road) 9.7.89. 9 in Benham Park near Newbury 29.4.89 (RDNHS Excursion). 9 at Hardwick between Bottom Wood and Path Hill 30.4.89 and 30-40 there 10.6.89 (MJC). 1 at A.R.E 11.6.89. 1 at Chalkhouse Green 15.6.89

RODENTS

Rattus norvegicus Berkenhout

Brown Rat

1 dead on Peppard Road 4.1.89, 10.8.89, 23.9.89. Rats abundant on View Island in May (MJC). 1 dead in Shinfield Road (opposite Cros fields School) 30.9.89.

Sciurus carolinensis Gmelin

Grey Squirrel

1 on lawn at Yeomanry House 3.5.89. 1 dead on road at Emmer Green 12.5.89, 2 dead there 13.6.89, 1 dead there 17.6.89, 7.7.89, (Rose Hill) 2.8.89, 4.8.89. 1 in Sonning Common (Old Copse) 21.5.89. 1 dead on road, Chalkhouse Green 21.6.89, 9.7.89. 1 in Sonning Common (Slade's Wood) 28.10.89 (SG). 1 in Blackhouse Wood (near Emmer Green) 5.11.89 (MJC), 1 nearby in sports field 24.12.89. 1 dead on road in Shiplake 26.12.89. 2 in Sonning Common (Hagpits Wood) 26.12.89.

* * * * *

ARACHNIDA

Spiders

Nigma walckenaeri (Roewer)

Pholcus phalangioides (Fuesslin)

Micrommata virescens (Clerck)

Marpissa muscosa (Clerck)

Euophrys frontalis (Walckenaer)

Dolomedes fimbriatus (Clerck)

Zilla diodia (Walckenaer)

All found in and around the garden of Lin Matthews at Badger's Close, Maidenhead.

My thanks are due to the following contributors:

Alan Brickstock (AB); Mary J. Carter (MJC); Mr Cooke; Stan Gudgeon; A. & D. Hodges (A&DH); H. D. Lambden (HDL); Heather Lee (HL); Cyril J. Leeke (CJL); Mrs Marks; Mrs Norton; Mrs. R. Tegg (RT); Ken Thomas (KT).

The Weather at Reading during 1989

Dr Russell D. Thompson, F.R.Met.Soc.
 Department of Geography
 University of Reading

1989 proved to be a very exceptional year weatherwise, with a pleasantly mild winter (the second year running) and a glorious sunny, hot dry summer which ended a run of four consecutively cool and damp summers. Indeed, in central England, it was probably the warmest year since records began in 1659. However, at the Reading climate station, it proved to be only the third warmest since our temperature records began in 1921, after 1949 and 1921 itself. Also, after four years running with sunshine totals well below average, 1989 gave us bright sunshine some 12% above average. This made it the sunniest year since 1976 and the third sunniest since our sunshine records began in 1956. We all enjoyed the 'Mediterranean' weather in the period from May through to August, when our monthly sunshine totals exceeded 45% of that expected, with the 61% May contribution quite outstanding. Lack of rainfall was perhaps the main feature of the year. Up to 10th December, Reading's rainfall was about 25% below average although the mid-December deluges (especially of the 13th and 20th) made up most of this deficiency, so that the year finally ended up only 7% below normal.

The following, detailed monthly weather summaries are based on the Table of Weather Records provided:

January was a delightful winter month with very dry, mild, calm and sunny weather. The anticyclonic control was evident, with the highest pressure for 25 years, and the southerly location of the high gave us mostly balmy south-southwesterly winds. Only 3% of the winds recorded at 0900 hours each day had a northerly component. Temperatures were about 2°C above average, although slight air frosts were common in the middle of the month. Rainfall was 47% below average, with only about half the rain days expected, and sunshine totals were slightly above normal.

February turned out to be an even warmer month, with the mean maximum temperature almost 3°C above average, the highest since 1961. Indeed, there were only 22 hours with temperatures at or below 0°C, compared with 460 hours in February 1986. The aggregate rainfall for the month was 14% above normal, although most of the rain was recorded in the second half of the month. This made February the wettest for a decade but despite this, it was a very sunny month with sunshine totals 44% above average and only 7 sunless days were recorded. It was the windiest February for almost 30 years associated with deep depressions; for example, on the 25th, the pressure reading of 949.4 mb was the lowest on record at this station.

March continued the unseasonally mild spell since, for the third month running, mean temperatures were more than 2°C above average. Only 2 air frosts were recorded and only 10 hours in the month had temperatures at or below 0°C. Consequently, the first three months of the year experienced the warmest start to any year for over 30 years. Rainfall was average for the month although there were 8 consecutive dry days at the end of the month. Hours of sunshine were 16% below the monthly average, although the number of sunless days was the lowest for almost a decade.

April came as a complete shock to us all after such a marvellous start to the year (weatherwise at least). It turned out to be an eminently forgettable month which was cold, wet and dull. The miserable climatic

deviations prove the point viz. temperatures between 1 and 1.5°C below average (the lowest April temperatures for almost 30 years), rainfall was 37% above average and sunshine hours were 18% below average. No more need be said about these wretched conditions although we all feared that this drastic change in the weather was a prelude to another disappointing summer.

May was to prove how exceptional the April weather was to be in a year of such record warmth. In stark contrast to the previous month's awful weather, May broke a number of weather records since it was very warm, delightfully sunny and 'bone' dry!! The mean maximum temperature was the highest since 1922 and was over 4°C above average; even the mean daily temperature was about 3°C above normal, which was the highest for 25 years. Rainfall was a rare event in such an anticyclonic month. The amount of rain recorded was 81% below average and indeed most (70%) of what was recorded fell in a single severe thunderstorm on the 24th. Consequently, it was the driest May for 30 years and with evaporation rates the highest in a decade, watering gardens became a regular chore. Sunshine was the outstanding feature of the month since the total number of hours recorded was a massive 63% above average. This excess represented the highest total observed since sunshine records were started in 1956. Indeed Reading became part of the 'Costa Berkshire' since we received 61% of the sunshine possible, with an unbelievable 9½ hours per day as a mean duration for the month. What a month!

June provided more mixed weather in that it was not as good as May but, overall, still gave us delightfully warm, sunny and very dry weather. For example, June started off as a great disappointment since the first 10 days or so were generally cool, damp and overcast. For example, the maximum temperature of 11.5°C on the 6th was the lowest recorded in 25 years. In contrast, the next 16 days recorded daily maximum temperatures well in excess of 21°C (the magical 70°F in the 'old' units!), and the maximum of 29.2°C recorded on the 20th was the highest temperature recorded so far this year. Dry conditions prevailed and rainfall was only 49% of the monthly average. An absolute drought was recorded from the 10th to 25th inclusive, with further problems for gardeners and farmers, especially since the rate of evaporation was the highest recorded since the drought of 1976. Sunshine totals were 15% above normal and the average duration of 7½ hours per day maintained that Costa feeling!

July was again dominated by anticyclones (the highest July mean pressure in almost 2 decades) and the resultant weather was very dry, sunny and hot, to continue the marvellous sunny weather. Mean temperatures were nearly 3°C above average and even exceeded those of July 1976, whereas the mean minimum was the highest since 1921. By the third week, we began to 'sizzle' when temperatures rose above 29°C. There were 3 days in excess of 31°C around the 22nd, when a maximum of 33.2°C and a minimum of 18.1°C were recorded, both the highest since the 'heat wave' of 1976. It was another dry month when, for the third month in a row, the rainfall recorded was considerably less than half that expected. There were 14 consecutive dry days and the water shortages were aggravated yet again by evaporation rates at their highest levels since 1976. Sunshine totals continued to be well above average and the mean duration of nearly 8% hours per day gave well over 200 hours of sunshine for the third month running - the first time this has happened since 1976.

August brought some rainfall relief for the gardens etc., but despite rainfall about 10% above average, it continued to be very warm and sunny. Temperatures were again well above average for the fourth month in a row, with maximum values in excess of 24°C recorded on 13 days. As already mentioned, rainfall was slightly above average but it should

be noted that more than half of the monthly total recorded fell on the 9th (34.1mm). The rest of the month was dry, with a spell of 8 consecutive dry days recorded on two occasions in the first part and middle of the month. Sunshine totals were again well above average and exceeded 200 hours (for the fourth month running), with nearly 8 hours a day average duration representing about half of the sunshine possible.

September continued the good summer weather although, for the first time since April, sunshine hours were below average by some 15%. Temperatures were again about 1°C above average and the monthly mean value was the highest for 25 years. It was a dry month, with rainfall some 26% below the monthly average and virtually all the rain recorded fell between the 12th and 16th.

October remained pleasantly warm with mean temperatures almost 2°C above average, which made it the warmest October for 20 years. It turned out to be the wettest month of the year so far with the rainfall aggregate some 16% above average. However, most of the rain fell in the second half of the month, especially during the wet spell on the 19th and 20th. October also experienced below average sunshine hours, although the number of sun-less days was the lowest for a decade. The second half of the month was very windy with a 65mph gust recorded on the 21st.

November proved to be a very mixed month, starting off very wet, windy and warm and ending up dry, calm and bitterly cold. Overall, temperatures remained very close to average values although maxima over 15°C on the 11th and 12th represented the peak of an abnormally warm period. In contrast, the last week was very cold with a run of seven night frosts. The -6.4°C minimum on the 26th represented the coldest night at Reading since the 1st February 1987 and the third-lowest November minimum since 1921. The rainfall patterns followed the temperature trend since the cyclonic, mild first ten days of the month provided all of the month's rainfall. This was followed by an anticyclonic spell of drought and cold weather. There were 17 consecutive dry days after the 13th so, for the month as a whole, the rainfall aggregate was about half of normal. This represented the third-driest November in the last 30 years. The anticyclonic dominance of the last two weeks resulted in sunshine totals well-above average, which made the month the third sunniest November since 1956.

December like the previous month, brought a 'mixed bag' of weather. The first 10 days continued the November cold spell and drought but then the Berkshire 'monsoon' broke and we had a very wet, stormy two weeks before a more-settled spell over the Christmas period. Temperatures were generally about a degree C above average, despite the cold start, and there were only 17 hours at or below 0°C in the entire month. The drought, which had started on the 14th November, ended on the 10th December and it turned out to be Reading's longest dry spell since the summer of 1976. The depressions and associated rains returned on the 11th and, for the next fortnight, we experienced deluge after deluge, accompanied by very high wind speeds. During this period almost 2½ times the monthly average rainfall was recorded, making it the second wettest December since 1921 (after 1934). On the 20th 35.8mm of rain fell making it the second wettest December day since 1921 (after 1954). At this time, torrential rain during the evening rush hour at Reading provided horrendous driving conditions and a journey along the IDR was made hazardous since the man-hole covers were bouncing around on small fountains of water. Severe gales accompanied the rains and the 68mph gust on the 17th was the highest in nearly 20 years. December was also a very dull month with the sunshine hours 40% below average, and a pathetic mean duration of one hour per day. It turned out to be the dullest weather for any month in the last 20 years.

Postscript It is apparent that 1989 was a record-breaking year with the hottest, wettest and sunniest spells of weather since records began at Reading. The heat (ie. 10 months of the year recorded above-average temperatures) and prolonged sunshine (ie. 8 months recorded above-average sunshine) convinced many people that the increased greenhouse effect had arrived. However, we must not forget the four previous dismal summers or the run of severe winters up to 1987. Also, the fact is that any lasting influence (if any!) from this well-publicised global warming will take another 50-100 years at least to become a regular feature of our weather. It does appear that extreme weather events are characteristic of the current global scene and that the hottest, coldest, wettest, driest, calmest and windiest weather will occur at any time in future decades! Weather disasters are not exclusive symptoms of an increasing greenhouse effect since, for example, similar extreme weather events occurred in the 16th-17th centuries in England. Furthermore, these extremes heralded the onset of the 'Little Ice Age' which gave us the coldest weather for thousands of years!

WEATHER RECORDS: 1989

STATION: READING UNIVERSITY (WHITEKNIGHTS)

		Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Mean Daily Temperatures °C	Max.	9.1	10.0	12.2	10.9	19.9	21.1	25.3	23.3	19.3	16.1	10.2	8.9	15.5
	Min.	2.7	2.6	4.3	3.4	8.6	9.8	13.8	11.8	11.3	8.5	3.1	3.1	6.9
	Mean	5.9	6.3	8.3	7.2	14.2	15.5	19.6	17.6	15.3	12.3	6.7	5.9	11.2
	Range	6.4	7.4	7.9	7.5	11.3	11.3	11.5	11.5	8.0	7.6	7.1	5.6	8.6
Extreme Temperatures °C	Extreme Max. Date	12.2 7th	14.4 5th	18.4 27th	14.6 1st	27.0 23rd	29.2 20th	33.2 22nd	28.6 6th	26.1 7th	19.3 17th	15.9 17th	13.6 20th	33.2 22/7
	Extreme Min. Date	-3.1 19th	-2.6 2nd	-4.4 18th	-1.2 26th	1.9 31st	3.8 5th	9.1 3rd	7.5 23rd	6.0 3rd	2.7 3rd	-6.4 26th	-4.1 1st	-6.4 26/11
	Extreme Grass Min. Date	-7.0 11th	-6.2 2nd	-7.1 18th	-5.5 9th	-5.3 31st	-2.4 3rd	2.1 4th	0.1 23rd	-2.0 3rd	-3.2 5th	-11.5 26th	-10.4 1st	-11.5 26/11
Days with air frost		9	5	2	2	0	0	0	0	0	0	7	6	31
Days with ground frost		15	16	10	15	3	6	0	0	3	7	17	16	108
Hours at or below 0.0°C		47	22	10	5	0	0	0	0	0	0	55	17	156
Sunshine Hours	Sum	56.9	92.8	90.2	128.0	295.1	227.6	259.9	245.6	123.8	86.4	95.6	30.7	1733
	% of possible	22	33	24	31	61	46	52	54	31	26	35	12	38
	Daily Mean	1.8	3.3	2.9	4.3	9.5	7.6	8.4	7.9	4.0	2.8	3.2	1.0	4.7
Precipitation	Amount in mm	29.7	45.2	58.5	63.4	11.1	27.1	13.8	58.6	42.5	64.1	27.6	150.7	592.3
	Rain Days	10	16	17	17	6	10	5	7	8	15	8	14	133
Maximum rain in one day "		6.0	7.4	11.2	15.5	7.8	7.3	8.8	34.1	22.2	14.2	10.4	35.8	35.8
Date		28th	25th	20th	5th	24th	26th	6th	9th	12th	19th	2nd	20th	20/12
Longest run of consecutive rain days		3	7	4	5	3	5	2	2	5	6	4	11	11
Longest run of consecutive dry days		5	5	8	3	10	16	14	8	9	4	17	10	17 Dec. Nov.
Snow or sleet days		0	2	0	2	0	0	0	0	0	0	0	0	4
Days with snow lying		0	0	0	1	0	0	0	0	0	0	0	0	1
Visibility	Days with fog at 0900 GMT	5	3	1	0	0	0	0	0	0	1	4	4	18
Thunderstorm Activity	Days of thunder	0	0	0	1	2	0	1	1	2	0	0	2	9
	Days of hail	0	0	0	4	0	0	0	0	0	0	0	0	4
Barometric Pressure mb	Mean Highest Date	1028 1044 29th	1014 1036 11th	1011 1024 11th	1009 1023 30th	1021 1032 6th	1018 1028 18th	1020 1026 4th	1015 1028 23rd	1019 1034 29th	1017 1032 1st	1014 1030 30th	1009 1039 2nd	1017 1044 29/1
	Lowest Date	1007 12th	962 25th	990 1st	989 11th	997 12th	1003 27th	1005 1st	1002 11th	1007 17th	993 28th	993 8th	966 17th	962 25/2

