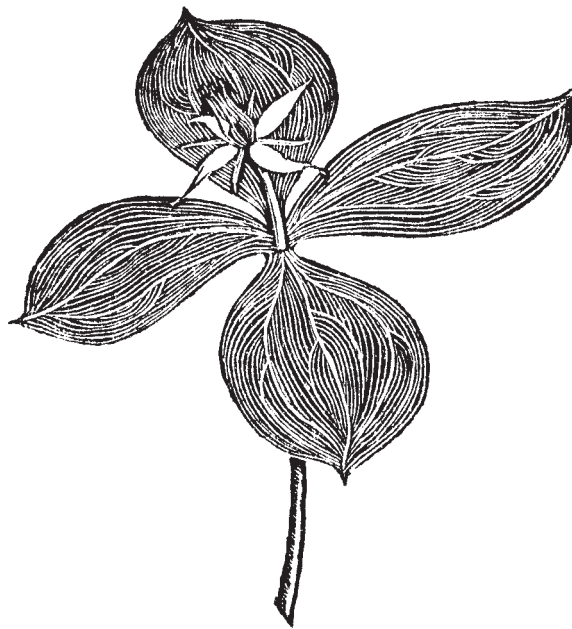


The Reading Naturalist

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THE READING NATURALIST

No 53 for the year 2000

The Journal of the
Reading and District Natural History Society

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EDITORIAL

It was with not without trepidation that I took over editorship from Ken Grinstead. He has done an excellent job for the last six years and it will be a hard act to follow.

However, I do have the advantage of working in the computer industry so have access to more technology than Ken. This has enabled the inclusion of photographs which it is hoped will make the publication more interesting and more readable. Unfortunately they can only be printed in black and white, but a computer version is available which shows them in colour. Those of a technical bent will understand that this is in Acrobat (PDF) format on a CD-ROM. It is perhaps a sign of the times that the CD version actually costs half as much per copy as the paper version.

Finally, I would like to thank Ken for all his work over the last six years. I know I have enjoyed reading *The Reading Naturalist* and I hope you have too and will continue to do so.

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OBITUARY

Barrie Knowles 1926–2000

Barrie lived in Sussex in his early years and always enjoyed the outdoor life, spending some time farming before doing his National Service, part of which was in Malaya.

After returning home he studied and passed his exams to become a Quantity Surveyor after which he moved to Reading. He joined Reading Rambling Club and walked not only to local beauty spots but on the mountains of Wales and the Lake District. He also walked more locally, delivering copies of "Wildlife News" for BBONT.

Ill health forced him to find a less strenuous activity, so he joined the local group of the RSPB and went birdwatching, mainly around the coast. He was also a member of the Wine Circle and won prizes in beer and wine making, both locally and nationally. In his last few years he became a member of the Natural History Society and enjoyed his love of the countryside by studying plants, flowers and other wildlife.

MEMBERS' OBSERVATIONS

Before the talks begin, members are invited to announce their observations. Since the indoor meetings take place during the winter months these are often "the first of the year" records. Here is a selection of observations from the 99/00 winter meetings:

- 7 Oct 99 Dora and George Lucy reported Earth Stars (*Geastrum pectinatum* and *G. sessile*).
- 28 Oct 99 No local observations, but 13 Buzzards seen feeding on worms in Wiltshire.
- 25 Nov 99 Alan Brickstock saw a Roe Deer slowly crossing the road at the top of Cockney Hill.
- 13 Jan 00 Martin Sell reported two Bitterns in the area of Searles Farm.
Michael Fletcher showed Tasteless Stonecrop (*Sedum sexangulare*) from Townlands Hospital.
- 27 Jan 00 Catherine Butcher has two Blue Tits fighting on the roof of her car.
Veronica Vincent reported a Sparrow Hawk.
Iris Fletcher saw a Muntjac in the cemetery.
Martin Sell, on the Pagham Harbour outing, saw 7 Egrets and over 50 Cormorants flying at a time.
- 10 Feb 00 Christine Storey reported a Bumble Bee.
Alan Brickstock had seen 2 Firecrests at Sulham.
Norman Shaw was seeing Treecreepers on a daily basis.
- 9 March 00 Martin Sell saw 2 Brimstones, a Comma, an overwintering Red Admiral and a Barn Owl.
Veronica Vincent reported a Sparrowhawk.
Iris Fletcher had seen a Red Kite over a field at Woodcote.
- 23 March 00 Martin Sell had seen Chiffchaff, Sand Martin and Blackcap.
Heather Baker reported a pair of mating Toads.
Kit Brownlea had observed a Slow-worm.
A Wheatear was seen on 13th March and an Orange Tip at Moor Copse.

EXCURSIONS

Meryl Beek

Thirty three different walks and excursions have been held by the Society during the year. Weather has not actually cancelled any of them, although numbers attending have varied from two to twenty nine. All leaders are thanked for their time and energies, whether few or many attended.

October 17th 1999. 3 members went to Wraysbury to view the ancient Yew tree. This visit was in anticipation of the lecture by Linda Carter in January 2000 on "The Yew: A Tree with a history".

November 6th. Cath Butcher, who works at the Wyld Court Rainforest, led 17 people round this interesting place. Once more members marvelled at the diversity of foliage, colour of the flowers and the antics of the animals in the three greenhouses where tropical to temperate climates are demonstrated.

February 19th 2000. 29 members and friends accompanied Michael Keith-Lucas round Kew Gardens and the Orchid Festival. Although rather a cold day, it was a memorable one full of colour and exotics.

March 18th. Mike Fletcher led a walk on Watlington Hill to introduce members to the mosses & liverworts of the area. The wooded area near the entrance to the reserve produced beautiful stands of *Thuidium tamariscinum* and the epiphytic liverwort *Metzgeria furcata*. In the open spaces of the main reserve a good find was the moss *Trichostomum crispulum*. The views from the hill were spectacular and the sight of a Red Kite gliding overhead provided an excellent finale.

April 1st. The first excursion of the new summer season was led by Meryl Beek in the Greys Green area. The weather can only be described as "fair to middling" and was attended by 6 adults, 3 children and 1 dog. Spring was just arriving, and various common wild flowers, including Greater Stitchwort, were seen for the first time in the new century. The "*pièce de résistance*" was just before the end of the walk, when a very good clump of Wild Daffodils was seen in Sams Wood.

April 15th. A small group turned up on a wet afternoon near Nuney Green and were led by Janet Welsh through the woodland complex at the extremities of four parishes in south Oxfordshire, the boundaries meeting at a couple of ponds. Lying on acidic plateau gravels, the bulk of the ancient woodland is mature beech with an under storey of holly, areas between the old woods have been planted up with conifers and Nuney Wood itself is a mixture of broadleaves. The woodland flora in these different areas were compared. The typical flora included Wood Anemone, Wood Sorrel, Woodruff and Wood Spurge. Butcher's Broom and Ramsons were less common. The valley, cut into the underlying chalk, supports Ash and Hazel coppice and contains a good population of Early Purple Orchids – 180 rosettes have been counted in the last few years though the walk was about a fortnight too early to see any flowers and Muntjac had bitten off a number of stalks. Wild Service occurs in three places in these woods and the largest group on the woodbank of Nuney Wood was observed. Ferns were admired, there is a cluster of huge crowns of Scaly Male-fern, their over-wintering fronds still in good condition and a single atypical Hard Shield-fern (which is to be confirmed). Both these are scarce in Oxon. In total over 30 plants associated with ancient woodland were located.

April 29th. Sulham & River Pang. 10 people and 1 dog turned out on a fine spring day, for a walk through some of the leader, Alan Brickstock's favourite woods and meadows: at Sulham and along the River Pang. One patch through a field where horses are kept was deep in mud, but everyone refused an alternative, and gallantly waded through! We were rewarded with 81 species of plants, including Goldilocks and Early Dog-violets early in the walk, some fine Marsh Marigolds along the Pang, and further on Petty Whin and Lesser Gorse, both on a little patch of heathland which has fortunately survived intact in the corner of a large meadow.

May 20th. 17 people met Bill Havers, the warden, at Homefield Wood Reserve on a bright sunny afternoon. Bill linked this visit with his talk to the society in March on the Military Orchid. This orchid was in abundance on the reserve, and other orchids present included Fly, Butterfly, Common Spotted, Twayblade and White Helleborine. Another very vivid memory is the vast numbers of Garden Chafers everywhere.

May 25th. 10 people were led round Hartslock Reserve by Chris Raper, who warden the reserve (see the article on page 17). They had a superb walk around the whole reserve, in warm evening sunshine. The Monkey Orchids were having a wonderful year (164 flowering plants) and were the highlight of the trip but it was stressed that the site is more than just an 'orchid site'. It has a wide range of very valuable habitats inhabited by a host of rare species, and is a well-used local public amenity with beautiful views over the Goring Gap to the downs beyond.

June 3rd. Rod d'Ayala led 8 people around the Warburg Reserve for a walk, a picnic and the annual mothing night. The Warburg is a frequent venue for the Society, so the group was taken where there is normally no public access. These are areas for reptiles. Tin sheets have been placed in sunny spots for their benefit, and under them were found the reptiles: Adders, which also sat on and around their favourite habitat piles, abundant Slow-worm and a few Grass Snakes. Common Lizards caught the late sun, before they scuttled off as people got too close.

The reserve, managed by BBOWT, is a very special place for all sorts of wildlife. It is one of the few places in Oxfordshire where all four species of "common" reptile can be found, and more remarkably, seen so easily. Most of the areas where the best populations live are off limits for casual visitors. Please do not enter these areas without checking with the warden first. Habitat fragmentation and loss, and persecution are major causes in the decline of reptiles. Too much disturbance of the good remaining habitat would deplete their numbers further.

As darkness fell the annual mothing evening started. Trapping was led by Geoff Martin and Martin Townsend, with 11 members in attendance.

June 10th. Tricia Marcouse, Reserve Warden, assisted by Ken Grinstead, led 13 members of the Society and the BBO Wildlife Trust around Decoy Heath on the fine, sunny afternoon of 10 June. Dragonflies, for which the Reserve is noted, proved illusive. Only a single Emperor and two Four-spotted Chasers were seen but Damselflies were present in swarms in the lower bog area, in all six species were identified. The high point of the afternoon was the discovery of a fine colony of orchids near the eastern boundary of the Reserve. Southern Marsh and Common Spotted with robust hybrids of the two species were present. Michael Keith-Lucas added over fifty species of plants to the Reserve list. These will be passed on to the BBO Wildlife Trust office at Theale.

June 13th. 4 members, including Michael Abraham, enjoyed an evening walk beside the Thames to the S.E. of Marsh Lock at Henley. Over 20 wild flower species, including Comfrey, Gipsywort, Square-stalked St. John's wort and Common Valerian were seen. The best area was where the river turned south towards Bolney Court. A Green Woodpecker was heard and a Common Tern was seen. Dawn Redwoods and Swamp Cypressess had been planted near the car park.

June 18th. The Holies, near Streatley. 5 people led by Alan Brickstock. (John Marshall was scheduled to lead, but he was in hospital at the time.) It was a beautiful hot, sunny day, with a pleasant breeze to cool us – in fact a perfect summer day. Despite this, only four of us turned up to visit this superb chalk downland site. The Common Spotted Orchids in their hundreds made a superb vista, and there were also lots of Pyramid Orchids in flower, as were the numerous large clumps of Deadly Nightshade at the top of the hill. Other interesting species included Common Rockrose, Dark Mullein, Sweet Briar, Thyme-leaved Sandwort and also the minute Lesser Thyme-leaved Sandwort. Sadly two things which I normally guarantee to find in flower here, Dropwort and Sqinancywort, were not to be found on this occasion. A marvellous outing, but what a shame that more members didn't come

June 24th. Sean O'Leary led a small group on Olddean Common to look for Heath Cudweed (*Gnaphalium sylvaticum*) and the rare fern *Dryopteris cristata* (Crested Buckler Fern). The fern proved co-operative, but it was with great relief that the leader found some cudweed in an unexpected spot, pretending skilfully that he knew all along it was there!

July 2nd. 7 members, led by Martin Sell, explored the Whitchurch Hill area, which is relatively unknown to the society. A good list of relatively common plants were seen in the hedgerows, including 2 or 3 very nice stands of Butcher's Broom. A Grey Partridge was observed, and a Linnet sitting on some telegraph wires. Butterflies included numbers of Ringlets.

July 15th. The outing to Rye Harbour Nature Reserve proved popular, with a fully booked coach. Good clumps of Red Hemp-nettle and Sea Pea were seen and photographed. The Least Lettuce and rare

Stinking Hawk's-beard were pointed out by the warden, Barry Yates, and the plants seemed to be doing well – even if both were rather small! It was good to return to this reserve again after 12 years and to visit the bird hides, which were rewarding. There was a Knot near the water's edge and a Hobby was sighted flying over the harbour.

July 22nd. 1 friend and 2 members only attended this nothing night in Padworth Gully. The low numbers were unfortunate, but can be explained by a number of other events booked for this same day – including a rather special wedding!

July 29th. 6 members, 18 BBOWT member and several local residents enjoyed an afternoon at BBOWT's Inkpen Common reserve led by Malcolm Storey. Repeated thunder while the group was assembling, did not bode well, but the rain mostly held off and we walked in sunshine. Much scrub has been removed from the reserve in recent years and the heathland is now kept open by grazing: two horses and several cattle were in evidence. The group was pleased to see all three Heathers, as well as few late-flowering Heath Spotted Orchids. One of the site's rarities is the Pale Dog Violet which was in fruit, but surprisingly easy to recognise. The small mire is now fenced to keep the cattle out, and provided a good show of Bog Asphodel and a few Meadow Thistles.



Bog Asphodel
Nartheceum ossifragum

August 8th. An evening walk was enjoyed in the Checkendon area by 3 people. A large number of Hornbeam trees were seen in fruit, and other plants seen in the wooded areas included Vervain, Starwort, Enchanter's Nightshade, Water Pepper, Pendulous Sedge and Policeman's Helmet. The arrival back by Checkendon church was greeted by oncoming darkness, the clock chiming nine and the flight of several unidentified bats.

August 12th. Michael Keith-Lucas led a party of 10 people on a walk on Lodge Hill, Bledlow on a warm Saturday afternoon. This area is a little further afield than a normal Saturday excursion and has not been visited by the society since 1988. Many of the typical chalk grassland plants were going over, but the list included Yellowwort, Thyme-leaved Sandwort, Wild Candytuft, Biting Stonecrop, Common Rock-rose, Wild Thyme, Dark Mullein and many other goodies!

August 26th. Peppard and Kingwood Common. This joint walk with BBOWT began in the rain. The 11 hardy (or foolish) souls were duly photographed, getting wet by the local paper. Rod d'Ayala lead the group from the meeting point in the middle of Kingwood Common, across the common, onto Peppard Common and back via the Woodland Trust managed Peppard Wood. Mostly it rained and the wildlife remained hidden. In the past Kingwood Common was open grassy heathland. The Nettlebed Commons project, managed by BBOWT, has been clearing trees, scrub and dense stands of head high Bracken to re-create this rare Oxfordshire habitat. Peppard Common has remained more open, and was a more mixed landscape of both heath and other grassland (chalk and neutral). Today much of it, too, is covered by trees some of which are being cleared to extend the surviving areas of open habitat. At the end of the walk it stopped raining, and the sun came out.

Sept. 9th Wittenham Clumps. 7 members enjoyed a walk around Wittenham Clumps lead by Malcolm Storey. The highlight was the bird hide overlooking the lake. While the botanists marvelled at the abundance of Water Soldier, the zoologists trained their binoculars on a Kingfisher half-hidden in an overhanging tree on the opposite bank.

Sept. 24th Davenport Woods Fungus Foray. This joint foray, in conjunction with Reading Fungus Group, took place as so many forays have done this year: in pouring rain. It was definitely was not for the faint-hearted! Despite the weather, a group of stalwarts found 56 species in the morning, including *Coprinus acuminatus*, *Hydnellum concrescens* and *Simocybe centuncula*. A smaller group in the afternoon could find only 28 species in a different area, which had mainly conifers rather than the mixture of deciduous trees, largely Oaks, of the morning.

In addition, 4 bird watching meetings have been led by Martin Sell.

Dec. 11th. Theale Gravel Pits (3 people);

Jan. 23rd. South Coast (2 people);

May 6th. South Coast (22 people)

and May 10th. Theale Gravel pits – a dull rainy evening, with patches of sunlight. Nightingales were heard and a Hobby seen. (6 people)

Meanwhile, the Society looks forward to another varied and interesting programme in the coming year.

WEDNESDAY AFTERNOON WALKS

Alan Brickstock

The weather for the walk at Ashampstead in April was yet again not too kind, raining most of the time, although not too heavily. Even so, it was a nice walk, enjoyed by seven people and three dogs. As a result of the weather, the walk was shortened somewhat. As usual Ken treated us to some local history. The church at Ashampstead has some fine old murals, plastered over in the Reformation, and now partly cleaned off. The owner at Bloreng House invited us into her garden to see the extraordinary folly. This was originally a coach house, added to by various owners to make it into a folly, now used as a garden, complete with sundial, a statue of St Francis and a large painting covering the outside of one wall. She explained that the house name was after a mountain in Wales, near Abergavenny. (The Bloreng is currently in the process of SSSI notification as the best grassland fungus site in the Principality – Ed.) 44 species of plants were recorded in the rain! Apparently I left too soon for the highlight of the day – the remainder were invited into another house for tea and cakes!

The Cold Ash walk in May produced a better list of 85 species, including Bog Stitchwort, Bilberry and an exceptionally large number of Shining Cranesbill plants. One interesting observation was a Green-veined White butterfly.

We had a pleasantly cool day for walking at South Stoke in June, cloudy and somewhat windy. Sadly there were only five people plus two dogs to enjoy the walk, on which we found exactly 100 species of plants, plus one Red Kite. Part of the route was along Popes Way, to Littlecote House, an old secret Catholic meeting place. Interesting plants included Pepper Saxifrage, White Horerhound, Nodding Bur Marigold, Ivy Leaved Toadflax, and a large number of Caster Oil Plants along a driveway.

Again 'five plus two' for the July walk round Waltham St Lawrence and White Waltham, on a hot sunny day. Fortunately there was quite a lot of shade, except on a very hot stretch of road walking. 72 species included Small Bugloss, Stone Parsley, and Corn Spurrey.

'This a horrible walk' was Ken's introduction to the walk at Shinfield on a warm, pleasant day in August – not an encouraging opening! Eight people and two dogs this time. This was certainly not the most scenic of our routes, although there were some nice stretches. It was interesting to see how things have changed, not for the better since Mary Mitford's day. Most interesting finds were lots of Wayside Cudweed and a variety of Umbellifers: Stone Parsley, Fools Parsley and Rough Chervil.

The September walk at Cane End – Keen End in the 18th C. was undoubtedly the best of the year. A fine, warm day, with lots of excellent woodlands. Fittingly, there were 11 people and 2 dogs to enjoy the day. 73 species of plants included Wayside Cudweed, Sharp-leaved Fluellen, Common Hemp-nettle, Fool's Parsley, and an amazing amount of Sanicle along one roadside.

Our thanks are due again to Ken for arranging these walks, and not only leading them, but surveying them several times in some cases.

MEETINGS (1999–2000)

Catherine Butcher

The first lecturer of the season, on 28th October 1999, was Dr Michael Keith-Lucas who spoke to 34 members on "Forest Canopies, Catastrophes and Civilisations in Central America". He had accompanied a group of scientists from the Natural History Museum on an expedition to Belize. Each had a different speciality and his was to take cores for pollen analyses. Slides were shown of rare plants, epiphytes and trees. Evidence of Mayan civilisation was everywhere. At the moment Belize is relatively unspoiled and is a delight with its colonial architecture and wildlife.

On 11th November 26 members were present to hear Dr Beth Okamura of Reading University speak on "Freshwater Invertebrates". She gave a fascinating lecture on marine and freshwater invertebrates, showing slides of colonies of barnacles and the diverse forms that occur in marine Bryozoans. Evidently freshwater bryozoans differed in shape and were larger. They could be a real nuisance to water treatment systems blocking water pipes. Rainbow trout fisheries were also affected and fish farmers were looking for ways of controlling this. There was strong evidence that migratory water fowl were carrying statoblasts from the Continent.

There was a large attendance to listen to Dr Ken Norris's lecture on "Islands in the Sun – Conserving some of the World's Endangered Birds". Members were informed that the population of the Magpie Robin from the Seychelles had almost halved because of cats, but with positive intervention, i.e. provision of bird tables and extra food, numbers had increased. Another endangered bird was the Corsican Nuthatch. Dr Norris and his team had taken DNA from this bird from which they could gain information with regard to conservation. Finally, he spoke about the Wyre Bird from St Helena, one of the most isolated islands in the world, where numbers had declined without any apparent reason.

On January 13th 2000, Linda Carter, one of our members, gave a most interesting lecture to 48 members on "The Yew – a Tree with a History". Linda is particularly interested in churchyard flora, especially Yew trees, and has visited most of the churchyards in Berkshire. She informed us that the Yew tree, known from early civilisation, was associated with life and death. Wood from the Yew had been used to make longbows in the time of William the Conqueror and it was believed that King John signed the Magna Carta under the Yew tree at Wraysbury and not Runnymede. She then introduced Mr Tim Hills, a retired schoolteacher from Bristol, whose excellent photographs of Yew trees were on display.

The advertised speaker for 27th January was Mr Mike Read, but as he was unable to attend owing to illness, Mr Gordon Langsbury, the well known photographer kindly took his place at the last moment, giving a most interesting lecture with slides on "Lapland Summer". He had spent a month touring the Arctic Circle photographing Arctic breeding birds. He commenced his tour in Finland and went to Veranger Fjord and thence to the Edderoya Nature Reserve in Norway. There were many super slides shown, e.g. Green Bunting feeding their young, a Lapland Bunting's nest lined with Reindeer fur containing ten eggs and a Temminck's Stint displaying. This event evidently only occurs one day a year and to the best knowledge of Mr Langsbury, this was the first time ever recorded on film.

Mr Nigel Phillips, senior reserve manager of Warburg spoke on "Wild Flowers of the Med" On 10th February. He had spent a cycling holiday with his family to the Costa Brava to investigate the flora of the Mediterranean. They then travelled to Majorca in the Balearics and were impressed by the stunning landscape. There they saw many rare orchids such as the Mirror Orchid, Bertoloni, Bee Orchid and Tongue Orchid. Lastly they visited Greece and Crete where Creeping Bell Flowers grew in abundance, together with Wild Tulips, crocuses, irises and orchids.

We welcomed Dr Peter Brandham on February 24th who spoke on "Patterns in Plants, Forms in Flowers". This was his third visit to the Society and he asked members to carefully observe the plants and flowers shown. There were photographic rules to be obeyed, but the variations within these parameter were almost infinite. There was mirror imaging, five flower curves and simple straight lines with top thickening. Other slides showed star shapes which were sometimes leaf arrangements. Cacti appeared in radiating lines coming in from the edge of the picture. Dr Brandham explained that this whole process was not easy. It was always an effort and exacting to achieve, but he knew when the

whole composition had the right "feel". His lecture ended with a little pseudo-botany, turning flowers into strange monsters and other fantasies. This was a most unusual and stimulating lecture.



Military Orchid
Orchis militaris

The final meeting took place on March 9th when 47 members attended to listen to Mr Bill Havers lecture on "The Military Orchid". He had been managing a reserve near Marlow since 1984 and was one of the first to spot the Military Orchid, a plant which is mainly confined to the Chilterns. We learned that the Military Orchid does not appear to have any special requirements and has a built in ability to adapt itself to climatic conditions. Habitat, propagation and the management of this interesting plant were discussed in detail with the aid of graphs and slides. Evidently only a third of the flowers got pollinated and a fungus is required to break down the seed coat. The life cycle of the Military Orchid was explained to members and Mr Havers stressed the importance of avoiding over-management of the reserve.

A Christmas Party was held when members brought a plate of food with tea and coffee provided by Heather Baker and Ivy Brickstock and also a Members Evening with contributions by Tina Gower, Environmental Outreach Officer on Biodiversity Action Plans whereby community groups and individuals would be asked to record sightings of the Song Thrush, Stag Beetle and Glow-worm. Yvonne Robertson showed slides of Polar Bears, Kit Brownlee from the Dept. of Food Science at the University also showed slides of moulds found in various foods. Finally Shirley Townend read some amusing prose from the book "And Now All This".

We have had a successful year. We are most grateful to Mr Alan Burt for organising the talks. The introduction of a coffee break at meetings has been most welcome, giving members an opportunity to talk to friends either in between or after the lecture. It has also been a pleasure to meet in comfortable airy premises and we look forward to another year of lectures and excursions.



Stag Beetle
Lucanus cervus

THE FISHLOCK PRIZE

Fishlock Prize has not been awarded this year.

MEMBERHIP

Norman Hall

It is traditional to list new RDNHS members in The Naturalist. The following members joined in calendar year 2000:

Mrs J. S. (Jennifer) George
Ms C. (Tina) Gower
Mrs S. V. (Susan) McCormick
Mr A. S. C. (Allan) Morton
Miss S. (Sarah) Priest

Ms K. L. (Karla) Proudler
Mr P. Vickers
Mr B. J. (Bryan) Walker
Mrs K. F. Summers rejoined the Society.

SOME MYCOLOGICAL RAMBLINGS

PRESIDENTIAL ADDRESS – by Alan Brickstock

Fungus fruiting bodies tend to be quite short-lived, Gill fungi rapidly rotting away, and even hard Bracket fungi usually disintegrating due to attack by maggots and the like, so it may be a surprise to find that a few very old specimens have been found in recent years.

The 'Iceman' who died over 500 years ago on an Alpine glacier had three fungal objects. Two of these were shaped pieces of the Birch fungus, *Piptoporus betulinus*, mounted on a leather thong. Found in his girdle bag was a large quantity of material prepared from the bracket fungus *Fomes fomentarius*. This fungus has long been known as a long burning tinder material, so it could have been used for this purpose. It has also been used as a styptic or wound compress, so it may have been for these purposes. The reason for the *Piptoporus* objects can only be speculated on. Possibly they were some sort of medicinal objects, much as *Daldinia concentrica* (King Alfred's Cakes or Cramp Balls) has been thought to ward off cramp if kept under the pillow or worn around the neck?

A tiny mushroom, only a few mm across, has been found in a piece of amber 90 million years old. It appears similar to those belonging to the *Marasmius* group.

However, both of these are comparative youngsters. An article in Nature in June 1999 reported the finding of some Ascomycetes in Lower Devonian Rhynie chert, 400 million years old. They contain characters morphologically identical to those found in modern pyrenomycetes, the oldest such evidence by about 250 million years. This age is that frequently estimated as that at which fungi first appeared, so these are very elderly specimens indeed.

After the oldest, how about the largest? A number of readers have sent me cuttings from a variety of newspapers about a giant specimen of *Armillaria ostoyae*, one of the 'Honey Fungus' species, found in Malheur National Forest in eastern Oregon. The latest to carry the story is Gardeners' World.

The mycelium from this monster covers an area of 2200 acres (880 hectares), and extends 3.5 miles across, and going an average of three feet into the ground. It is estimated to be at least 2400 years old. This beats the previous largest specimen of this species, found in Washington State in 1992, and covering a mere 1500 acres. They had to be in America!

Some uses of fungi

Many uses of fungi, such as in making bread, fomenting wine and so on are well known. However, there are many more less well known uses, and more are continually being found.

A number of agricultural pests can now be controlled by using fungi. *Beauveria bassiana* is being used to control Colorado potato beetle, and others are used against spittlebugs and aphids. Some species of

fungi invade the ovaries of insects, including the malaria carrying mosquito, and render them sterile by totally inhibiting egg production.

A Cancer cure from a *Xylaria* species?

An important chance discovery may lead to a new treatment for breast cancer. A Romanian student, was analysing a group of chemicals called cytochalasins, extracted from a *Rosellinia* species. In order to test their cancer fighting abilities, she was using a drug called Tamoxifen, which binds to cells containing high levels of oestrogen, such as occur in breast cancer: it was hoped that the Tamoxifen would guide the cytochalasin to the cancerous cells. However, Tamoxifen is made up of two components, one of which is thought to cause secondary cancers as a side effect.

By chance, she left some Tamoxifen mixed with a particular cytochalasin while on holiday. On returning, she found the mixture contained some white crystals, which proved to be the purified safe form of the drug. This purification process is now being used commercially. However, so far it has not proved possible to bind the cytochalasin to Tamoxifen, although there is confidence that this will be achieved within the year.

It has been discovered that the Common Inkcap (*Coprinus atramentarius*) contains an enzyme that removes rogue colours in the wash. Some soap powders already contain polymers to mop up escaped dyes, but laboratory tests have shown that the fungus enzyme is more efficient than any other known substance.

A number of fungi are able to degrade various environmental poisons. The 'white rot' fungus, *Phanerochaete chrysosporium* can degrade a wide range of pollutants, including pesticides, bleaching wastes from the paper industry and TNT contaminated dyestuff effluents. Other species can degrade paraquat and benzaldehyde, while others can take up uranium, radium, thorium, and various other heavy metals.

Sick or dying trees provide shelter for birds, mammals and reptiles. In many forests across the US, loggers harvest trees showing the first signs of fungal infection ... 'in many places there aren't any sick trees left'. In order to try and provide suitable wildlife habitats, forest managers have tried blasting off the tops of trees with explosive charges, or burning their roots. However animals don't find artificially damaged trees so attractive.

The heartwood of Western Larch trees is normally rotted by *Phellinus pini* or *Fomitopsis pinicola*. American biologists hope that inserting dowels soaked in liquid cultures of these species into holes drilled in trees may be more successful. Wouldn't it be simpler just to leave some naturally infected trees?

***Chondrosterium purpureum* can be useful!**

The 'Silver Leaf' fungus, which can be a scourge on plum trees, is being used commercially in Canada, The Netherlands, Switzerland and New Zealand to control stump regrowth in American bird cherry, which has become a weed in many forests, as well as other hardwoods.

The fungus appears to be able to live as either a parasite or a saprophyte. It is applied to the stumps, under the brand name BioChon, as a mycelium suspension.

In a trial in Holland, 112 stumps of recently cut Poplars were infected. Next spring a few of the stumps did not sprout, but by summer it appeared to have been less effective. However, by late autumn, stumps which had sprouted, had wilted and died. Eventually all the stumps died. Only 15% out of 54 untreated control trees died.

And some unfortunate effects of fungi

An unwanted species in my garden, and in many other people's too

A most unwelcome fungus which appeared in my Garden and also on our allotment, in 1999 and again this year, was *Phytophthora infestans*, the fungus which caused the great Irish potato famine. This also attacks Tomatoes, and destroyed many of my tomatoes in a matter of two or three days. We read of the speed at which the Irish famine spread, but only now do I appreciate the amazing speed at which

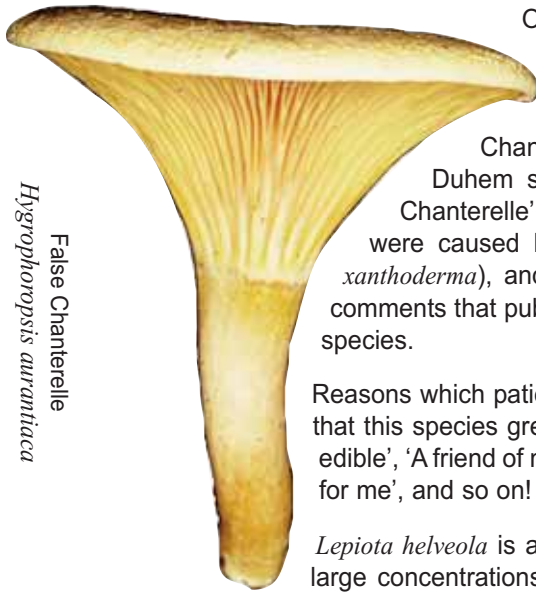
whole plants, fruit and all, were destroyed – particularly galling as I was going to have a bumper crop last year. By the time I realised what was happening to my plants, it was too late.

Spraying with Bordeaux mixture is highly effective if applied as soon the first symptoms are seen. But wash the tomatoes before eating!

Fungus Poisoning Accidents

The Marseilles anti-poisons unit reported a total of 206 cases of fungus poisonings (404 patients) requiring medical or hospital treatment in 1994 and 187 cases (371 patients) in 1998.

In 1994, 286 were due to errors in identification by amateurs, 65 cases intolerance to edible species and 45 'domestic accidents': these were mainly due to children eating fungi in their gardens. There were 2 errors by commercial concerns and, amazingly, 4 tentative suicides. Half of the cases were due to eating unidentified fungi – how mad can one get?



False Chanterelle
Hygrophoropsis aurantiaca

Of identified species, 100 cases were caused by 'Pleurotes de l'olivier' (*Omphalotus olearius* or *Clitocybe olearia*). According to 'Le petit Guide, Champignons' this is due to confusion with the False Chanterelle, *Hygrophoropsis aurantiaca*. Courtecuisse & Duhem say 'Frequently! But unforgivably, confused with the Chanterelle'. Fortunately this Pleurote is rare in Britain. 33 cases were caused by 'Agarics jaunissants' (or Yellow Stainer, *Agaricus xanthoderma*), and 22 cases were due to *Boletus satanus*. The article comments that public information is particularly important for these three species.

Reasons which patients gave for eating their fungi included, 'I didn't think that this species grew in our region', 'I had seen on television that it was edible', 'A friend of my cousin knows his fungi well, and had gathered them for me', and so on!

Lepiota helveola is another species which is highlighted, since it contains large concentrations of phalloidins, the toxins present in the Death Cap. This species belongs to the same family as the very edible 'Parasol mushrooms', and illustrates the need to avoid small parasol look-a-likes. 'Le petit Guide' also warns of this species, and says that it is vital that one should not eat any *Lepiota*'s with a diameter of less than 10 cm.

There is evidence that 'sick building syndrome' is caused by fungi growing in ventilation systems, under carpets and on walls. Investigation in schools where teachers complained of blocked or runny noses, and itchy or watering eyes, has found high concentrations of *Penicillium* and *Stachybotrys* moulds. Complaints stopped after work on the air conditioning systems.

Good edible species can cause unexpected allergic reactions in some people. An office worker in a firm which packed dried mushrooms, although he never had direct contact with them, experienced severe asthma attacks at work, but never away from work. He was shown to be allergic to inhalation of dust from dried *Boletus edulis*, but not to dust from the other species the firm handled.

In another case, a cook who cooked large amounts of this species had severe asthma at work, and also had various severe symptoms after eating it. A housewife was also ill after eating it.

Many years ago, a friend of mine experienced glandular swellings after eating a well-known brand of mushroom soup. On investigation he found that the soup in question was made from *Boletus edulis*, not from an *Agaricus* species.

The Parasol mushroom, *Lepiota procera*, is in the view of many people one of the best edible species. The Shaggy Parasol, *Lepiota rhacodes*, is also good to eat, but according to various books it can produce stomach upsets in a few people. However, Gordon Crutchfield finds the opposite! He says that *Lepiota rhacodes* is, in his opinion, even tastier and has the added advantage that it has less tendency to maggot

infestation. But he says he does find it very indigestible, producing 'repeating' type symptoms, like many people suffer from cucumber or green peppers.

A man admitted to hospital with feverish and Pneumonia-like symptoms was treated with oxygen and intravenous drugs. Incubation of biopsy samples grew *Penicillium janthinum*. He had apparently disposed of a carton of orange juice whose surface was covered with fungus, and he had inhaled dust from this! Moral: take care when disposing of moldy food!

The dried spore mass from puffballs has for long been used as a styptic wound-dressing, and in particular for stopping nose-bleeds.

However, inhalation of puffball spores can, on rare occasions, lead to a lung disease, Lycoperdonosis. Eight adolescents who attended a party in Wisconsin, during which they inhaled from puffballs, contracted respiratory illness. Within three days they all developed coughs, fever, with temperatures up to 103°F, shortness of breath and fatigue. Five of them required hospital treatment, 3 of them having lung biopsies. After treatment, all recovered within one to four weeks.

Because of fears that the boom in gathering fungi for food may lead to more fatalities, New Cross Hospital, in conjunction with Kew, are producing a CD-ROM for use by medical centres and GP's. It will contain images and details of about 100 potentially dangerous species.

Gourmets corner.

In 1995 the magazine 'France' reported the invasion of cheap and worthless truffles from China. These cheap mail order imports are virtually tasteless, and can only be distinguished from the genuine *truffle noir* by microscopic examination. Unscrupulous vendors have been disguising the worthless variety by scenting them with small quantities of the real thing.

'France' also reported the planned invasion of the true truffle from Tasmania. The Tasmanian climate and soil are almost identical to those of the truffle growing areas of Europe, and Périgord Truffles of Tasmania (PTT) has developed two small plantations near Hobart. By 2001 their production is forecast to be around 12 tonnes per annum. French Gourmets may be able to look forward to truffles in the summer, as well as in the winter.

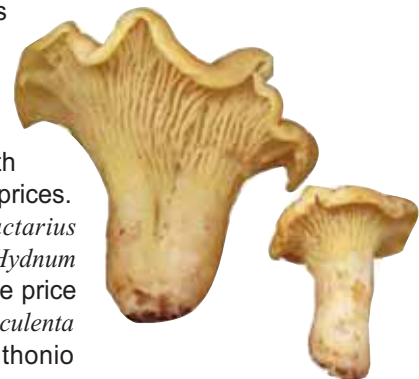
After years of research, Japanese scientists have succeeded in cultivating *Tuber aestivum* truffles in a mixture of beer yeast, Soy bean bran and oak dust, inoculated with truffle spores and kept at 24°C for 40 days. 100 golf ball sized truffles were produced. In comparison, one French method takes seven years to produce truffles!

Truffle hunting can be dangerous! An article in the Sunday Telegraph on Truffle hunting includes the advice on hunting in Italy: don't try to do it independently – the licensed trufflers are a fierce lot. Poisoning of rival hunters' dogs is common practice. There were 40 cases of this in 1997, while fights and even murder are not unknown!

The Morel
Morchella esculenta



Commercial picking is big business, with a number of species commanding high prices. In West End London stores, *Lactarius deliciosus*, *Cantharellus cibarius* and *Hydnum* species are on sale at £30 per kilo. The price of fresh *Boletus edulis* and *Morchella esculenta* can be as high as £100 per kilo. Antonio Carluccio's brand of dried Ceps sell at £5.20 for a 60gm packet and dried *Craterellus cornucopioides* at £188 per kilo! In Waitrose supermarkets imported dried Chanterelles cost £149.50 per kilo and dried Morels £237.50 per kilo. No wonder many people are attracted to gathering wild fungi.



Chanterelle
Cantharellus cibarius



Turban Fungus
Gyromitra esculenta

But beware!

In a two year study, the US Food and Drug Administration found that 21% of Morel and 15% of wild mixed mushrooms offered for sale were contaminated with toxic fungi. The mushrooms were imported and contained the toxic species *Verpa bohemica* and *Gyromitra esculenta*. The latter is toxic, despite its name!

A wild cauliflower mushroom bought for £36 at Harvey Nichols in Knightsbridge was contaminated with rodent droppings and hair, and infested with a centipede and larvae. The store admitted selling food unfit for consumption and was fined £1,500 with £2,083 costs ... the customer was an off-duty environmental health officer. Anyone who has eaten this species will know of the difficulty of cleaning it adequately.

Miscellaneous oddities.

Super sniffer dogs!

A Surrey firm has three dogs, Sammy, Scrappy and Goldie who have been trained to sniff out dry rot. They can detect *Serpula lacrymans* at an early stage, checking a five bedroomed house in less than an hour. Dogs are wonderful!

Woodpecker fungus

Next time you see a branch or tree with a cavity or woodpecker holes in it take a closer look and you might find an interesting polypore. *Inonotus nidus-pici* is a resupinate annual species which has a yellowish-green to olivaceous pore surface when fresh and is brown when dry. The fungus lines cavities in a variety of deciduous trees but most commonly in Oak. Apparently the fungus often lines the roof of cavities with nesting woodpeckers and parts of the fungus frequently become dry and brittle and fall to the ground. An interesting question is whether the woodpeckers assist in dispersing the fungus or whether the nest environment favours growth. The fungus is widely distributed in Europe and has been recorded in France and Germany. There are no reports from the UK but it is worth looking out for. You could also persuade any birdwatching friends to keep an 'eye open' for it.

People often enquire about the control of Honey Fungus. A paper by Johnathan West and Dr Roland Fox discusses the control of *Armillaria*, and concludes that few chemicals were effective, and even the best, fenpropidin, was inadequate.

Names

"... the English names ... have not always been quite the same as those in general use. There has, however been far less stability in scientific nomenclature and very many changes in both generic and specific names have been made during the last twenty years, especially perhaps within the last decade." All fungus forayers know this only too well, but this is not a quote about fungi! It is from the preface to the 1945 edition of the classic book on 'The Butterflies of the British Isles' by South.

NATURAL HISTORY SERVICES PROVIDED AT THE MUSEUM OF READING

David Notton

Curator of Natural History

Reading and District Natural History Society has long had an important partnership with Reading's museum service ever since the foundation of the Society in 1881 by Dr Joseph Stevens, the first Honorary Curator of the Museum. The purpose of this article is to continue to foster that relationship by outlining the range of services provided by Reading Museum Service today which are aimed at supporting the activities of the Society.

The Museum of Reading offers learning experiences that are fun and tailored to families, groups and specialists alike, both formal and informal and including the chance to handle real objects from the collection. The Museum building is at the heart of Reading in the Town Hall complex. It has been extensively refurbished, with seven new galleries, including natural history, which opened in March of



Joseph Stevens, founder of this Society and first Honorary Curator of the Museum.



The new Natural History Gallery

the development of Reading's environment, landscape and wildlife, using hundreds of geology and natural history specimens, many of which were collected and donated over the years by Natural History Society members. The focal point is the Red Deer stag from the Royal herd at Windsor, given in 1911 by King George V.

The gallery is purpose-built to accommodate school education sessions with a central assembly area and interactive points around the edge of the gallery for close study and handling of objects. A wide selection of objects can be handled, so this space is particularly suitable for family groups. A multimedia computer point in the gallery allows in-depth exploration of selected objects from the gallery: you can find out how the Red Kite came to Reading and hear the sound of rutting Red Deer!

2000, jointly funded by Reading Borough Council and the Heritage Lottery Fund. I hope you enjoy it!

Green Space – the new natural history gallery

This colourful new gallery, opened in March 2000, traces



Karen Knight, Director and David Notton toast the opening of the new Natural History Gallery.

Box room - natural history objects to handle and investigate, especially for families

The exciting, interactive Box Room provides the opportunity to handle real objects from the Museum's diverse collections. Here you can stroke Bertie the badger and examine a bed bug in detail under the high-powered video-microscope. Visitors are encouraged to explore first hand such questions as:

- What stories can objects tell us?
- What clues can we find from the telltale marks on objects?
- Who are the people behind the objects?

The Museum's Education Loans Service is based in this gallery and visitors can see the loan boxes that give the gallery its name on open storage. These provide a regular service to schools and other organisations throughout Berkshire. Natural history items are popular loan objects for artwork, imaginative writing and environmental awareness. Additional natural history items from the loan boxes can be seen by the public on request, please ask the gallery staff.



A young visitor gets acquainted with a new friend



The Curator of Natural History attempting to identify an object

Museum Surgery and Enquiry Service

Every Thursday afternoon from 2–7pm is your chance to talk to staff about the Museum's collections and to ask for help in identifying your interesting objects. Natural history advice is available when I'm on the rota, so if you have a natural object to bring in please phone up to check I'm on duty. I can also take enquiries by phone or letter – see contact details below.

The Study

The Study is a quiet area for members of the public to carry out in-depth study and other creative projects using the collections. In this space you can examine objects which are not on display including the extensive insect collection which is stored nearby. Equipment such as binocular microscopes and insect identification guides are kept here and are available for use by visitors.

Other parts of the collection, for example, shells can be brought in from the Museum's out-of-town storage by request. Recent uses have included a visit by the Berkshire Network for Invertebrate Conservation to study the insect collection, also a Year of the Artist project 'Brilliant Creatures' sponsored by Southern Arts to produce jewellery inspired by the insect collection. Visits are welcome from groups or individuals, specialists or beginners, naturalists and artists alike. Please phone for an appointment and to discuss how I can help with your project.

The Study was well attended by members of the Society for its official launch on 18th January in a fitting tribute to the life of Brian Baker, former Deputy Director of the Museum and Curator of Natural History and a dedicated member of this Society. Thanks are due to Heather Baker for her



The Study in use: using microscopes to study the insect collection



The new microscope for public use: looking at slides in the Study

Much of the collection dates from the 1900–1920's. The entire slide collection is held in the Study for ease of access by visitors.

Access

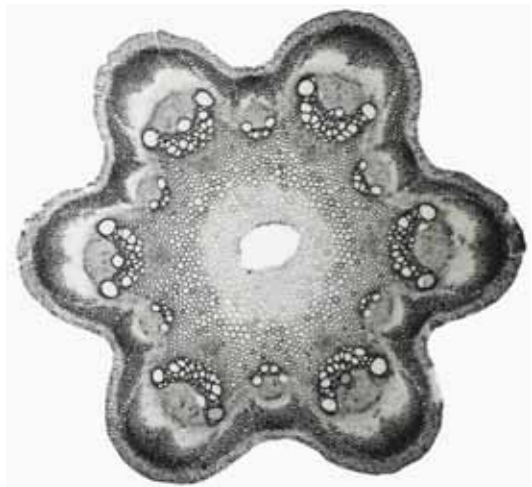
There is level access to the Museum through the new entrance. Access to the galleries has been improved by the addition of a glass lift accessible on the ground floor. Induction loops are provided with the audio-visual features in the galleries. Tactile signage is provided throughout the building and each gallery has its own icon to help you find your way around the building. Accessible toilets are on the ground floor behind the reception.



Admission to the natural history gallery is free

substantial financial assistance in buying a new microscope for use in the Study.

The new Leica transmitted light microscope is for looking at very small objects or thin sections mounted on glass microscope slides - its purchase is very significant because it makes the Museum's microscope slide collection accessible, which previously could not be looked at. This collection is an extensive and historic collection of some 2,500 glass slides with a diverse range of objects from the Natural World. It includes intricate and minute algae with glass shells (diatoms), an extensive collection of smaller invertebrates such as insects, mites and false scorpions, thin sections of plants (see picture below) and even a sample of tuberculosis bacteria.



Thin section of a *Clematis* stem as seen using a microscope

Opening hours

The Museum of Reading is open: Tuesday to Saturday 10am–4pm with Thursday late night to 7pm; Sunday and bank Holiday Mondays, 11am–4pm.

Admission to the galleries, including 'Green Space' the natural history gallery, is free.

Contacting the Museum and/or the Natural History Curator

For general information, group bookings and education loans or sessions ring 0118 939 9800. Information may also be found on the museum's website: www.readingmuseum.org. For natural history enquiries or to book the Study area, please phone David Notton on 0118 939 9831 or e-mail david.notton@reading.gov.uk.

Photographs: Copyright © 2001 Museum of Reading.

A MUTANT FOXGLOVE

Malcolm Storey

It is always worth getting known as the local naturalists. People often ring with something interesting, as happened to us last June:

“There’s a strange Foxglove in our garden!”

We went round, to be greeted by a Foxglove (*Digitalis purpurea*), ordinary-looking except for the top flower. In place of the normal slightly asymmetric tube was a symmetrical open cup, held vertically like a sunflower. The petals were the same bright cerise with deeper white-ringed spots that one remembers from peeking inside Foxglove flowers as a child. In the centre of the flower was a cone of scales, reminiscent of a dahlia deadhead.



Radiating from this cone were 17 stamens, mostly in pairs. A normal Foxglove grew beside it.

The mystery plant turned out to be a genetic form caused by a single recessive gene at a locus called "centroradialis". The Foxglove normally forms flowers at intervals around and along the flower spike. Towards the tip, these get progressively smaller and only partially developed until they peter out. However, the mutant form goes out with a bang rather than a whimper! The spike ends with a monstrous single 'flower' which is actually a group of full-sized flowers fused together. From the shape and markings, there looked to be about 18 joined flowers in our plant.

Similar forms are known from other members of the snapdragon family (Scrophulariaceae), so maybe the mutation arose before the different species evolved.



The reverse of the flower

SEHIRUS DUBIUS (OR SHOULD THAT BE DUBIOUS?)

Chris Raper

In 2000 Bernard Nau, an expert on UK bugs, visited Hartslock to look for a rare shieldbug called *Sehirus dubius*. This had been found in previous years – feeding on the Bastard Toadflax plant (*Thesium humifusum*). The bugs are actually quite common on Hartslock and Bernard didn't have much trouble in finding plenty. He took away a few of these for closer examination and rather to his surprise found that they were in fact a very similar species (*Sehirus impressus*) – a species that had never been recorded in the UK! On further investigation he also found that the UK specimens in the Natural History Museum labelled *dubius* were also *impressus*.

And here by hangs a cautionary tale – don't assume that something is what is first appears – especially in the world of entomology!



Sehirus impressus

HARTSLOCK – A LOCAL SUCCESS STORY

Chris Raper (Hartslock Volunteer Reserve Manager)

Introduction

I am sure many of you will be familiar with Hartslock Nature Reserve, near Goring-on-Thames, but for those members that have never been I will start with a brief description.

Hartslock Nature Reserve is a beautiful area of unspoilt chalk downland overlooking the Thames at Goring. It was purchased by BBOWT (then BBONT), the local Wildlife Trust, in 1975/76 and is managed by its staff and volunteers. The reserve is part of a Site of Special Scientific Interest (SSSI), which comprises the reserve and a much larger area of mixed Yew and broad-leaved woodland.

The habitat is extremely species-rich, having over 2000 recorded species of animal and plant, many of which are very rare. Of the 80+ rarities the most famous is the colony of Monkey Orchids (*Orchis simia*), which, in the UK is only known from two other localities in Kent. Other rarities include Downy-fruited Sedge (*Carex filiformis*), Bastard Toadflax (*Thesium humifusum*) and the Adonis Blue butterfly (*Lysandra bellargus*).

The Monkey Orchids

The Monkey Orchid colony has been known since the 1620s and, although the plants have always been very local in the UK, they probably grew on



Monkey Orchid at Hartslock

any reasonable quality chalk downland between the Goring Gap and Marlow. Exact distributions are difficult to calculate because the scientific and common names changed over time and in the early 19th century Monkey Orchids were included with Military Orchid (*Orchis militaris*) and Lady Orchid (*Orchis purpurea*) under one name – *Orchis militaris*.

It seems that the majority of colonies died out through changes in land use – e.g. different agricultural practices and house building caused by the growth of towns and villages. We know of strong colonies in: Caversham (above The Warren), existing until the early 1800s; Mapledurham, probably ploughed or scrubbed over in the middle 1800s; and Whitchurch, which existed until the late 1800s when it was burnt.



Lady Orchid

By the turn of the century Hartslock was probably the only site left in the Thames Valley but it is likely that the colony was strong despite the attentions of plant collectors. Before the war there were up to 200 flowering plants recorded but the site was damaged by timber extraction and ploughing in the early 1950s, during the post-war push for greater food production. Thanks to local botanists, many of whom were Reading & District members, the remaining plants were looked after and monitored until BBOWT entered the scene in 1976.

During the 1970s and 1980s several poor years saw the population decline from an average of 30 flowering plants to a low of 5. They recovered a little but it was decided that some drastic action was needed and in 1992 we erected a rabbit-proof fence around the entire colony to reduce loss through over grazing. Driving fence posts in through solid chalk on a steep slope was very hard work but it paid huge dividends. At around the same time we set up monthly volunteer-run work parties to tackle small but important management work around the site.

Subsequent years have seen the colony recover (slowly at first but more rapidly in recent years) and now it stands at over 300 plants – with over 200 flowering! A superb testament to what can be done when a small group of enthusiasts get together and put in a little time and effort.

Future projects

Picked specimens feature in most of the UK's herbariums and in a recent study we have tracked down over 300 collected from the Hartslock area between 1790 and 1950. Although collecting ceased to be a major threat many years ago it is still a worrying fact that we hold so many eggs in one basket. With this in mind the Trust has made it a key aim to increase the range of the plants on the reserve and to set up satellite colonies nearby. This work takes a lot of planning and research but we hope to be in a position to try a test planting within the next year or two.

During the orchid flowering period (May and early June) the reserve is looked after by a resident warden. The warden helps guide the many visitors around the site – making sure there are no little 'accidents'. But in addition to this they do very valuable monitoring of our rare plants and animals and this gives us vital information on what we have on-site and which species we need to be aware of when we make any changes in management.

Summary

Hartslock is in very good condition but we are not complacent and we are aware that continued success is dependant on us keeping on top of the management work. If you would like to help out as a volunteer at Hartslock please get in touch with me at the above address, or with Rod d'Ayala at the Warburg nature reserve. We are always in need of an extra pair of hands for either maintenance work during the winter or with stand-in wardening or species monitoring during the summer. We can fit around whatever time you can give from a couple of hours to a whole day.

The Reading & District are having an evening walk at Hartslock on the 23rd May this year. This is at the peak time for Monkey Orchid flowering and it should be a superb trip – weather permitting of course! If you can make it I will see you there.

RECORDERS' REPORTS

Malcolm Storey

The Society has always had active field naturalists among the membership, spanning the full diversity of the natural world. These members have generously contributed the records which have formed the basis of the Recorders' reports in *The Reading Naturalist*. This has generated a valuable source of historical information. Nowadays, biological recording is increasingly computer-based as the accumulated quantity of records becomes inconvenient to handle with paper-based systems. The published lists have always been selective and it is no longer useful to publish long lists of names with little other information. The Reports should continue to report interesting records, and at the same time, provide enough background information to be understandable to the non-specialist.

Please continue to observe and record the wildlife of the Reading area and forward your records to the Society's recorders. They will add the background information, but you can help by giving as much detail as possible of what the organism was doing. For example, how many were there? Was the plant in flower? What tree was the toadstool under? What plant was the insect on? Was it feeding? Did you take a photograph or make a sketch? Then we can publish your observations for the Society's membership.

"RDB" AND "N" STATUS – THE JARGON EXPLAINED

Rod d'Ayala

Some years ago, the Joint Nature Conservation Committee (a government agency) launched a series of publications to document the rarest and most endangered species in the British flora and fauna. These "Red Data Books" listed the relevant species and described what was known of their ecology, the threats to them, the reasons for their rarity and the conservation measures which were needed.

The species included were those which had been found at only a few sites. A common way to record species on a national scale is to plot their presence or absence in 10 kilometre squares. There are approximately 3000 such squares covering the UK (including Northern Ireland, but excluding Eire). Species included in the Red Data Book were those recently recorded in no more than 15 of the 10Km squares. For obvious reasons such species are referred to as "RDB species". The RDB status was subdivided, depending on the risk or threat that the species faced, into: "extinct" (EX), "endangered" (EN), "vulnerable" (VU) or "rare".

To cover slightly less rare organisms, the term "Nationally Scarce" (originally "Notable" or simply "N"), was introduced for species recorded in between 16 and 100 squares. It is sometimes split into "Na" (16 to 30 squares) and "Nb" (31 to 100 squares).

New definitions were developed in 1994 when a new set of international guidelines appeared. These took into account many more factors and introduced revised categories, e.g. "extinct in the wild" (EW) and "critically endangered" (CR). Most "rare" species have been assigned to the "lower risk" category which includes species that are "conservation dependent" (cd) and "near threatened" (nt). This "lower risk" category also includes the "nationally scarce" (ns) species and those of "least concern" (lc). The new system conveys much more information about the species abundance and distribution; for example those in rapid decline, of small and fragmented range, small and declining populations etc. The emphasis has moved from pure abundance to rate of change. This makes the system more complicated but gives a more precise and useful summary of the status of a species. As yet the new system has only been applied to plants, birds and a few other groups.

[The above status terms are used in the following Recorders' Reports. – Ed.]

RECORDER'S REPORT FOR BOTANY 2000

L. I. Carter

The weather this year has not deterred members from turning out to record the species on the many and varied walks with the Society and this is reflected in the selection of species listed below. In addition, a large number of records were submitted from a variety of habitats in south Oxfordshire, as well as from churchyards, roadsides and woodlands.

This year was a spectacular one for Danish Scurvygrass, *Cochlearia danica*. Thousands of flowers narrowly ribboned the sides of heavily salted roads, a special feature of Berkshire. The exceptionally mild autumn resulted in unusually long or the second flowering of some species. Pignut, *Conopodium majus*, flowered in Sonning churchyard at the end of November, thus evading the mower, and the occasional Dandelion still brightened sheltered banks in the town until the snow of the 28th December.



Danish Scurvygrass
Cochlearia danica

MOSSES and LIVERWORTS

Fossombronia pusilla var. *pusilla*

This, the commoner variety, is recognised by the spores having spines often joined by translucent wings.

Side of path, Park Wood, Bisham, 20 Feb 00 (MWS)

Polytrichum piliferum

Frequent in S.E. Berks. Rare elsewhere in our area. Its bright red male "flowers" are conspicuous in spring.

Decoy Heath Reserve, 10 Jun 00 (DM K-L)

Scleropodium purum (= *Pseudoscleropodium purum*)

This very common moss rarely fruits in the UK. Fertile. Lower Common, Bucklebury, 26 Feb 00 (MWS)

FERNS

Asplenium trichomanes Maidenhair Spleenwort

Usually on walls in our area and believed to be increasing but rarely reported by members.

Stratfield Mortimer St Mary churchyard, 18 May 00 (LC)

Dryopteris affinis x *felix-mas* (= *D. x complexa*)
hybrid Male x Scaly Male Fern

Bowdown Woods, top of valley D, 17 Dec 00 (MWS, identified by Clive Jermy)

Polystichum aculeatum Hard shield-fern

Bowen (1968) reported this species to be rare and decreasing.

Nuney Green, 15 Apr 00 (AB)

HERBACEOUS PLANTS

* *Allium triquetrum* Three-cornered Garlic

Very common in the west country, but rare in the Reading area. Introduced from W. Mediterranean in 1752.

New Copse, S. Oxon, 17 Apr 00 (J&JW)

* *Amaranthus retroflexus* Common Amaranth

A component of commercial birdseed.

Caversham, Waitrose car park, 3 Nov 00 (LC)

Anagallis arvensis ssp. *arvensis* Scarlet Pimpernel

Blue flowered form! Garden, Caversham Heights, Aug 00 (MB)

Arenaria serpyllifolia ssp. *leptoclados* Small Thyme-leaved Sandwort

Rare. Not always distinct from the common *Arenaria serpyllifolia*.

The Holies, Goring, 18 Jun 00 (AB)

Asperula cynanchica Squinancywort

Very local, in short chalk grassland. Tiny flowers vanilla-scented!

The Holies, Goring, 18 Jun 00 (AB)

Bidens cernua Nodding Bur-marigold

Scarce and local.

South Stoke, 14 Jun 00 (AB)

Blackstonia perfoliata Yellow-wort

Restricted to chalk grassland. In small quantity.

Warburg Reserve, Bix, 20 May 00 (AB)

Hartslock Reserve, Field 3 (comp 4), 22 May 00 (MWS)

Campanula rotundifolia Harebell

Abundant in dry grassland of this conservation-managed churchyard.

Beenham, St Mary churchyard, 16 Aug 00 (LC)

Centaureum erythraea Common Centaury

Occasional on poor soils, probably decreasing. More records please.

The Holies, Goring 18.06.00 (AB)

Bucklebury Common, both pink- and white-flowered forms, 12 Aug 00 (MWS)

Chrysosplenium oppositifolium Opposite-leaved Golden Saxifrage

Locally very scarce, except south of Newbury.

1st Society record for this site. Frequent along the stream at Shiplake Copse, 7 May 00 (J&JW)

Clinopodium acinos Basil Thyme

Uncommon. On dry, chalky soils, decreasing.

The Holies, Goring, 18 Jun 00 (AB)

* *Colutea arborescens* Bladder Senna

Introduced. Rare garden escape.

1 plant beside paved road, Bramshill Plantation, 7 Aug 00 (NH)

Cynoglossum officinale Hound's-tongue

Nationally scarce. HJMB (1968) reports it 'local and decreasing' for Berks.

Warburg Reserve, Bix, 8 Jun 00 (AB)

Daphne mezereum Mezereum

Nationally scarce. 14 plants in all.

Pishill Bottom, S. Oxon, 1 Apr 00 (J&JW)

Digitalis purpurea Foxglove

Monstrous terminal flower. (See article – Ed.)

Miles's Green near Upper Bucklebury, 1 Jun 00 (MWS)

Euphrasia anglica an Eyebright

Recorded in HJMB (1968). Abundant to north of the church.

Bearwood St Catherine churchyard, 30 Jun 00 (LC)

Filipendula vulgaris Dropwort

Uncommon. Mainly in chalk grassland.

Sliding Hill, S. Oxon, 25 Jul 00 (MB)

* *Galega officinalis* Goat's Rue

Introduced, a rare casual.

About 20 plants beside paved 'road', Bramshill Plantation. Jul 00 (NH)

Several clumps, rough car park beside railway, Newbury, 1 Jul 00 (MWS)

Galinsoga parviflora Gallant-soldier

Introduced to Kew from Peru in 1793 and escaped.

Large late-flowering patch. Tanners Lane, S. Oxon, 6 Oct 00 (LC)

Gentianella amarella Autumn Gentian

Stronghold in the Chilterns but not to be confused with *Gentianella germanica*, Chiltern Gentian.

The Holies, Goring, 18 Jun 00 (AB)

Geranium rotundifolium Round-leaved Crane's-bill

Rare in Berks, more frequent in Oxon.

Earley Gate, Whiteknights, Reading, 15 Jun 00 (C&RG)

Geum rivale Water Avens

Society members (1900) report this species only in wet meadows at Burghfield.

Moor Copse, Tidmarsh, 11 May 00 (AB)

Gnaphalium uliginosum Marsh Cudweed

A survivor in seasonally damp soils. Apparently under-recorded by the Society. Records please.

Cane End, 13 Sep 00 (MB)

Hippocrepis comosa Horseshoe Vetch

Restricted to dry chalk grassland and decreasing. It is the food plant of the Chalkhill Blue butterfly.

Hartslock Reserve, Goring, 18 Jun 00 (AB)

Hydrocotyle vulgaris Marsh Pennywort

Localised in Berks and rare in Oxon.

Decoy Heath Reserve, 10 Jun 00 (DMK-L)

Iberis amara Wild Candytuft

In large numbers, often on bare ground.

Sliding Hill, S.Oxon, 25 Jul 00 (MB)

Juniperus communis Juniper

BBOWT is engaged in a species recovery programme to arrest the steep decline in the Juniper population.

Hartslock Reserve, Goring, 18 May 00 (AB)

* *Lemna minuta* Least Duckweed

Introduced to Britain in 1977 and spreading rapidly. The Society's 1st record.

Nuney Green, 15 Apr 00 (AB)

(Probably spread by water fowl, it has become very common on ponds to the west of Reading in the last decade. It grows all winter, forming a blanket over a centimetre thick which smothers other duckweeds, even *Azolla* and shades out all the pondweeds. – Ed.)

* *Lilium martagon* Martagon Lily
Introduced, rarely naturalised.
1 plant only by ruined hut, Bomb Dump BBOWT Reserve, 14 May 00 (MWS)

Lithospermum arvense Field Gromwell
Is this species still decreasing? Records please.
Warburg Reserve, Bix, 8 Jun 00 (AB)

* *Myrrhis odorata* Sweet Cicely
Planted specimen at Warburg Reserve, Bix 20 May 00 (AB)
No other sites since 1987. Records please.

Neottia nidis-avis Bird's-nest Orchid
c.5 flowering spikes.
Gutteridge and Nunej Woods, 22 May 00 (MB&JH)

Oenanthe aquatica Fine-leaved Water-dropwort
Local, rare and decreasing.
Sulham Woods, 1 Jun 00 (AB)

Ophrys insectifera Fly Orchid
In 1900 also in Sulham and Pangbourne Woods.
Warburg Reserve, Bix, 8 Jun 00 (AB)

Parentucellia viscosa Yellow Bartsia
About 100 plants of this rare native. Believed to be introduced into this area.
Bramshill Plantation, 7 Aug 00 (NH)

Pilularia globulifera Pillwort
No recent records from Berks or Oxon – extinct? Records please.
In flooded sand-pit, Bramshill Plantation, 7 Aug 00 (BG via NH)

Polygala calcarea Chalk Milkwort
A very localised species, mainly on chalk.
Hartslock Reserve, Goring, 18 May 00 (AB)

Primula veris Cowslip
Abundant to n. of church. Left uncut until seeds drop, Tidmarsh St Laurence churchyard, 15 May 00 (LC)

Ranunculus auricomus Goldilocks Buttercup
Abundant and persistent despite mowing, Kidmore End St John churchyard, 15 Apr 00 (LC)

Rhinanthus minor Yellow-rattle
Locally common but in some places sown in 'restoration' seed mixes to restrict vigour of grasses on which it is parasitic.
Sheffield Bottom, 25 May 00 (AB)

Saxifraga granulata Meadow Saxifrage
Churchyards are a stronghold of this declining species of old grassland in Berks and Oxon.

Earley St Peter churchyard, (a truly urban site), 1 Jun 00 (LC)

Saxifraga tridactylites Rue-leaved Saxifrage
Very local in our area. All previous records on walls.
Abundant on mossy ground, Greenham Common, 24 Apr 00 (MWS)



Yellow Figwort *Scrophularia vernalis*

* *Scrophularia vernalis* Yellow Figwort
Introduced and rare.
Near Beech Lane entrance, Whiteknights, Reading, 3 May 00 (C&RG) Last recorded here by Society member (HMJB) in 1978.
Bury's Bank Road, Newbury, 25 Apr 00 (MWS)

Sedum telephium Orpine
Very localised. Nevertheless regularly recorded by the Society.
Nunej Green, 15 Apr 00 (AB)

Spergularia marina Lesser Sea-spurrey
A maritime plant which has spread in the wake of road salting.
A33 roundabout on M4, Reading. (DMK-L)
1st seen at this site in 1997. Thought destroyed by roadworks in 2000, but present again late 2000. [and near the M4 towards Hermitage – Ed.]

Thesium humifusum Bastard Toadflax
Rare and decreasing. Parasitic on chalk grassland species.
Hartslock Reserve, Goring, 18 May 00 (AB), 7 May, 13 Aug (CMTR)

Urtica galeopsifolia Fen Nettle
This species is very similar to the Common Nettle and has only recently been discovered in Britain. It is (almost!) non-stinging. It also has longer more pointed leaves. Another difference is number of chromosomes and this was used to

confirm material from Woolhampton when it was added to the British list. (McAllister, 1999)
Thatcham reedbeds, 11 Jul 00 (MWS)
1st record for Society – more please.

Vaccinium myrtillus Bilberry
Very scarce on acid soils in Berks and probably extinct in Oxon. Records please.
Cold Ash, 17 May 00 (MB)



Downy-fruited Sedge
Carex filiformis
at Hartslock

GRASSES, RUSHES and SEDGES

Carex filiformis Downy-fruited Sedge
Nationally rare (RDB).
Hartslock Reserve, Goring, 18 May 00 (AB)

Luzula forsteri Southern Woodrush
Very local and specific to beech and oak woodland.
Nuney Green, 15 Apr 00 (AB)

* *Setaria italica* Foxtail Bristle-grass
A component of commercial birdseed.
Caversham Waitrose car park, 3 Nov 00 (LC)

NOTE All names are after Stace (1997).

* introduced species

CONTRIBUTORS

Thanks to the following for their contributions:–

Meryl Beek (MB), Alan Brickstock (AB), Linda Carter (LC), B. Goater (BG), Colin and Renee Grayer (C&RG), Norman Hall (NH), June Housden (JH), Michael Keith-Lucas (MK-L), Chris Raper (CMTR), Malcolm W. Storey (MWS) and Jerry and Janet Welsh (J&JW)

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THE NEW BERKSHIRE FLORA

Malcolm Storey

It is 33 years since the publication of Humphrey Bowen's "The Flora of Berkshire" and much has changed in the county since then. Many sites have been lost to changing agricultural practice or development and new aliens have become established. Furthermore three decades of botanical work, not least for the BSBI's Flora 2000 project, have resulted in far more information than Bowen had access to. Prof. Mick Crawley's eagerly anticipated new "Flora of Berkshire" is currently nearing completion. We can look forward to an up-to-date account of the Flowering Plants, Ferns and Conifers of the Berkshire vice-county (which includes much of modern Oxfordshire) as well as more detailed accounts of the Bryophytes and Fungi (including Lichens) than was provided in the previous work.

RECORDER'S REPORT FOR MYCOLOGY 2000

Alan Brickstock

A Poor Year?

Certainly weather-wise this was a poor year, with several of our forays taking place in pouring rain – congratulations to the hardy souls who none the less not only came, but stayed!

Although many of the normally common species appeared in abnormally small numbers, some species, especially some of the less common ones, appeared in unusually large numbers: there were an amazing number of large rings of *Clitocybe nebularis*, and also one very large ring of *C. geotropa*. *Cantharellus infundibuliformis* were more numerous by a long way than I have ever seen before.

Hydnum rufescens is a species which I see infrequently, and then usually in only small numbers, but at Sulham, there was a ring of them roughly 10 metres across. Some of the fruiting bodies had appeared during October, and fresh ones continually appeared, the ring still being in good condition in mid December. This species was also found in unusual numbers at Nuney Green.

The total number of species, at 372, was a little low, compared with the average over the last 8 years of 450, but this does little to indicate the sparseness of fungi at many sites. Can it be that the weather was too unrelentingly wet for most fungi, as well as us humans?

GILL FUNGI

Amanita echinocephala (Vitt.) Quél.

A rare species, found on dry, calcareous soils.
Warburg Reserve, 17 Sep 00; 22 Oct 00 (AB)

Bolbitius aleuriatus (Fr.) Singer (= *Pluteolus reticulatus*)

A small species with distinctive crinkled violaceous grey cap, the gill edge 'frosted'.
Holly Wood, Bucklebury, 15 Oct 00 (MWS)

Cantharellus infundibuliformis (Scop.) Fr., the 'Horn of Plenty' or 'Trompette des-morts'.

Grey's Court, 21 Oct 00 (AB)
This is normally a rather uncommon species, but here there were literally thousands of specimens, which extended for hundreds of metres along the woodland floor.

Clitocybe geotropa

Curtis's wood, 15 Nov 00 (AB)
Interesting here because they were forming a very large ring, roughly 40 feet across.

Coprinus acuminatus (Romagn.) Orton

Similar to *C. atramentarius*, the common inkcap, but with a prominent umbo.
Davenport Wood, 24 Sep 00 (AB)

Coprinus kubickae

A tiny inkcap fungus which grows on reeds and sedges in marshy areas.
On a Sedge leaf, Thatcham Reedbeds, SU506665, 3 Jun 00 (MWS) Identified by Derek

Schafer. Only described recently. This is the first British record.

Coprinus urticicola (Berk. & Br.) Buller

Another tiny inkcap on reeds and sedges.
Thatcham Reedbeds, SU506665, 25 May 00 (MWS)
On decaying leaves of Reed Sweet-grass .

Entoloma lividum (Bull) Quél. (= *E. sinuatum*)

A large highly poisonous species, fortunately rare, which sometimes grows on lawns.
Holly Wood, Bucklebury, 15 Oct 00 (MWS)

Entoloma dysthales (Peck.) Sacc.

A small, blackish grey brown toadstool not more than 2cm across.
Holly Wood, Bucklebury, 15 Oct 00 (MWS)
At the time, its strong smell of dung or rotten cabbage caused confusion as this species normally has no smell.
Thatcham Reedbeds, SU513662, 28 Sep 00 (MWS)
Amongst mossy roots of leaning Oak. Smell not noticed at the time, but a later re-collection at same spot smelled fleetingly of rotten cabbage.

Galerina marginata (Batsch) Kühn.

A poisonous species containing the same Phalloidin toxins as present in the Death-cap.
Curtis's wood, 15 Nov 00 (AB)

Hemimycena candida

A small white "Mycena" that grows at the base of living Comfrey.

Thatcham Reedbeds, SU513663, 17 Oct 00 (MWS) At base of Comfrey. Smell radishy,

Hohenbuehelia geogenia

Sulham Woods, 16 Oct 00 (AB)

At one time regularly seen at Sulham, but not seen recently until now.

Kuehneromyces mutabilis (Schaeff.: Fr.) Sing.

Cane End, 13 Sep 00; California Country Park, 5 Nov 00; Curtis's Wood, 15 Nov 00 (AB)

Lactarius citriolens Pouzar

Bomb Dump BBOWT Reserve, SU50886543, 14 Oct 00 (MWS). Under Birch and Grey Sallow.

Leptonia euchroa (Pers: Fr.) Kumm.

A small species with a silky, violaceous cap. Gills deep violaceous, with a darker edge. Unusually for *Leptonia*, this species grows on fallen wood.

Warburg Reserve, 22 Oct 00 (AB)

Marasmius buxi Fr. apud Quel.

Basildon Park, SU605772, 7 Oct 00 (MWS)

On leaves and old dead twigs inside Box bush.

Marasmius caulicinalis (Bull.: Fr.) Pat.

(=*Crinipellis stipitaria* (Fr.) Pat.)

A tiny 'fairy parasol' of a gill fungus, growing on dead grass stems and tiny dead twigs.

Mortimer, 22 Jun 00 (BB)

Marasmius curreyi Berk. & Br. (= *M. graminum* (Libert) Berk.)

A tiny species growing on dead grass stems, in a barish arable field, Mortimer, 24 Jun 00 (BB)

Melanophyllum haematospermum (Bull: Fr.) Kr. (= *M. echinatum* (Roth: Fr.) Sing.)

The pink gills become dark vinaceous red. Cap has appendiculate margin.

Warburg Reserve 17 Sep 00 (AB)

Bomb Dump 14 Oct 00 (MWS)

Melanotus caricicola (P.D. Orton) Guzman

Said to grow exclusively on *Carex riparius*. It is distinguished from the similar, but much commoner, *Melanotus phillipsii* by host plant and spore details. (Late news: *M. caricicola* has been synonymised with *M. phillipsii*).

On unidentifiable monocot leaf. Thatcham Reedbeds, SU513663, 29 Sep 00 (MWS) Apparently the second British site for this toadstool.

Mycena longiseta Hoehn.

A tiny species with a basal disc and long hairs on the cap.

Holly Wood, Bucklebury 15 Oct 00 (AB)

Pholiota oedipus (Cooke) P.D. Orton

A small brownish toadstool which usually fruits during the winter.

Sulham Wood, SU644747, 31 Jan 00 (MWS), under Ash and Hawthorn on railway sleepers at pathside.

Blacklands Copse, SU546679, 24 Dec 00 (MWS), At lower end of stream

Simocybe centunculus (Fr.) Sing.

Davenport Wood 24 Sep 00 (MWS).

Growing on deciduous stumps and twigs. Gills yellowish, with white edges.

Volvariella caesiotincta P.D. Orton

Rushall Copse, SU583724 (MWS)

On the ground (buried wood?). Quite strong, unpleasant, smell of *Pelargonium* (Geranium), becoming sweet as fungus dried. Found by Shirley Kirstein.

HETEROBASIDIOMYCETES

Phleogena faginea Link

Curtis's wood 15 Nov 00 (AB)

Large numbers of tiny fungi growing in clusters on fallen birch logs. These were only about 2 or 3 mm high, and looked rather like tiny earthballs, with very scurfy tops. Not being able to identify these, I eventually sent some, after 2 weeks in my fridge!, to Nick Legon. His reply was as follows: The specimens ... are identified as *Phleogena faginea* Link. This is actually a heterobasidiomycete with 'gasteromycete like' fruitbodies, the hymenium being inside the little capitate head of the fruitbody. It tends to be collected by myxomycetologists because it has the look of a giant species of *Physarum*, The basidiomes develop a very strong smell of curry powder when they are dried and this will last for many years in herbarium material – a bit like the smell of dried *Lactarius camphoratus* but ten times stronger!! It is relatively common but probably under-recorded because it is not described in much of the literature that collectors have easy access to. It is in Nordic Macromycetes 3. However, *Betula* is not the commonest of hosts for this species.

(This species was described by Paul Cook in 'Profiles in Fungi' in 'The Mycologist' August 94)

BOLETI

Gyroporus castaneus (Bull.) Quéf.

Cap very light in colour. Tubes notched, white or pale yellowish.

Warburg Reserve 17 Sep 00 (AB)

Xerocomus lanatus (Rostk.) Sing.

Similar to *X. subtomentosus*, but having a blue-green reaction to ammonia on the cap
Holly Wood, Bucklebury, 15 Oct 00 (MWS)

APHYLLOPHORALES

Dendrothele acerina (Quél.) Lemke

Lambridge Wood, 21 Oct 00 (AB)
A grey-white resupinate, growing on *Acer*.

Hydnellum concrescens (Pers. ex Schwein.) Banker

Davenport Wood, SU822861, 24 Sep 00 under Beech on bank at side of road. Turns instantly black with KOH. Smells of fenugreek when dried (MWS)

Oligoporus sp. An undescribed species near *O. ptychogaster*

Several, well-formed brackets *Coriolus*-like, but softer and with larger pores, on Yew log sections, accompanied by the imperfect state, which is pinkish when young, exuding red droplets, becoming brick-coloured as it matures. Basildon Park, SU609783, 7 Oct 00 (MWS, Id: Nick Legon, who finds it at Norbury park, Surrey)

Thelephora penicillata

A white species, tufted rather like a *Ramaria*.
Holly Wood, Bucklebury 15 Oct 00 (MWS)

ASCOMYCETES

Humaria hemisphaerica (Wigg.: Fr.) Fuckel

A greyish cup fungus, with prominent brown hairs round the margin and on the lower surface.
Holly Wood, Bucklebury 15 Oct 00 (AB)

Hypomyces aurantius (Pers.: Fr.) Tul.

A bright orange-yellow Ascomycete, covering an old Polypore. Padworth Common 25 Nov 00 (AB)

Laboulbenia cristata

A microscopic fungus parasitic on *Paederus riparius* L., a small, bright red and black rove beetle found on bare mud and among reed litter by lakes and in fens. The fungus is known from the UK, but not yet formally published.

On the legs and elytra of *Paederus riparius*, Thatcham Reedbeds, SU507665, 25 May 00 (MWS, Id: Alex Weir)

CONTRIBUTORS

Alan Brickstock and Reading Fungus Group members (mainly the latter!) (AB), Barrie Bristow (BB), Gordon Crutchfield (GC), Malcolm Storey (MWS)

Leptopodia atra (König: Fr.) Boud.

A small, dark brown species, a little like a *Helvella*, which I have only rarely seen.
California Country Park 5 Nov 00 (GC)

RUSTS

Puccinia kusanoi Diet.

One of two rusts on Bamboos known in Britain.
Braywick Nature Centre, SU895798, 2 Apr 00 (MWS)

On Bamboo in the wildlife area. Uredia (cinnamon coloured) and Telia present in separate patches.

Like many parasites, rusts have complicated life cycles, often involving two hosts and up to five kinds of spore at different stages. Uredospores are the kind mainly produced during the summer, and they cause further infections on the same host (in this case Bamboo). Towards winter, Teliospores are produced and these remain dormant until next spring when they germinate and produce Basidiospores. These infect the alternate host, (in this case *Deutzia*, but it seems not to have been found on this host in Britain.) The primary infections on this host produce Spermatia, which as the name implies, are haploid. These fuse to form a diploid which gives rise to Aeciospores which re-infect the original host and the cycle is complete.

LICHENS

Chaenotheca trichialis (Ach.) Th. Fr.

Lichen on exposed heartwood of living Ash. Photobiont: *Stichococcus* (cylindric, septate)
Bowdown BBOWT Reserve, SU507651, 10 Feb 99 (MWS, confirmed: Brian Coppins) First record for VC 22.



Chaenotheca trichialis

RECORDER'S REPORT FOR ENTOMOLOGY 2000

David G. Notton

Curator of Natural History, Reading Museum and Archive Service

The order of families and nomenclature used is that given in the standard Royal Entomological Society checklists supplemented by Bradley and Fletcher (1979). Records presented are selected and edited for brevity: full details of all records submitted are available for examination on application to the Recorder at the address above. It is encouraged that voucher specimens are retained for critical species.

THYSANURA – Bristle-tails

Dilta saxicola: (Machilidae) A bristle tail.
Sulham Wood, SU6474, 23 Jul 00 (MWS – voucher kept)

EPHEMEROPTERA – Mayflies

Ephemera lineata: (Ephemeridae) A large pRDB2 mayfly which is mainly confined to the Thames and similar large rivers.
1 adult at 22 Beech Road, Purley-on-Thames, Reading, SU6557620, 23 Jul 00 (CMTR)

ODONATA – Dragonflies & Damselflies

Gomphus vulgatissimus: (Gomphidae) Club Tailed Dragonfly.
A Notable B dragonfly mainly associated with the Thames.
1 immature, River Thames at Hartslock, SU615794, 2 Apr 00 (CJB, CMTR); south bank of the Thames between Caversham Bridge and the where the fields begin, 13 May 00, 16 exuviae, 20 May 00, 18 exuviae, 2 emerging adults (AH)

ORTHOPTERA – Grasshoppers, Crickets etc.

Metriopectera roeselii: (Tettigoniidae) Roesel's Bush Cricket.
A medium-sized brown bush cricket recognised by three yellow spots on the sides of the thorax. At the beginning of the 20th C, it had a restricted distribution centred on the Thames estuary, with scattered records along the south and east coasts to Hampshire and the Humber, but during the '80's and '90's it greatly extended its range and is now widespread in S.E. England and common in our region.
Several hundred singing at Hartslock Reserve, SU616796, 13 Aug 00 (CMTR); single male at Warburg Reserve (The Range), SU720879, 27 Aug 00 (CMTR)

HEMIPTERA – True Bugs

Sehirus luctuosus: (Cydnidae). A ground-dwelling shield bug feeding on forget-me-nots. Adult on Viper's Bugloss, main concrete/asphalt area,

Bomb Dump BBOWT Reserve, SU50726533, 15 July 00 (MWS – voucher kept).

Syromastus rhombeus: (Coreidae) A squash bug.
Gravel Pit Copse, Pamber Forest HWT Reserve, 23 Sep 00 (KHG)

Livia juncorum: (Psyllidae).
Tassel gall on *Juncus articulatus*, Pond at bottom of hill, Wittenham Clumps, SU568929, 9 Sep 00 (MWS)

LEPIDOPTERA – Moths & Butterflies

Zygaena filipendulae: (Zygaenidae) Six-spot Burnet.
A total of 29 seen this year, breeding in lawn allowed to grow long, Emmer Green, 24 Jul 00 (JHFN)

Anthocharis cardamines: (Pieridae) Orange tip.
Larvae in garden on Hedge Garlic seed pods, Emmer Green, 23 Apr 00 (JHFN)

Colias croceus: (Pieridae) Clouded Yellow.
2000 was a good year for this migrant species. One was seen at Emmer Green, 25 June 00 (JHFN) and another, a late record suggesting a native bred insect, at Matlock Road, Caversham, 4 Oct 00 (HB)

Cynthia cardui: (Nymphalidae) Painted Lady.
Matlock Road, 25 Sep 00 (HB)

Pyronia tithonus: (Satyridae) Gatekeeper
143 seen in garden this year and has been breeding in areas of long grass left as a wildflower patch, Emmer Green, 11 Jul 00 (JHFN)

Plemyria rubiginata: (Geometridae) Blue-bordered Carpet
Hargreave Road, Maidenhead, 8 Jul 99 (MA)

Lithophane socia: (Noctuidae) Pale Pinion
One at light, Emmer Green, 12 Sep 00 (JHFN)

COLEOPTERA – Beetles

Badister meridionalis: (Carabidae) a 6–7mm long red and black predatory ground beetle. Open ground by water. Very rare, with a few records in the south midlands only. RDB1.

In grass tussock on damp meadow, Otmoor, Oxon, SP579142, 29 Oct 99 (TDH)

Guignotus pusillus: (Dytiscidae) a water beetle. One adult in a temporary pool, north-west quadrant north of runways, Greenham Common, SU495648, 24 Apr 00 (MWS – voucher kept)

Scaphidium quadrimaculatum: (Scaphidiidae) Four-spotted Boat Beetle.

One adult, under rotting beech wood, near car park, Windsor Great Park, SU946727, 2 Apr 00 (MWS – voucher kept)

Alaobia scapularis: (Staphylinidae) a Notable B rove beetle.

In moss in scrub on calcareous down, Hartslock Reserve, Oxon, SU618793, 17 Apr 99 (TDH)

Oxypoda lurida: (Staphylinidae) a Notable B rove beetle.

In moss in disused sand pit, Hitchcopse Pit, Oxon, SU451996, 16 Oct 99 (TDH)

Paederus riparius: (Staphylinidae) a Local rove beetle.

Infected with the parasitic fungus *Laboulbenia cristata*, Thatcham Reedbeds, SU507665, 25 May 00 (MWS – voucher kept)

Schistoglossa gemina: (Staphylinidae) a Notable B rove beetle.

In grass tussock on marshy meadow, Otmoor, Oxon, SP571137, 29 Oct 99 (TDH)

Stenus argus: (Staphylinidae) a Notable B rove beetle.

In grass tussock on damp meadow, Otmoor, Oxon, SP579143, 29 Oct 99 (TDH)

Stenus cicindeloides: (Staphylinidae) a Local rove beetle.

One adult among lodged *Glyceria maxima* standing in shallow water, *Glyceria* patch north of path, Thatcham Reedbeds, SU508665, 11 July 00 (MWS – voucher kept)

Claviger testaceus: (Pselaphidae). Yellow Ants'-nest Beetle.

A tiny orange, eyeless beetle living symbiotically in nests of yellow meadow ants *Lasius flavus* and occasionally *L. alienus* on dry chalky or sandy soils. Not uncommon in the SE. Rarely recorded. In mound nest of the yellow ant *Lasius flavus* on calcareous down, Hartslock Reserve, Oxon, SU617794, 17 Apr 99 (TDH)

Euplectus punctatus tholini: (Pselaphidae). A short-winged mould beetle. Provisionally RDB 3. Under bark of felled mature oak, in oak wood, Old Windsor Wood, Windsor Great Park, SU977732, 27 Mar 99 (TDH)

Lucanus cervus: (Lucanidae) Stag beetle.

Six beetles flying during the evening at 41 & 43 Highmoor Road, 15 Jun 00 (HB)

Typhaeus typhoeus: (Geotrupidae) Minotaur Beetle.

A large black dung beetle, the male with three prominent horns. Usually feeding on Sheep or Rabbit droppings on fairly dry soils on southern heathlands and northern moors. Local, but can be abundant where found

Dead male in valley above *Sphagnum* Pond, Bowdown Woods BBOWT Reserve, SU50486556, 15 Jul 00 (MWS – voucher kept)

Agrilus sinuatus: (Buprestidae) Hawthorn Jewel Beetle.

Larvae develop in old Hawthorns. Adults are most frequent in late summer.

Resting on leaf of figwort in Hawthorn scrub, near Gatehampton Farm, near Goring, Oxon, SU618791, 12 Jun 99 (TDH)

Ampedus elongantulus: (Elateridae) A red and black click beetle of ancient broadleaved woodland, especially oak, in Southern England. The larvae develop in dead wood. Notable A.

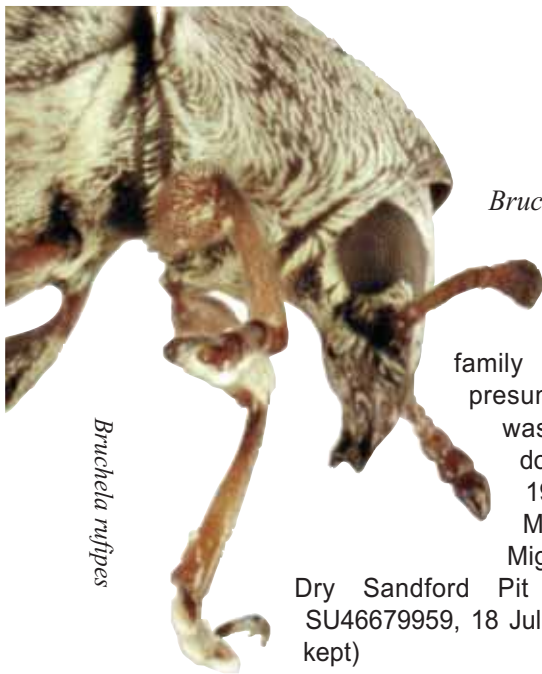
On decaying oak log, in log pile at edge of deciduous wood, Silchester Common, SU618622, 4 Jul 99 (TDH)

Platycis minutus: (Lycidae). A conspicuous red and black net-winged beetle with orange-tipped antennae. Larvae in very soggy rotting wood. An old woodland species, which is adult late in the year and more often found by mycologists than coleopterists! Notable B.

One adult on Dog's Mercury, Roadside near large Beech with hole, Ashampstead Common, SU578749, 27 Aug 00 (MWS – voucher kept)



Platycis minutus



Bruchela rufipes

Bruchela rufipes: (Urodontidae) an urodontid weevil. The larvae feed on the Mignonette family (Resedaceae). A presumed introduction, it was first found near docks in S. Essex in 1984 but spreading. Mating pair on Wild Mignonette, infill area, Dry Sandford Pit BBOWT Reserve, SU46679959, 18 Jul 00 (MWS – voucher kept)

Trinodes hirtus: (Dermestidae). A small shining black museum or larder beetle with yellow legs. Occurs under bark, feeding on debris in spiders webs. Scarce species with most records from the south coast. RDB 3 By beating solitary oak tree in parkland, Windsor Forest, SU947728, 9 Jul 99 (TDH)

Hadrobregmus denticollis: (Anobiidae) a Notable B wood boring beetle. Found hibernating under fibrous bark of living Redwood tree, *Sequoia sempervirens*, in woodland, High Standinghill Wood, Windsor Forest, SU933742, 23 Oct 99 (TDH)

Synchita separanda: (Colydiidae). a narrow timber beetle. A small brown beetle living under bark of fungus infected dead wood, mainly on Beech but has been found on one occasion on Sycamore. Very rare, recorded from only 3 sites, all ancient forests in south east England. Only recently added to British list after separation from *S. humeralis*. By beating dead bough of living beech in beech and oak wood, High Standinghill Wood, Windsor Forest, SU935743, 9 Jun 99 (TDH)

Molorchus umbellatarum: (Cerambycidae) a long-horn beetle. Notable A. By beating Holly tree which was growing with rose bushes on the edge of deciduous woodland overlooking calcareous grassland, Hartslock Reserve, Oxon, SU615794, 12 Jun 99 (TDH)

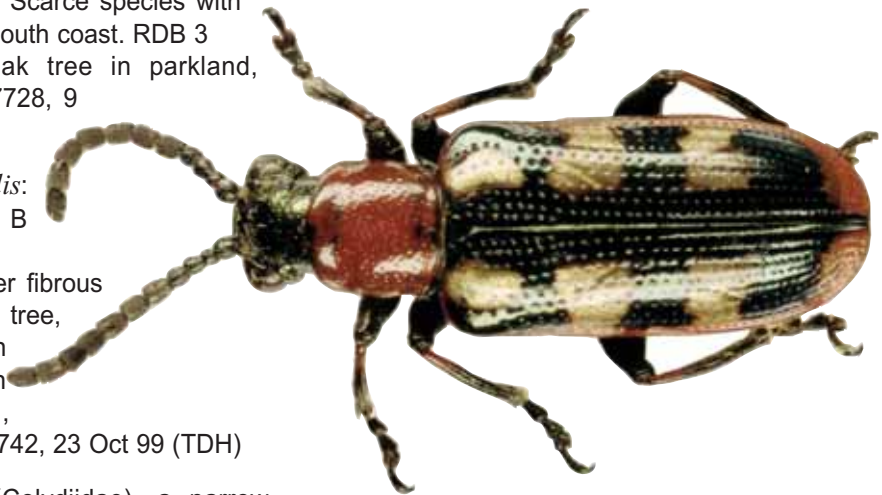
Epitrix atropae: (Chrysomelidae) Belladonna Flea Beetle. A hairy flea beetle feeding exclusively on Deadly Nightshade and making characteristic feeding marks.

Southern clearing, Ashampstead Common, SU586748, 27 Aug 00 (MWS – voucher kept)

Phyllotreta tetrastigma: (Chrysomelidae) a 1.5–2mm long black and yellow flea beetle on *Rorippa* and other crucifers (Brassicaceae) in marshy places. Widespread but very local. One adult on Large Bitter Cress (*Cardamine amara*) under pylons, Baynes BBOWT Reserve, SU50986518, 14 May 00 (MWS – voucher kept)

Psylliodes luteola: (Chrysomelidae) a flea beetle. A poorly known flea beetle of uncertain ecology. Very few records. Provisionally RDB K Resting on vertical white-washed wall of house in suburb, Earley, SU735708, 10 Oct 99 (TDH)

Crioceris asparagi: (Chrysomelidae) Asparagus Leaf Beetle.



Asparagus Leaf Beetle *Crioceris asparagi*

Synanthropic (ie living in association with man). Adults and larvae on *Asparagus* on the infill area, Dry Sandford Pit BBOWT Reserve, SU46679959, 18 July 00 (MWS – voucher kept)

Apion cerdo: (Apionidae) A small seed weevil developing in seed pods of Tufted Vetch. Local N to SW Scotland. Woodlands, grasslands, hedgerows. Possibly spreading. By sieving leaf litter on bank of water-filled ditch in hedgerow, Otmoor, Oxon, SP571128, 29 Oct 99 (TDH)

HYMENOPTERA – Bees, Wasps, Ants

Tenthredopsis friesei: (Tenthredinidae) a pRDB3 sawfly. 1 male at Hartslock Reserve (cpt 4) SU61757935, 21-23 May 00, CMTR

Tenthredo scrophulariae: (Tenthredinidae) Figwort Sawfly. Large wasp-like sawfly which feeds on Water Figwort in the young stages,

although the adults are predatory. Common in southern England, becoming local in the north. One adult found at a parking place in wood, The Hockett, Bisham, SU854841, 5 Aug 00 (MWS)

Vespa crabro: (Vespidae) The Hornet. Our largest social wasp. Nests in hollow trees, chimneys, wall cavities etc., sometimes using the same site year after year (although a new colony). In the 1960s it was rare, but has become locally abundant in wooded areas in the south and is spreading north.
Farley Castle, nr. Farley Hill, 1 Oct 00 (CB)

Crossocerus binotatus: (Sphecidae) a Notable/Na solitary wasp which nests in hard rotten wood. Its recorded prey includes snipe flies.
4 females, Warburg Reserve (The Range) in Malaise trap, SU72018792, Jul/Aug 00 (CMTR)

Andrena hattorfiana: (Andrenidae) The females of this RDB3 solitary bee gather pollen almost exclusively from Field Scabious or, in some populations, Small Scabious. This large and distinctive bee has declined substantially: there are recent records for only about 15 sites in southern England from Cornwall to Norfolk.
Hartslock Reserve, SU616796, 16 Jul and 13 Aug 00 (CMTR)

Sphecodes spinulosus: (Halictidae) a RDB2 solitary bee which is very rare, being known only from about 8 counties in southern England. It is a brood parasite of Halictine bees.
1 male at Hartslock Reserve (cpt 1) SU616796, 12 May 00 (CMTR & GC)

Aporus unicolor: (Pompilidae) a Notable/Na spider-hunting wasp which preys on the local Purse-Web Spider *Atypus affinis*. It paralyzes the spider within its burrow and the wasp larva feeds on the spider's body. It is recorded from southern England as far north as Cambridgeshire, where it is found on warm sparsely vegetated areas such as cliffs, heaths and downs.
5 males, Warburg Reserve (The Range), in Malaise trap, SU72018792, 17-30 Jul 00 (CMTR)

Auplopus carbonarius: (Pompilidae) a Notable/Nb spider-hunting wasp confined to

southern England. Nests are constructed under stones, in old stumps or in old shells and are made of clay cells. Usually found in broadleaved woodland but sometimes in more open habitats such as sandpits.

2 female & 1 male, Warburg (The Range) in Malaise trap, SU72018792, Jul/Aug 00 (CMTR)

Priocnemis agilis: (Pompilidae) a Notable/Nb spider-hunting wasp.
2 females, Warburg Reserve (The Range) in Malaise trap, SU72018792, 1-16 July 00 (CMTR)

DIPTERA – Flies

Rhagio strigosus: (Rhagionidae) a RDB3 snipe fly which, apart from Box Hill in Surrey, is only known in Britain from the area bounded by Moor Copse, The Holies, and Bucklebury.



Rhagio strigosus

This record extends the known range to the north side of the Thames. 2 males at Hartslock in dry valley field, SU620793, 25 Jun 00 (CMTR)

Thecophora fulvipes: (Conopidae) a Notable thick-headed fly.
3 adults at Warburg (The Range) in Malaise trap, SU72018792, 1 Jul-12 Aug 00 (CMTR)

Chetostoma curvinerve: (Tephritidae), a picture wing fly classified as pRDB2. 1 adult at Warburg Reserve, SU7188, 11 Jun 00 (CMTR)

Drino lota: (Tachinidae) a Notable B parasite fly whose larvae are parasitoids within Elephant Hawkmoth caterpillars. 1 female at Warburg Reserve (The Range) in Malaise trap, SU72018792, 1-8 Jul 00 (CMTR)

Thecocarcelia acutangulata: (Tachinidae) a pRDB2 parasite fly. Its host in this country is not known, but in Europe it has been reared from the caterpillar of an Essex Skipper butterfly. 2 females at Warburg Reserve (The Range) in Malaise trap, SU72018792, 28 Aug 00 (CMTR)

My thanks are due to Hugh Carter for comparing lists of Coleoptera against the Museum database, and to the following members for their submissions:

Adrian Hine (AH), Chris Buck (CB), C. J. Bennett (CJB), Chris Raper (CMTR), G. Collins (GC), Heather Baker (HB), Hugh Carter (HHC), John Notton (JHFN), Ken Grinstead (KHG), Martin Albertini (MA), Malcolm Storey (MWS), Tom Harrison (TDH).

RECORDER'S REPORT FOR INVERTEBRATES OTHER THAN INSECTS 2000

H. Carter

ARANAEA – Spiders

Pisaura mirabilis

Present in garden of 10 Northbrook Road

Salticus scenicus Zebra spider

10 Northbrook Road, Caversham Park, 13.2.98, again in 2000

Aranea diademata Garden Spider

Several of various ages in orb webs on low branches of trees, 10 Northbrook Road

Nuctinea umbratica

A colony of this spider on railings of steel fence beside Caversham Park Road opposite the Sports Field on orb webs at night, in crevices during the day.

RECORDER'S REPORT FOR VERTEBRATES 2000

H. Carter

PISCES – Fish

Salmo salar Linnaeus Salmon

No report this year (many released 1999, no earlier records)

Cyprinus carpio Linnaeus Carp

Many in Widmore Pond, Sonning Common in December 2000; no carp of other species (MM) (1 in 1998, no other reports 1994 to 1999)

Carassius carassius (Linnaeus) Crucian Carp

No report this year (1 in 1999, no report 1994-1998)

Leuciscus cephalus (Linnaeus) Chub

None at Central Library this year. (many netted 1999, none 1998, about 5 in 1997, 12 in 1996, 13 in 1995, 22 in 1994)

Rutilus rutilus (Linnaeus) Roach

Many in Widmore Pond, Sonning Common in December 2000 (MM) (Thousands released in 1999, no records 1994-1998)

Abramis brama (Linnaeus) Bream

No report this year (2 in 1998, 1 in 1995)

Tinca tinca (Linnaeus) Tench

No report this year (1 in 1999, 8 in 1998, none in 1994-1997)

Perca fluviatilis (Linnaeus) Perch

No report this year (2 in 1999, numerous small fry 1995, 1 in 1994)

AMPHIBIA – Amphibia

Triturus cristatus (Schreber) Crested Newt

Present at Lockyer Close.(1 in 1997, no other records 1994 - 1999)

Triturus vulgaris (Linnaeus) Smooth Newt

No reports received (1 in 1997, 1 in 1996, no other records 1994 - 1999)

Triturus helveticus (Razoumovski) Palmated Newt

No reports (1 in 1996, no other records 1994 - 1999)

Bufo bufo (Linnaeus) Toad

Total sightings 2 (about 10 in 1999, about 10 in 1998, 5 in 1997, about 50 in 1996).

Rana temporaria Linnaeus Frog

No reports received. (1 in 1999, 1 in 1998, 6 clumps of spawn in 1996, many clumps of spawn and 180 adults in 1995, 64 in 1994)

REPTILIA – Reptiles

Anguis fragilis Linnaeus Slow Worm

No reports received. (1 in 1999, about 5 in 1998, 1 in 1997, no records 1995-1996, 1 in 1994)

Vipera berus

Linnaeus Adder

No reports received. (7 in 1999, 0 in 1997-8, 1 in 1996, 1 in 1995, 1 in 1994)



Adder



Grass Snake

Natrix natrix (Linnaeus) Grass Snake
No reports received (0 in 1999, 1 in 1998, 1 in 1997, 0 in 1996, 5 in 1995, 0 in 1994)

MAMMALIA – Mammals

Sorex araneus Linnaeus Common Shrew
No reports received (2 in 1999, 0 in 1998, 1 in 1997, 1 in 1996, 0 in 1995, 2 in 1994)

Sorex minutus Linnaeus Pygmy Shrew
No reports received (2 records in 1996, no other records 1994-1999)

Erinaceus europaeus Linnaeus Hedgehog
Total sightings 4. (2 in 1999, 8 in 1998, 27 in 1997, 15 in 1996, 8 in 1995)

Talpa europaea Linnaeus Mole
Signs at Henley, 5.3.00; active throughout the year on the Showground, Caversham Park (5 records 1997, 1 in 1995, 2 in 1994, no other records)

Plecotus auritus (Linnaeus) Brown Long-eared Bat
Present on Warburg Reserve going into hibernation (no reports 1994-1999)

Mustela erminea Linnaeus Stoat
No reports received (0 in 1999, 1 in 1998, 0 in 1997, 2 in 1996, 0 in 1995, 1 in 1994)

Mustela putorius Linnaeus Polecat
1 dead on Peppard Road, 30.6.00. 1 dead at Caversham Bridge, 26/6/00 (MJC)
Total sightings 2 (3 in 1999, no records 1994-1998)

Meles meles (Linnaeus) Badger
No reports this year (about 10 in 1999, 0 in 1998, 2 in 1997, 4 in 1996, 0 in 1995, 18 in 1994)

Vulpes vulpes (Linnaeus) Fox
Total sightings 1 (0 in 1999, 1 in 1998, 10 in 1997, 1 in 1996)

Muntiacus reevesi Ogilby Muntjac
Thought to be responsible for damage to young trees at Kennylands, Sonning Common.
Total sightings 2 (about 12 in 1999, 5 in 1998, 7 in 1997, 7 in 1996)

Dama dama (Linnaeus) Fallow Deer
Slots at Bones Lane, Binfield Heath, 2.10.00 (2 in 1999, 0 in 1998, 12 in 1997 (at Stonor!), 1 in 1996, 0 in 1995, 3 in 1994)

Capreolus capreolus (Linnaeus) Roe Deer
2 at New Copse, Gallowstree Common, 21.7.00 (MJC)
Total sightings 2 (0 in 1999, 0 in 1998, 0 in 1997, 2 in 1996, 2 in 1995, 3 in 1994)

Lepus capensis Pallas Hare
Total sightings 9 (0 in 1999, 4 in 1998, 7 in 1997, 6 in 1996)

Oryctolagus cuniculus (Linnaeus) Rabbit
Total sightings 58 (81 in 1999, 861 in 1998, 324 in 1997, 193 in 1996, itself an increase on 1995).

Apodemus sylvaticus (Linnaeus) Wood Mouse
1 dead on Caversham Park Road by St. Martin's School, 8.4.00
Total sightings 1 (2 in 1999, 0 in 1998 to 1995, 2 in 1994)

Sciurus carolinensis Gmelin Grey Squirrel
Total sightings 7 (17 in 1999, 21 in 1998, 28 in 1997, 54 in 1996, 14 in 1995)

My thanks are due to the following contributors: Elizabeth Carter (EMC), Mary Carter (MJC), Claire Frank (CF), June Housden (JH), Martin Moore (MM), Graham Watson (GW)

THE WEATHER AT READING DURING 2000

Ken Spiers

Department of Meteorology, University of Reading

JANUARY

The month started in a very unsettled mode, with most of the month's rainfall falling in the first week. However, daytime temperatures were very high during this period. By the end of the second week, high pressure had positioned itself to the west of the British Isles, producing cool winds from a northerly direction. During this period temperatures were below average, with the result that the mean temperature for the month was the lowest since 1997. By the end of the month it became very dry, with only a quarter of the month's average rainfall being recorded, January was the driest since 1997 and the sixth driest since 1921. During the cooler period it became very sunny and with only six days not recording any sunshine, it was the sunniest January since 1984 and the third sunniest since 1957.

FEBRUARY

The month was not unlike that you would expect for April, very showery and sunny in between. The daytime temperatures were well above average throughout the month, with the result the mean temperature for the month was the fourth highest recorded in the last thirty years. From the 19th onwards, for a few days, it became cooler and drier with long sunny periods as a high-pressure system over the country influenced our weather. However it soon turned more unsettled and remained so to the end of the month. With the total rainfall some 53% above the monthly average, this helped make February the wettest since 1997. However, sunshine was in abundance during the month and although this was only the sunniest February since 1998, overall it was the fourth sunniest since 1956: 46% above the expected average.

MARCH

The presence of high pressure for the first three weeks dominated our weather. It acted as a block to any unsettled weather from the Atlantic and produced a very dry March. In fact this was the eleventh March in a row with rainfall below average. In the period from the 3rd to the 22nd inclusive no daily rainfall amount of 0.2 mm or more was recorded, making this the longest dry spell since March/April 1997. Most of the days were quite sunny, with temperatures above average. Although it was the coolest March since 1996, it was still in the top ten warmest March months since 1960.

APRIL

The main feature of the month must be the rain; in fact it just seemed to keep on raining. With one low pressure after another, tracking their way in over the country, April became the wettest ever recorded at the University campus meteorological site since 1921. It was only the second time that the total has been over the one-hundred millimetre mark. The 3rd recorded the heaviest daily fall since 1991 and on three occasions it was even cold enough for the rain to turn to snow. However, interspersed were a few sunny days, but not enough to prevent the total for the month being 15% below average. There was a cool period during the end of the second week, which was also very wet and dull, with the temperatures not getting above average until the end of the month. This was too late to prevent April being the first month of the year with its mean temperature below average.

MAY

The first three weeks came as a welcome relief from the previous months deluge, dry with above average temperatures and reasonable amounts of sunshine. All this was influenced by high-pressure systems. During the daytime, temperatures reached the mid twenties, approximately eight degrees above average. However, by the end of the month high-pressure had receded and allowed in more unsettled weather from the west, with much lower temperatures. Most of the month's rainfall fell in the last ten days, with 18.5 mm on the 26th, the heaviest daily total for any day in May since 1993, helping this May to be the wettest since 1985. There were only three days when no sunshine was recorded, with the total sunshine for the month near to average.

JUNE

Although the month was not outstanding weather-wise, it did provide us with some fine, warm and dry early summer days. Day and nighttime temperatures remained above average throughout most of the month helping June become the warmest since 1993. During the third period there was a short period

when temperatures were high, with the peak on the 18th, 29.9°C, the highest for any June day for five years. The same day also recorded the sunniest day in June for four years, with a daily total of 14.1 hours. However sunshine levels at the end of the month were disappointing as the weather became more unsettled. Daily rainfall levels remained low, resulting in June being the driest for four years. Overall this was the best month so far in a disappointing year.

JULY

It was not until the third week of the month, with high-pressure stationed over the country, that we were able to enjoy warm, sunny and very dry conditions. Previously, unsettled conditions prevailed, with most of the month's rain falling during this period. Also during the first half of the month, daytime temperatures were up to six degrees below average, producing the coldest July since 1988. Although there were only two days without any sunshine, the daily amounts were low. This made it a very dull month with the total amount of sunshine, 20% below the expected average.

AUGUST

August was undoubtedly the best month of the year. Apart from a few days during the middle of the month and a couple in the last week, pressure remained high. Temperatures remained above average for most of the month, making this August the sixth warmest in the last fourteen years. Daily sunshine levels were average throughout, the only month to recorded more than two-hundred hours. Rainfall was virtually confined to the days when high pressure was not influencing our weather, resulting in this August being the sixth driest in the last fourteen years.

SEPTEMBER

The month could be split into two phases, with the second half very wet, little in the way of sunshine and with temperatures about what would be expected for that time of year. These weather conditions would remain with us for the remainder of the year. Preceding this, the month enjoyed a fair start, with temperatures above average, very dry and reasonable amounts of sunshine. In the second week, very high daytime temperatures were recorded on a couple of days, with a maximum of 26.5°C on the 11th. This was the sixth highest for any day in September since 1968. That was the last memorable day of the year; from then on it became very wet, with the total rainfall for the month some 50% above average. During this period of unsettled weather, daily amounts of sunshine were low, with the result that September was the dullest since 1994.

OCTOBER

An easily forgettable and very miserable month. The lack of any high-pressure systems, allowed depressions and fronts to pass over the country at regular intervals, with only a brief respite between each period of wet weather. This culminated in the storm on the 29th and the 30th, which produced a rainfall total on the 29th of 49.3 mm and a maximum wind gust of 54 mph on the 30th. All this resulted in the month being the wettest since October 1987. Local flooding was widespread and many low-lying areas remained so until the end of the year. However, temperatures throughout remained about normal but daily amounts of sunshine were low, with the total 13% below average. This made October the sixth month out of the last seven with sunshine totals below their average.

NOVEMBER

A depressingly similar month to October, very unsettled throughout. Although not as wet as October, it did manage to become the wettest November since 1974. The main reason was that, again, there were no high-pressure systems any where near north west Europe. The daily pressure readings never reached the month's average at any time in the month, with the result that the month had the lowest mean pressure, for any month of the year, since before 1960. One thing November did have in its favour was that at times it was quite sunny. However, the stormy nature of the weather brought with it high winds, resulting in the month being the windiest since 1992.

DECEMBER

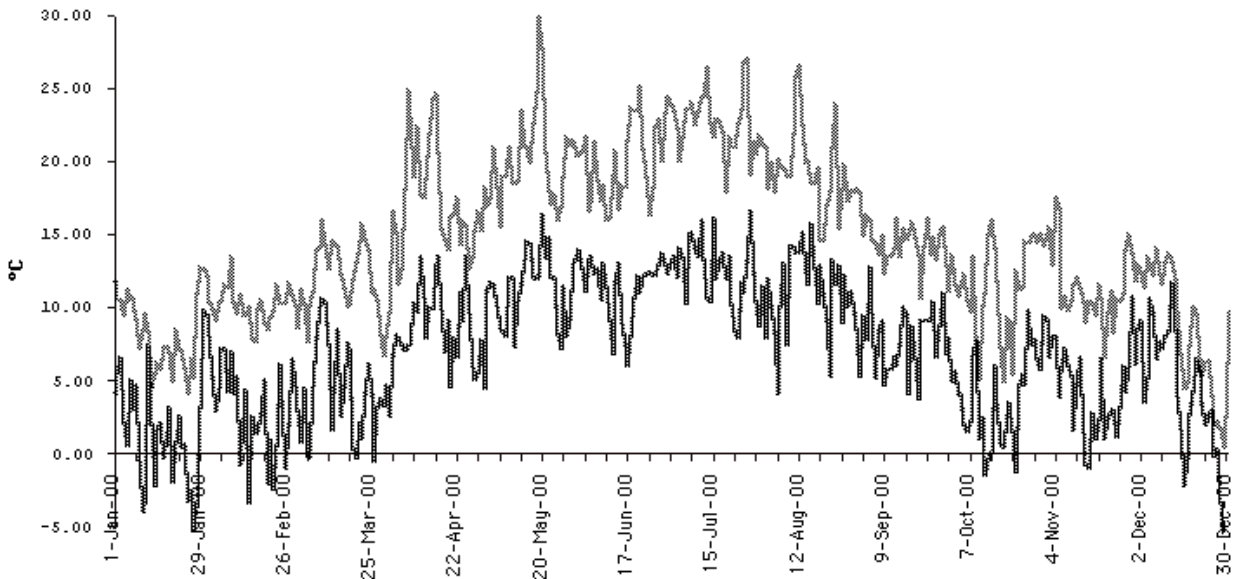
A continuation of the weather experienced during the previous three months, saw very wet and windy conditions prevail until the middle of the month. During this time winds were very strong, with the highest wind gust in December for the last seven years: 60 mph recorded on the 13th. Most of the month's sunshine was recorded during this time, before a run of nine days, when no sunshine was recorded. This was the longest period of sunless days in December since 1956, the year when sunshine records were first kept at the University. However, there was no stopping the rain: this was the fourth month in a row, with the total well above average and it was the fourth wettest December in

the last thirty years. As the month progressed, the temperatures began to drop. Low-pressure and associated fronts swept down from the north bringing with them more wintry conditions to Britain around Christmas. Snow fell on the 28th and remained on the ground for the rest of the month, accompanied by very low nighttime temperatures.

DAILY WEATHER RECORDS: 2000 – UNIVERSITY OF READING (WHITEKNIGHTS)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Mean Daily Temperatures °C													
Maximum	8.3	10.1	11.8	12.2	17.4	20.1	20.2	22.5	19.3	14.4	10.9	8.5	14.6
Minimum	1.6	3.0	4.1	4.4	8.6	11.3	11.4	12.3	11.3	7.7	3.7	3.7	6.9
Mean	5.0	6.6	8.0	8.3	13.0	15.7	15.8	17.4	15.3	11.1	7.3	6.1	10.8
Range	4.9	6.9	7.7	7.8	8.8	8.8	8.8	10.2	8.0	6.7	7.2	4.8	7.6
Extreme Maximum	12.7	13.5	16.0	17.5	24.9	29.9	25.1	27.0	26.5	17.9	15.0	14.0	29.9
Date	29th	8th	9th	29th	6th	18th	21st	25th	11th	1st	28th	7th	18 June
Extreme Minimum	-5.3	-3.4	-0.6	-1.5	4.4	7.1	6.0	7.9	4.1	3.7	-1.1	-6.8	-6.8
Date	27th	14th	26th	6th	31st	25th	17th	22nd	3rd	20th	15th	31st	31st Dec
Extreme Grass Minimum	-11.9	-8.6	-8.6	-9.1	-3.4	-0.9	-0.8	0.5	-2.5	-1.5	-5.4	-12.0	-12.0
Date	27th	20th	19th	6th	20th	25th	12th	21st	4th	17th	15th	30th	30 Dec
Days with:													
air frost	10	5	4	3	0	0	0	0	0	0	2	7	31
ground frost	24	19	19	15	4	1	1	0	2	6	17	13	121
Hours at/below 0°C	55.0	26.0	3.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	79.0	180.0
Sunshine Hours													
Total	76.3	97.9	113.0	129.4	189.0	154.1	163.3	201.8	118.8	90.4	63.0	38.4	1435.4
% of Possible	28.9	33.5	30.7	31.3	39.4	31.2	32.9	44.8	31.2	37	23.3	15.5	31.4
Daily mean	2.46	3.38	3.65	4.33	6.10	5.14	5.27	6.51	3.96	2.10	2.10	1.24	3.85
Precipitation													
Amount in mm	16.2	61.5	12.8	132.6	71.1	21.2	48.5	38.7	86.7	153.2	113.8	95.9	852.0
Rain days	10	17	6	23	15	10	12	10	16	17	22	19	177
Maximum rain in one day													
mm	8.0	14.0	8.0	22.4	18.5	7.0	11.3	7.8	23.6	49.3	28.3	16.0	49.3
Date	8rd	24th	2nd	3rd	26th	29th	4th	27th	19th	29th	5th	7th	29 Oct
Mean wind speed													
mph	3.9	5.3	4.0	4.1	3.8	3.0	2.6	2.7	2.7	4.1	4.1	5.0	3.8
Days with:													
sleet or snow	0	0	0	3	0	0	0	0	0	0	0	1	4
snow lying	0	0	0	1	0	0	0	0	0	0	0	4	5
fog at 0900 GMT	0	0	3	0	1	1	0	0	0	1	2	6	14
thunder	0	0	0	1	1	1	2	0	0	1	0	0	6
Days with hail	0	0	2	1	0	0	0	0	0	0	0	0	3
Mean Pressure													
mbs	1025.3	1018.8	1022.5	1006.9	1016.0	1019.8	1015.0	1017.7	1011.8	1009.2	999.7	1006.2	1014.8
Highest	1041.1	1034.3	1036.5	1035.3	1027.5	1028.6	1027.1	1025.6	1025.2	1027.2	1015.5	1017.1	1041.1
Date	16th	3rd	18th	7th	2nd	16th	21st	5th	4th	6th	10th	19th	16 Jan
Lowest	999.1	998.9	1006.2	985.2	1000.1	1006.2	992.3	1010.3	998.0	973.6	973.7	995.3	973.6
Date	29th	29th	18th	12th	28th	9th	10th	19th	28th	11th	6th	28th	11 Oct

Temperature: daily maxima and minima during 2000



MONTHLY AND ANNUAL WEATHER AVERAGES: 1971-2000

UNIVERSITY OF READING (WHITEKNIGHTS)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
Mean barometric pressure (mbs):	1015.6	1016.3	1015.7	1014.9	1015.5	1016.6	1017.0	1016.6	1015.9	1014.8	1014.9	1014.8	1015.7
Mean temperature:	4.5	4.6	6.7	8.5	11.9	14.8	17.2	17.0	14.2	10.8	7.1	5.4	10.2
Mean max temp:	7.3	7.7	10.3	12.7	16.5	19.3	22.0	21.8	18.5	14.5	10.3	8.1	14.1
Mean min temp:	1.6	1.5	3.1	4.4	7.3	10.1	12.4	12.1	10.0	7.1	4.0	2.6	6.4
Daily range:	5.7	6.2	7.2	8.3	9.2	9.2	9.6	9.7	8.6	7.4	6.3	5.5	7.7
Soil temperature °C													
5cm:	3.2	3.2	5.5	9.1	14.0	17.4	19.5	18.3	14.5	10.1	6.0	4.2	10.4
10cm:	3.4	3.4	5.3	8.3	12.8	16.2	18.3	17.4	14.0	10.0	6.2	4.5	10.0
20cm:	4.2	4.1	5.8	8.2	12.1	15.3	17.6	17.2	14.4	10.8	7.3	5.3	10.2
30cm:	5.1	4.9	6.5	8.7	12.0	15.0	17.2	17.2	14.9	11.9	8.5	6.3	10.7
50cm:	5.6	5.3	6.7	8.7	11.7	14.6	16.7	17.0	15.2	12.5	9.3	6.9	10.9
100cm:	6.6	6.0	6.8	8.3	10.8	13.3	15.3	16.1	15.2	13.2	10.5	8.1	10.9
# days air frost:	10	9	6	2	0	0	0	0	0	1	5	8	41
# days grnd frost:	20	19	18	15	8	3	0	1	4	9	16	17	130
mean grass min:	-1.7	-1.9	-0.7	0.2	3	6	8.2	7.6	5.6	3.1	0.4	-0.8	2.4
mean bare soil min:	-0.7	-0.7	0.7	1.7	4.5	7.4	9.7	9.1	7	4.4	1.6	0.3	3.8
mean concrete min:	-0.4	-0.3	1.3	2.5	5.7	8.8	10.8	10.1	7.8	4.6	1.9	0.5	4.5
Rainfall (mm):	59.6	40.5	46.5	47.3	46.6	50.1	41.2	52.5	57.5	64.5	58.9	64.4	629.6
# rain days:	16	13	15	13	13	11	10	11	11	13	14	15	155
# wet days:	11	9	10	9	9	8	7	7	8	10	10	11	109
Hrs bright sun:	54.2	70.5	106.8	151.7	191.9	186.9	202.2	195.1	139.3	107.7	67.9	47.4	1521.6
Mean duration:	1.75	2.52	3.45	50.6	6.19	6.23	6.52	6.29	4.64	3.47	2.26	1.53	4.16
Mean duration possible at Lat 51° :	8.51	10.05	11.86	13.83	15.51	16.45	16.03	14.53	12.65	10.73	8.97	8.04	12.27
# sunless days:	12	8	6	3	2	2	1	1	3	6	9	13	66
Mean RH:	88.7	87.8	83.2	76.7	73.4	73.2	73.1	75.4	82	86.9	89.1	89.9	81.6
# days with fog:	3	3	1	0	0	0	0	0	1	2	3	3	16
# days with snow:	3	3	2	1	0	0	0	0	0	0	1	2	12
Mean wind speed (mph):	5.2	5.1	5.2	4.9	4.4	4	3.8	3.6	3.6	3.9	4.2	4.9	4.4