

# The Reading Naturalist

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THE READING NATURALIST

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### Meetings and Excursions

The Annual General Meeting on 4th October 1984 (attendance 62) was followed by Mr. M.R.W. Sell's Presidential Address entitled "The Scilly Season and Other Unnatural Events". Other lectures during the winter were: Gilbert White and the Natural History of Selborne by Dr. E. Chatfield (62); Reminiscences of a Mis-spent Youth Among the Lepidoptera by Mr. E.P. Wiltshire (46); Nature Conservation in Upper Deeside by M.P. Marran (34); Spring in the Everglades by Mr. G. Langsbury (56); Wildlife of the Seychelles by Mr. G. Bathe (47); Freshwater Crayfish by Mr. J.B. Hogger (47); Agriculture and Conservation - Which Way Now? by Dr. W.M. Adams (56); The Natural History of a Royal Forest - Shotover by Dr. D. Steel (64); The Naturalised Animals of the British Isles by Sir C. Lever (45); Two Members' Evenings of slides, talks and exhibits were held - on December 13th 1984 and March 21st 1985 (54 and 55).

### Winter Excursions

There were two Fungus Forays during October - the first to Cold Ash (29) and the second to Ashampstead and Mortimer (24 in the morning and 20 in the afternoon). Walks were: to Caversham Court and the Warren for Trees in Autumn (29); for lichens and general interest at Swallowfield (19); for birds at Dinton Pastures (22); a day-long visit by 10 stalwarts to Slimbridge (in freezing weather!) for wildfowl; for Herons at Sonning as the listed walk for mosses and liverworts was cancelled due to heavy snow - (again 9 stalwarts).

### Summer Excursions

The first on 6th April was to Pamber Forest in very inclement weather for Adders and spring flowers (24); then on April 20th to Nuffield for Green Hellebore (15); on May 4th to Bucklebury for Meadow Saxifrage and Yellow Figwort (25); on May 9th to Bearwood (14) and on May 22nd to Burghfield - River Kennet Gravel Pits (16) both for bird song; to Moor Copse Reserve on June 1st for general interest (23); to Dinton Pastures on the evening of June 5th for Bats (36); on June 18th to Langham Pond, Runnymede for ancient meadow flora and Butterflies (18); a day-long visit to Selborne and Noar Hill Reserve to visit the Gilbert White Museum and the ancient chalk quarries to see Musk and other Orchids and Butterflies (30); to Basingstoke Canal for Skullcap, many water plants and Damselflies (26); to Warren Heath on August 17th for Dragonflies (28); on September 7th to Cookham for general interest (18); and on October 21st to Fawley near Henley for hedgerow fruits and general interest - notably acute- and roundleaved Fluellen (23).

A photographic meeting was held at Aston Rowant on August 3rd (24); Two mothing evenings were held: at Owlsmoor on June 21st and at Snelsmoor Common on July 6th - this being preceded by a study of acid heathland and bog and then a very enjoyable barbecue organised by Dr. Humphry Bowen (36). The Annual Coach Excursion was to Wye National Nature Reserve, Ashford in Kent. On a very sunny day, many orchids and birds were seen and a nightingale was heard (40).

PRESIDENTIAL ADDRESS GIVEN BY H.R.W. SELL ON OCTOBER 4th. 1984

"THE SCILLY SEASON AND OTHER UNNATURAL EVENTS"

My talk this evening will be about some of the stranger habits of Homo Sapiens, as we conceitedly entitle ourselves; I prefer the term 'Homo stultus', or possibly 'ferox', but these two are not generally recognised by scientists, although more descriptive of the species. 'Ferox' in particular, describes man quite effectively and generally, as man is basically a hunting species, although this urge is often suppressed, and pops up in the guise of collecting or photography, which, after all is said and done, is a similar form of hunting.

I class myself in the latter category, as a collector of records in fact, nothing more sinister than that! Unfortunately for me, a two-year sojourn in an old damp cottage in the late sixties caused my old diaries to gather such an amount of mould, that they were beyond retrieval, and had to be disposed of; I therefore have no comprehensive records older than 1968, but I have vivid recollections of an idyllic setting near Bath, where the film the "Titfield Thunderbolt" was made in 1950, with Turtle Doves, Dippers and even Red-backed Shrikes, which in those days were far more common than they are now, along the railway line and the adjacent stream, where the film was being shot.

And talking of shooting, Britain, as I said, was originally a nation of hunters, an instinct which still carries on, in the form of game shooting, fishing and egg-collecting, now illegal, of course, although it still has a hard core of 200 collectors, probably more. Countering this is the large conservation lobby, including well over 300,000 members of the Royal Society for the Protection of Birds, the County Naturalists Trusts, and many other organisations, who are becoming a powerful voice in the land, and who are beginning to make their presence felt in terms of votes in Parliament. Gradually, the conservation ethic is spreading throughout Europe, although it is very much in its infancy in the South, where wholesale massacre of migrant birds still takes place in Spring and Autumn, and never a binocular or camera is to be seen in the country. Although laws protecting migrants and resident species alike have been passed in the E.E.C., these are blatantly flouted in Italy and France, for instance, where characters resembling bandits, with large cartridge belts, go creeping through the undergrowth, shooting at anything that moves, sometimes scoring a direct hit on another example of Homo Sapiens. Bird-liming and trapping, often in mist-nets, is rife, and in Malta and Cyprus is so extensive, that it is estimated that in the latter island, about 2/3 to 3/4 of the migrants flying in are slaughtered, a figure involving several million birds in Spring and Autumn each year. One hears similar horror tales from Greece, where after work each day in the season, workers set out on their motor scooters with guns, and blaze away at any bird they set eyes on, leaving many to die a lingering death. This is all totally inexcusable, as it has no economic value whatsoever, and is presumably done just to boost the 'macho' image of the perpetrators. However, I do not wish to continue in this vein, as there are much more interesting aspects of natural history to discuss, albeit related to man's urge to hunt, but which are probably far less well known .....

I mentioned the collecting mania earlier - well, mania is perhaps too strong a word, although it may not be, as you will see. That august body, the Wild Flower Society, is a club of collectors, although not in the original sense where specimens were taken. It was originally set up for children in the last century, to observe the countryside, recording plants and the date they were seen. Branches were set up, and you could "win a Branch" by seeing the greatest number of plants in the particular part of the country. If you saw 700 plants two years running, you were then accepted into "Valhalla". You could then carry on "accumulating" plants; if you saw 2,000 plants, as listed in Dandy, you could then count Aliens, and get into the non-competitive Branch of the W.F.S. (There

are about 3,000 plants in Britain.) This is of course quite harmless, and probably very good fun!

Another aspect of collecting, which I had no idea existed until I had lived in Reading for about three or four years, was a strange phenomenon known as "Twitching". The origins of this pastime are rather obscure, but they are said to derive from the competitive nature of the said species, Homo Sapiens, to see more rare species of birds than his fellow men, with particular reference to the United Kingdom. In this connection, the term "Listers" or "Tickers" is fairly readily comprehensible, but the term "Twitchers" needs some explaining!

It was apparently derived from the early activities of a certain pair of rarity hunters, who, in the very early days, before the 'grapevine' was as well developed as it is today (about which more anon), would learn of a rare bird some distance away from where they lived, and set off before dawn, often in bitterly cold weather, on a motorbike. They took a large dog, which came for the exercise, but was also useful in that it could be jammed between them on the motorbike to provide a little warmth on the journey! The first action of the pillion passenger, on arrival at the site, was to light up a cigarette, with which he often had extreme difficulty as he, and his hands in particular, were so cold. The resultant shivering, or twitching, apparently became automatically associated with a trip to see a rarity, and the name stuck to this day!

So from the guns to the binoculars and cameras - I was about to have a new world opened to me. When I first visited Cley marshes in 1971, I thought: what on earth can there be of interest here on this bleak and windswept barren-looking area? I soon found out. A weather-beaten figure, clad in a black leather jerkin, approached, and as he had a kindly face, I asked him hesitantly, not knowing who he was, or what his knowledge of birds was, whether there was anything interesting to be seen. I could not have picked a better person to ask, for as I soon discovered, it was none other than the late Richard Richardson, the well-known bird artist, who at the time was the expert on Cley and surrounding area, and was most helpful to me, as he was to anyone, whatever their knowledge, or lack of it, when approached for information. It so happened that there was a Baird's Sandpiper, a rare vagrant from America, there at the time, and he told me exactly how to get to it, and other birds of interest in the area. This wetted my appetite, and I soon became "hooked" on Cley, making three or four visits a year to this bird-watching Mecca.

I then discovered the "Grapevine", the fantastic network of information operated by birdwatchers, "Twitchers" or "birders" as they are so often called nowadays. Information about rarities could be obtained almost instantaneously anywhere in the country, or so it seemed, if you knew the right people, and could persuade them to tell you "what was about" when you wanted to know! Armed with current knowledge about unusual birds in the country, a completely new world was opened up to me, and when groups of birdwatchers descended upon some unsuspecting corner of the country at dawn, the locals would look on in amazement, finding it quite incredible that news about one small bird could bring so many people from all parts of the country together so quickly! On Friday nights, in particular, telephone lines all over the country would be buzzing about news of rarities, particularly during the Spring and Autumn migration, when weather conditions were right. At first, birds whose names I had scarcely heard of before were being found, and exact geographical directions were given, with useful topographical tips thrown in for good measure ..... certain locations were renowned for rarities, I discovered, and certain people always had the very latest news. A "nerve centre" existed at Cley, where there was always someone to answer the telephone with details of anything from Lands End (or the Scillies) to John O'Groats and beyond - some telephone bills must have been astronomical, too!

Speaking of the migration season, the North Coast of Norfolk, with its Nature Reserves and heritage coast from Sheringham right through to

Hunstanton is always an exciting place particularly in Autumn, when weather conditions are right, and at the end of August 1974, I was fortunate enough to experience that phenomenon, - a "fall" of migrants, and how apt that descriptive word is. The previous day, on a 4 to 5 mile walk along the coast near Cley, the number of passerines and other small birds could almost be counted on the fingers of two hands. The wind was South-West, entirely from the wrong quarter, but the following day it had veered round to the North-East, force 2 to 3, with a sea mist onshore. I walked in the same area, but the difference between the two days had to be seen to be believed. It was evident that something had happened overnight, and there were fair numbers of passerines on the shingle bank, the foreshore, and the salt-marsh behind. I had walked about two miles along the shore towards Blakeney Point, a well-known bird sanctuary, when I stopped for a bite of lunch, and I suddenly realised that it was literally raining birds out of the sky around me as I ate my sandwiches. Pied Flycatchers, Whinchats, Redstarts, Wheatears and other small birds were everywhere I looked. In the space of 3 to 4 miles along the shingle, sometimes completely bereft of any wildlife, I counted 150 to 200 Pied Flycatchers, 400 or more Wheatears, 15 Wrynecks, and many other species, "wind-drifted" across the North Sea from Scandinavia, quite an experience in itself, but more was to come. News filtered through of a Bonelli's Warbler in Great Yarmouth, only about 5 miles from where I was staying at the time, so a number of people piled into cars and sped back the 45 miles or so to the spot. The Promenade at Yarmouth was quite a sight, with every small ornamental shrub on the sea front being host to a dozen or so assorted migrants, and we found ourselves on a playing field, looking over a hotel wall into a large garden with a huge Elm tree, full of Chiff-Chaffs, Willow Warblers and other migrants, where the rarity in question had secreted itself. In the meantime, the diversion continued, as we found ourselves the subject of an artist's sketch from the rear, a number of heads being depicted looking over the wall at the large Elm tree! People came and went, but no-one had seen the bird for a while. A bird-watcher, just arrived breathless from a wedding, complete with white carnation in his buttonhole, but with the indispensable pair of binoculars round his neck, joined the crowd, and a loud cheer went up as the Bonelli's Warbler appeared, chased a Chiff-Chaff into the tree, hovered to show its characteristic yellow cap, and then vanished into the tree itself.

Weather conditions, as I have said, if correct, can give rise to great excitement and interest. St. Ives in Cornwall, one of the best sea-watching sites in the British Isles, if the winds are right, produced an amazing day in September 1983, when storm-force South-Westerly winds veered North-Westerly, and blew 1500 Storm Petrels, 88 Sabine's Gulls, Leach's Petrels, Great and Cory's Shearwaters, numerous Manx Shearwaters, all four species of Skua seen normally in British waters, and many other seabirds in enormous numbers right past a large group of watchers on St. Ives island. This weather pattern had been foreseen, and those with sufficient foresight to make the long trip were amply rewarded for their pains. With bird-watching at this intensity, speed is of the essence; if you don't get up and go at once, the bird you are after may be gone. It only needs one clear night, and you may regret your slothfulness.....

However, birds are very conservative in their habits, and if a bird finds a spot to its liking, it is sometimes almost possible to set yours watch by what it does. Even if you know what you are going to see, there is always the element of surprise. I was once at Eyebrook Reservoir in Leicestershire an excellent spot for waterfowl, looking for a Killdeer, which I didn't see, incidentally, but as I scanned a long line of ducks resting on a shingle bank, I mentally identified them all, but passed over a tall white one which didn't register in my mind. When the penny dropped, and I came back to it it was a Spoonbill a very unusual visitor, and even more so at the time of year I saw it; I also had no idea that it was there, anyway! The same thing happened when passing Tring Reservoirs

on a warm Spring afternoon. I stopped for a few moments and scanned the water, noticing a small duck with some Tufted Ducks and Coot. It turned out to be a drake Garganey in immaculate Summer plumage. Such are the excitements of birdwatching, but even if you don't see the bird you have set your mind on, the disappointment can be tempered if you have visited a good area. The worst trips are those where you have travelled a great distance specifically to see one bird, and there is nothing else in the immediate vicinity, the bird in question has flown, it is raining steadily, cold, and you are on an industrial estate in the North-East or the Midlands, it is Sunday, and you have run out of hot coffee... these are the bad moments, but you then have to try hard to remember the good ones!

With rarities, many birds are "reportable", in other words, the Rarities Committee, or the "ten rare men", as they are sometimes known, need to consider a full field description of the bird in question, which should be submitted by the observer or observers for scrutiny. I remember my first experience in this field, finding a drake Ring-Necked Duck at Theale in 1978, and telephoning several people to inform them of my discovery, and then thinking "horrors, I won't get this record accepted unless I submit it. Oh well, never mind, there are far more experienced birders than I who will do it". But they were very generous - they said "It's your bird - you submit it!" So I did, and I got it accepted, and in spite of a most unscientific description, I saw my record in print in the following November's issue of "British Birds" a real thrill indeed!

By now you will be getting into the swing of things, but there are more strange things to come - "Twitchers" have a language all of their own, which can sound like a foreign tongue to outsiders. Phrases like "Gripped off" means that someone else has seen the rarity that you haven't; "dip out" means that you haven't seen it anyway, and "unblocked" means that you have now seen a rarity which was a "megatrick" before - sorry I mean that very few people had seen it. And "ticks" in this instance are not to be found on sheep, although that is what I first thought; they are the number of species, i.e. birds that one has seen. The list is much longer, but these are just a few examples to go on with.

Knowledge of rare birds is constantly being extended, and recently I made three trips in a week to Norfolk to see a particular Tern with an orange bill, but otherwise very similar to a Sandwich Tern, actually seeing it on the third attempt, but still not knowing exactly which species it was! You may question the sanity of driving or being driven 1,000 miles, and walking along 24 miles of shingle, for what? ... For me, the experience is worth it, and the days in the open, along the shore with plenty of other birds to look at as well. For others, the angle may be slightly different. A Cream-Coloured Courser from the Sahara caused a plane to be chartered from the Isles of Scilly about which more anon, and someone was overheard to say, after a plane flight to the Shetlands: "Have a good look at this one - it's costing you £100 a minute!" Some bird - but there are those who feel it is all worthwhile.

So now to the main event of most "Twitchers' " calendar - the annual migration to the Scillies, as they are irreverently called, or the Isles of Scilly, as they should be correctly entitled. These superb islands, only 28 miles South West from Lands End, are not only famous for their rare birds, but have a wealth of unusual plants and other natural history specialities as well. The islands are almost invariably the warmest place in the United Kingdom in Winter, and that includes the Channel Isles. There is rarely frost, and snow is almost unknown. The islands have subsided since Roman times, and at low tides it is still possible to see the ancient roads between the islands, which at that stage were joined together. At very low tides it is still possible also to walk between all the islands except St. Agnes, if you know exactly where to put your feet! Tresco is famous for its tropical plants, many of which could not grow anywhere else in the British Isles. To give you some idea of the climatic peculiarities,

Daffodil bulbs are well advanced in October, some of the early daffodils can be picked in November, and many more in January. Much of the early flower market has, however, been lost to the hothouses in the Channel Isles, and the economy of the Islands is precariously balanced, with tourism forming the mainstay from May to September, and early flowers and vegetables propping up the livelihood of the islanders for the remainder of the year.

There are many rare wild flowers in the Islands, some found nowhere else in Britain, such as Viola kiteibeliana and Ornithopus pinnatus and a couple of buttercups found in bulbfields on St. Martin's. Large Cuckoo Pint abounds, as does Four-Leaved Allseed and Bermuda Buttercup, to name just a few. These are very rare or unknown on the mainland, and many are of Mediterranean origin. Spring flowers, such as Three-Cornered Leek, often bloom again in October; strange hedges protect the early Spring bulbs, with plants from New Zealand and Japan, such as Euonymus, Escallonia, and the ubiquitous Pittasporum, which provides a splendid windbreak, and can tolerate salt spray, which in the Winter storms blows right over the islands.

When the last of the holidaymakers depart in September, another invasion takes place; this time the invaders are dressed not in shorts, T-shirts and plimsolls, but in camouflage gear and boots, and are armed with binoculars and telescopes. The season of the "Twitchers" has arrived! After the initial resentment by the islanders, the realisation dawned that there was an extension to the tourist season, and nowadays in October there are about 700 birdwatchers, birders or Twitchers to boost the islands' economy for an extra month. Traders and boatmen both benefit; in the 1960s, the maximum number of birdwatchers on the Islands was about 35 to 40 in Autumn, but after an incredible late September and October in 1975, the idea really caught on, and numbers rapidly climbed. I first went in 1977, and at that time the social activity in October was restricted to once-weekly slide shows in the Town Hall, of wildlife on the Islands, and the daily bird "log" was called in the "Atlantic" or the "Mermaid". Perhaps I should explain what I mean - the "Log" is meant to be a record of all birds seen on the islands that particular day, and the "Atlantic" and the "Mermaid" are two of the hostelrys on the main island, St. Mary's, the former tending to be haunted by the more sedate birdwatchers, the latter by the younger generation and the hardened "Twitchers", often being one and the same! This however has all changed, and the "nerve centre" for birdwatchers and "Twitchers" alike is the Porthcressa Restaurant, which serves meals, snacks and continuous bird information on anywhere in the U.K. all day, and the Bar downstairs, where there are events on any number of ornithological topics, from slide shows to talks, to a "Birders' Ball" and a quiz to prove who is the best at identifying unusual birds; this is of course preceded by the "Log", read out by no less a personage than the Secretary of the Rarities Committee. Although the place gets extremely crowded and smoky, it is possible to meet here, or anywhere else outside during daylight hours, for that matter, people you don't see from one year to the next! In October, the Islands are now truly geared up for the birdwatching invasion, and as I say, it adds a very valuable four to six weeks to the holiday season for the islanders and their economy.

Apart from birds and flowers, there are also a number of unusual moths and butterflies to be seen, even as late as October, and these include Convolvulus Hawk and Humming Bird Hawk moths, Painted Lady, Red Admiral and Clouded Yellow butterflies, and sometimes, if conditions are right, Monarch butterflies are to be seen. These are enormous, half as big again as our Purple Emperor, and have a floppy but powerful flight. They should have, as they come from North America, as do many of the migrant birds at this time of the year in Scilly! They have a glossy black abdomen, and look for all the world like an orange and black stained-glass window when roosting, which they do before dusk, or on overcast days.



Mammals consist of rats and rabbits, far too many of the former, and the Scilly Shrew, which is unique to the Islands. There are also a large number of cats and dogs, some of the former appearing to specialise in catching rare birds! Of the birds, of course, I have heard it said that, apart from the resident Sparrow, Starlings, Robins, Wrens and Blackbirds, all birds are only there by accident; this is of course an exaggeration, but most birds that are to be seen in late Autumn are on regular migration, or blown wildly off course. Sanderlings, which run up and down a beach with the advancing and receding waves like so many clockwork toys, are on regular migration from their breeding grounds in the Arctic to their Wintering grounds on the West Coast of Africa. The breeding English Warblers and Flycatchers are also regular each Autumn, but most other birds are vagrants or accidentals, hence the large number of people going to see them each year. The beauty of the islands for me at any rate, is that you never know what is going to turn up - each year is different. Granted, there are some similarities, but I would like to illustrate to you how, by quoting a number of interesting and amusing episodes, how each year is different from any other.

As I said my first year was 1977, and I particularly wanted to sample the boat crossing from Penzance, as it was said to be good for seabird watching. I did board the "Scillonian" with some trepidation, as I had spent a previous holiday in the peninsula West of Penzance, and had been asked when buying fish and chips one evening in Penzance whether we had come off the "Scillonian". On asking why I was told: "Oh, well, a couple of people had broken ribs and one had a broken leg," in the most off-hand way, as though it were a daily occurrence! After a rather lively but otherwise uneventful crossing to St. Mary's, I was told, on arrival, that there was a Black-and-White Warbler at Lower Moors. I had no idea where this was, so I went to the flat where we were staying, dumped the luggage, and followed the crowd! After a short wait at the site, a superb small bird appeared, looking just like a mint humbug, and eventually got within less than ten feet of the watchers. I thought to myself that if all American passerines were as easy to see as this bird, I was in for a very good time indeed! But what a fantastic start to the holiday, the very first bird I had seen on the Islands being an American Warbler! Was it going to go on like this?

One of my early discoveries on the islands was that it did not appear to matter which way the winds blew - there were always birds of interest to be found, and it was a far commoner occurrence to have an American and Asiatic passerine in the same bush than it was to get the Americans and Russians together to discuss matters like arms limitations!

One American bird that obviously liked the area was a female Black Duck, which arrived in the Autumn of 1976 and stayed for at least seven years, pairing with a British Mallard, and producing a large number of small "half-Black Ducks" in the process! On the same stretch of water, the Abbey Pool on Tresco, I watched two different American waders, a Baird's Sandpiper and a Wilson's Phalarope, from a distance of about ten feet. Where else in Britain could one see this sort of phenomenon?

A particularly good area for watching is the Golf Course on St. Mary's, with panoramic views over the other islands. The only problem, particularly at weekends, is a surfeit of golfers, who cause the larks, pipits and any rarities that might be there, to take flight! Nevertheless, access is available to everyone on any part of the course, and this is of course a great benefit to birdwatchers.

The following year, 1978, I was beginning to get accustomed to the geography of the islands, and some of the more unlikely events, or so I thought, but there were more surprises in store; the day after most of us had been watching a Scarlet Rosefinch in a weedy field (Rosefinches in Britain are never scarlet, I should perhaps add), a large notice appeared at the edge of the field, stating that birdwatchers were a nuisance in large numbers, and that the low wall we had been looking over the previous day was now piled high with a topping of two feet of manure, so that

we couldn't lean on it, as we had done till then! The farmer obviously thought that flocks of birdwatchers, rather than birds, could be kept at bay by this rather drastic measure ... it was at this stage that I began to realise that there was a developing role for those I would call the "elder statesmen", the senior and most responsible birdwatchers, who would be able to keep the young hotheaded twitchers in check, and prevent them dashing all over private land to see rarities, and trampling vegetation. Over subsequent years, I have noticed a gradual change in the islanders' attitudes, from outright antagonism to tolerance and even positive encouragement and a welcome when the swarms of watchers arrive in October - after all, there are benefits to the economy of the community, but it is essential to understand other peoples' attitudes as well. One major fear that the islanders have is the potential spread of eelworm from one bulbfield to another on people's feet, and this is why there is often rigid insistence for walkers to stick to recognised paths. Nevertheless, such is the change in attitude that special trails are opened by farmers for birdwatchers to see rarities, often in parts of their domain where no access has previously been possible. However, this attitude can only be maintained by constant good behaviour on the part of those who enjoy the hospitality of the islanders every year as their guests, and I must confess, the general standard of behaviour is usually very good; this is helped by a certain amount of self-policing, and general respect for the wishes of the local people.

Another feature of 1978 was a brilliant piece of detective work in bird identification. Amongst the waders on the islands' shores, a call very similar to a Spotted Redshank was heard, but no Spotted Redshank was ever seen. The question was - what bird was producing this call? Various theories were put forward and then discounted, until one suggestion made aroused the excitement of a few of the cognoscenti, but nothing was said until more investigations had been carried out .... could one of the small flocks of Ringed Plovers contain a bird remarkably similar to a Ringed Plover, but with a totally different call, but the only difference in visual identification being partially webbed feet! Eventually, the individual bird was isolated by its call, and did indeed prove to be a Semi-Palmated Plover, an American wader, and the first for Europe. The great difficulty remained - seeing the partial webbing of the feet, but this could in fact be accomplished at a distance of up to fifty feet with a telescope and in good light! Problem solved, and a feather in the cap of the discoverer!

An amusing incident, apart from the discomfiture of those involved, concerned the transport arrangements to the islands. I was looking for a Barred Warbler one morning, when suddenly a thick fog descended without warning. I heard the helicopter arrive at the airport, but apparently not land. I later found out that it had been unable to land because the fog arrived just that little bit too quickly, and so made its way back to Penzance. When it got there, the fog was too dense for it to land, so it had to put down at St. Just, near Lands End, where there was a special bus waiting to take the luckless passengers back to Penzance, which they had left about 3 hours previously, hoping to make their way to the islands! This particular year, I made the homeward journey on the Scillonian, and about three miles from St. Mary's, a shout went up: "Albatross" and everyone rushed to the stern, where a large black and white bird was sitting high in the water. It was useless to expect the ship to be turned round, so a message was put out on the ship-to-shore radio, and a boat was chartered to try and find the bird, but in vain.

By the next year's trip, I had got accustomed to the possibility of having the day's planned itinerary wildly disrupted by some rarity or other turning up, and references to the 'Bunting field', or the 'maize field' meant something; what I did not expect was that a largish American bird could give several hundred birdwatchers the slip for five days on St. Mary's and when it did reappear, it was so easy to see; it was a Rose-Breasted

Grosbeak, and although the adults, with black backs and scarlet breasts have not been seen in Britain, the immatures have brilliant vermillion under the wings, which makes a pillar box look positively pale, and causes gasps from watchers as the bird takes off or lands!

Two other examples of the 'good tourist' image came to notice, when two rarities appeared on St. Agnes, an island where the birdwatchers staying there usually have the run of the area, but where others from St. Mary's have to stick to the public paths. A ticketing system was introduced whereby the birds concerned could be viewed by those holding 'tickets' (numbered pieces of paper) for a limited period of time, then giving way to others. At the end of the day, most people had seen the bird concerned and extra time was given to those who had not yet been lucky. The technique was used for access to private land, or where there was limited access for viewing and was 'Policed' by the more experienced watchers.

The boatmen, who ferried those wanting to visit the other main islands over at mid-morning and early afternoon, were splendid characters. Sixty or so people could be conveyed in each vessel, open to the elements, unless you sat right at the front, where you could avoid most of the spray on a rough crossing. Only on the very roughest days would there be no boats, and sometimes even in mountainous seas the intrepid would set out if there was news of a rarity on one of the other islands. On one eventful occasion, there were so many rarities on the "off islands" that boat passengers were actually exchanged in mid-channel, which provided everyone with the opportunity of seeing more birds more quickly than they otherwise would have done!

There are occasions however, when the boats, even with their shallow draft, cannot visit all the "off islands" at very low tides, and when a Blackpoll Warbler turned up on Bryher, the boats could not get in, so birdwatchers were advised to walk between the islands, going from Tresco to Bryher. This most of them did, wading up to waist-deep across the narrow channel. Those who got the timing exactly right, only got wet feet, but others crossing half-an-hour later, got much wetter. The amusing sight of a crocodile of enthusiasts, wading across, trousers rolled up, binoculars and telescopes held aloft, must have been well worth watching.

Crossing from Tresco back to St. Mary's one day a message came over the boat's radio "Red-Rumped Swallow at Porthcressa Beach," whereupon the boatman was interrogated. That worthy exclaimed vigorously that he had nothing to gain financially or otherwise, as he was only taking his passengers back to their normal destination! All on the boat disembarked in record time when it docked at St. Mary's, ran up the main street, telescopes at the ready, and there, sure enough, was this odd-looking Swallow flying around the beach, just as he had said - it was a fair cop!

For the second week of my fortnight in 1979, my family rather rashly decided to join me on St. Mary's, on my insistence that if they never came to see what we lunatics got up to on the islands, they would never be able to pass judgement with any degree of accuracy, their evidence only being based on hearsay of what actually happened! Walking back to our bungalow one afternoon, we passed two people peering into a small field near the Golf Course, and when I asked what they were watching, I got the answer: "Olive-backed Thrush". Somehow this didn't register, and we walked back at a leisurely pace. When we reached the house, a sort of panic seized me; what did they mean - was it an odd Song Thrush or something? I rushed back to the spot, where I had realised they meant that it was a Swainson's Thrush - a small thrush from North America - which they had called by its older name. I managed to get reasonable views in the gathering gloom of this extreme rarity (there had only been about three other occurrences in Britain up to that time), when the experts came rushing up, and I was quizzed about the details I had seen on the bird. What a surprise - I was almost speechless - I had unwittingly been almost the first on the scene, and had not fully realised what I was looking at!

The arrival of this small Thrush really brought home to me the magnitude

of the journeys some of these small birds make - the American warblers, in strong Westerly winds, can cross the Atlantic in 36 hours, a journey of some 3,000 miles non-stop, a prodigious feat by any stretch of the imagination, with of course no intermediate landfall between American and the islands West of Cornwall, if they miss Ireland, that is! Conversely, if the winds blow more from the East or South-East in mid-October, you are likely to go out one morning and find Black Redstarts everywhere on the islands - overnight migration is the rule, rather than the exception, for small passerines.

My holiday in 1980 started rather dramatically; we had just experienced a force eight North-Westerly gale crossing on the "Scillonian" and after the three-hour crossing were very thankful when we entered St. Mary's Roads; just then the Captain came over the Tannoy to say that there was a French trawler aground in the harbour, and couldn't berth until high tide, when it would be re-floated and hopefully set sail once more, as it was occupying our space. Most people on board groaned, and it was little consolation to them that the bar and buffet remained open for another three hours, as no-one was very hungry! It was also little consolation to them that the Scillonian had not been able to berth at all in St. Mary's the previous day, as it was so stormy, and had to return to Penzance, the total time at sea being nine hours in a Force 9 gale!

While we were waiting to berth, a number of birdwatchers already on shore were seen hurrying to a spot near the harbour, then watching a spot intently; naturally, this engendered considerable anxiety among those marooned on the ship, but we later discovered that it had been a hoax, cleverly organised by those who had realised our predicament, and knew that we would have no idea what they were watching, if anything!

One feature of this particular year which struck me was how some birds, with cryptic colouring and superb camouflage, apparently gave their presence away with what I considered unnecessary movement. This was evident with both a Jack Snipe and a Woodcock; as they were feeding, they bounced gently up and down as though they were internally sprung, and it was this movement which drew my attention to the Woodcock, as it fed at the bottom of a small bulb field, against the background of a dark hedge. If it had not moved in this way, I am convinced that I would not have seen it. Jack Snipe also tend to feed in the same way, whereas Snipes do not, and to my mind are much more difficult to detect against a background of dead bracken or Phragmites, for example.

Immature birds - most of the vagrants to the islands are immatures - are sometimes exceedingly difficult to differentiate from other closely related species, and a Sylvia warbler found on one of the more open parts of St. Mary's proved impossible to identify readily in the field - after due consideration, Lesser Whitethroat was ruled out by most people, but the experts were equally divided as to whether it was a Subalpine Warbler or the much rarer Spectacled Warbler. Most people no doubt hoped that it was the latter; eventually, permission was obtained to trap the bird in a mist net - something not normally done on the islands, and for which permission has to be obtained from the Duchy of Cornwall. After examination in the hand, certain diagnostic features proved it to be an immature Subalpine Warbler; this just shows how difficult positive identification can be, even to the most experienced birdwatchers in the country.

1981 I shall remember as the year of the Monarch - not a bird, of course, but that most magnificent of butterflies which sometimes does a Trans-atlantic migration. It was estimated that there were about nine different individuals, but as one or two had been seen in Devon and Cornwall in September there may well have been more. I pursued two or three, but never had a close view of one at rest - they were always on the move when I came across them, and flew deceptively fast, doing the disappearing act very effectively just when you thought you had caught up with them! Searching for these butterflies provided an interesting diversion, as European birds were rather thin on the ground this year. However, when the excitement came, it was intense. An American Nighthawk, a bird

very similar to our Nightjar, but with different wing markings, was discovered one evening flying around, but no-one got very good views, as it was late, and had begun to get dark. The following evening, everyone on the islands got into position, in very good time, on both sides of the valley where it has last been seen, that morning. Being a crepuscular bird, opinions were sought as to the best time it was likely to fly. By five o'clock, I had taken up position on a farm road, overlooking the valley, with the airfield and Lower Moors, a marshy area, on the far side. By far the larger number of birders, probably about 300, had assembled on the airfield, at the edge overlooking the valley, but they could not see Lower Moors from where they were standing. Presently, a Short-eared Owl appeared over Lower Moors, and started to hunt over the marsh. Our group of about 20 people moved downhill slightly to get a better view of the Owl, still retaining a general view of the valley. The crowd on the opposite side of the valley, seeing where we were looking, and our movement, rushed as one man to the edge of the airfield, leaving unattended a collection, which I quickly estimated as worth about £50,000, of what we in business call 'optics' - telescopes, in short. These looked highly amusing, all perched along the skyline! However, their owners soon returned and when the Nighthawk did appear, ten minutes after the Owl, along the valley where it was expected, a roar went up that would have done credit to Liverpool playing at home! The bird put up a tremendous flying display, catching what insects there were to be had on a warm October evening, and everyone went back to their evening meals very satisfied. I was right outside our farmhouse flat so only had to go in and cook supper!

What was even more astonishing was the bird's appearance the following night after it had got dark, and in steady rain - it flew up and down the road to Hugh Town, in between observers' legs, and also at head height, but was not seen again the following morning. We assumed that it had succumbed to the cold and lack of food the previous evening, as it should have been on its way to South America when we saw it.

Another memorable incident that year was the discovery of a male Orphean Warbler, rather like a large Blackcap, but with a brilliant yellow eye. Some of us had just returned on the afternoon boat from Tresco, and we heard the news on the quay at St. Mary's. Most people ran the two miles to Forthellick, where the bird had been seen in some gorse, but there were the usual taxis and the odd cycle or two. So intent was everyone on looking at or for the bird, that no-one reacted when a crash in the bracken was heard. The unfortunate collapse of one of the older watchers, for whom the dash from the quay had obviously been too much, had gone completely un-noticed; fortunately he recovered, because I am quite sure that no-one would have known what to do if he had suffered a serious heart attack. Such are the trials and tribulations of high pressure birdwatching .....

The following year, naturally we all wondered what was in store for us this time; we were not to be disappointed, as 1982 proved to be the best year for American vagrants for many a long time. There were other surprises as well - a young and inexperienced Osprey practising its fishing techniques on the Pool at Forthellick, and in the bay nearby. The noise made when the bird crash-landed or belly-flopped at close quarters had to be heard to be believed! The success rate of its dives was about one in ten, but the spectacle involved with the aerobatics was marvellous to watch.

As I mentioned before, Siberian birds always seem to get through somehow, and I think that 1982 was the first occasion when I saw an American bird (Scarlet Tanager, which by the way wasn't scarlet at all, but a yellowy-green female) sitting in the same bush as a 3½ inch long Siberian bird, a Pallas' Warbler. It always staggers me when you realise that these little mites have flown over 3,000 miles in the wrong direction, and appear as fit as though they have come from the next field, rather than the distance they actually have travelled.

And while still on the subject of American vagrants, one memorable day bears recall; I had spent the morning on St. Mary's watching the Osprey's

antics at Porthellick, when a rather large and strangely-coloured Hen Harrier appeared over the Pool; it turned out to be the American race of Hen Harrier, but more excitement yet was in store - a number of birders set out for St. Martin's to see a Killdeer (a large American plover), which had just been reported from there. As usual, the boatmen had turned up trumps, and provided us with half-an-hour to see the Killdeer, which was in a small field right by the quay, then setting out direct for St. Agnes to wait for the Nighthawk (another one of course!) which had made an appearance, and we had superlative views as it flew round the old lighthouse like a large moth, approaching as close as three feet. The new management at the island store-cum-Post Office had got in on the act, and was providing hot cups of soup for late birdwatchers, but a cryptic message on his blackboard had me disbelieving; it said: "Black-billed Cuckoo in Police garden on St. Mary's". I was sure that this was some kind of joke, until I realised that there were very few people watching the Nighthawk, and when the special boat left at dusk for St. Mary's, I realised that most must have left on another boat chartered specially for the occasion. This was indeed the case, and had seen the errant Cuckoo, which had appeared two days earlier, but had then gone to ground, and all the experts were quite sure that it had died, as all American cuckoos seem to do, most sooner rather than later - no-one is quite sure why, it was indeed disporting itself in the Police garden in Hugh Town!

I felt that I had obviously tried to cram too many American birds into one day and was doomed to miss something; the weather was appalling during that night, with driving wind and rain, and I was quite sure that the Cuckoo would be found the following day "under a bush with its feet up", as they say! The following day, Saturday, was my last day on the islands and it dawned fine, sunny and warm, as if to mock me. Down in the town there were a number of long faces, especially those who had come over to the islands for the day (oh, yes, they do that too!) hoping that the Cuckoo was still to be seen. There was no sign, however, so I presumed that it had died, and went off to other parts of the island to spend my last hour or so before the helicopter flight to Penzance. Just by chance (or was it good luck?) I came back to Hugh Town, and was told: "It's on view"; I didn't need to be told what was on view - I nipped round the back of a row of cottages in a flash, and there was a small group of people watching a rather woebegone Cuckoo gulping hairy caterpillars and then looking rather dozy; I gather that it was found dead the following day....

It was then a quick dash to the airfield for the afternoon flight, the ticket for which I could have sold several times over, or demanded, and obtained three times the price for it, as a Chimney Swift, which had never been seen in Europe before, had been reported near Porthgwarra, the South-Western tip of Cornwall. Pinning down a Swift would sound like an impossible task, but birds are creatures of habit, and if they like a particular spot, they will stick to it.

So, elated with my last-minute discovery of the Black-Billed Cuckoo, I returned to Penzance on the helicopter, the next question being how to arrange transport to Porthgwarra, which was about seven miles from the town. Getting there was one thing, getting back could be sorted out later! As luck would have it, a colleague, with his car at Penzance had room for myself and luggage, so we went out to the spot considered most likely to afford a decent view of any aerial movement, and waited patiently for what seemed an age, relieved by the necessity of transferring my luggage to another friend's car, then by a Pallas's Warbler, a tiny mite from Siberia, skipping through the Sallows in the valley floor. By 6 p.m., there were only about 20 of us left, and I had made up my mind to stick it out until dusk, colleague and his wife permitting, when a cry went up, "Swift", and there flying towards us down the valley, was a small cigar-shaped bird that was very definitely a Swift of sorts. What's more, there were two of them and one birder shouted "It's the one on the left!" whereupon someone else shouted: "The one on the right is one too!" and the whole valley erupted with exclamations of disbelief. The birds put up a superb flying display, before eventually flying back up the valley, after having flown within

ten feet of us, as we stood there, watching in amazement. Never had I expected to witness the first occurrence in Europe of two North American birds of the same species, simultaneously! A once-in-a-lifetime experience ...

1983 I shall always recall as the year of the siege, or rather dock strike. Proposed new manning arrangements, with "versatility" in the West of England ports, had led to the Penzance dockers refusing to load the ships in port at the time. This of course included the "Scillonian", and I only found out about this problem, being off the beaten track, I suppose, the day before I was due to travel, due to a chance remark from a colleague who knew of my mad exploits in October each year! We had to make an emergency booking by a special flight from Penzance, leaving at 7.10 a.m. It was quite eerie taking off from Penzance heliport in the dark, but more was to follow. We found that basic supplies were rationed on St. Mary's and fortunately I had taken the trouble to put nine loaves in my holdall before leaving home, plus a few other basic necessities, and these proved invaluable. Milk was hard to come by later in the first week, but the islanders were nothing if not resourceful, being a hardy race, and so most folks managed to cope. Tony Soper was filming on the islands at the time, and the plane he had chartered, known in some quarters as "kamikaze", was kept busy ferrying film crews in one direction, and crammed with fruit and vegetables to the islands in the other! The "Scillonian" sailed very infrequently during the fortnight, and with no supplies at all (normally it provides the islands' main lifeline). Passengers also had to handle all their own luggage. Finally, on the last Friday morning I was there, she sailed for her annual refit direct to Falmouth, and the hapless passengers on board had to make their own way to Penzance where they had their cars parked! The locals were furious, as they had only been told of this unscheduled trip at 5.30 the previous evening, and had had no time to make any arrangements for travel, stores, or anything else for that matter! Altogether, quite a pantomime, and a very interesting fortnight.

The birds lived up to the usual expectations, with another 'first' for the Western Palearctic, a Cliff Swallow. The sequence of events leading up to my seeing this bird was hilarious; I was in the flat cooking and had slipped out the back door for a few seconds to put some rubbish in the dustbin; I heard the front door go, and someone mumbling something about "the Garrison" which is part of the ancient fortifications on the South West side of the main island. When I returned to the kitchen, my assistant cook had deserted, three of the hobs had vegetables cooking, which I turned off, as there was no-one to ask what had happened! The lounge had the television still on, but no-one watching so I switched that off; the front door was swinging on its hinges, so rapid had been the exodus of the other seven inmates, and it was then rather like following the Pied Piper of Hamelin or being one of the Gaderine swine, both speeded up about five times! One passer-by described the bird as a Cliff Swift, of which I had no knowledge, but everyone was running in the direction of the Garrison, so I followed the mob; one individual had just come out of his bath dripping wet and was running partially clothed down the main street, but everyone was obviously enjoying the anticipation of seeing a bird of which many of them had never heard before! Anyway, the bird was there, flying low over the heads of about 300 delighted watchers, most of whom were fully clothed, I might add, and so we went back glowing warmly, to a late supper that evening ....

Another incident, worth repeating, was the way in which a Parula Warbler, another American vagrant, was enticed out from its normal spot on St. Agnes. It frequented a couple of fields where it could not be seen from the main path, and two of the more experienced birders got permission to go into the fields, and played a recording of a Screech Owl (American Bird of course). The effect was electric; the Warbler shot out of its normal haunt into a small orchard where most people watching could see it, albeit momentarily. The tameness of Arctic American birds, especially waders, sometimes has to be seen to be believed, and when I saw a group of watchers on a path on Tresco looking down with binoculars close to the path I crept up

quietly and whispered to enquire what they were looking at. There, about six feet away, and out of focus, was a Solitary Sandpiper, feeding in a small muddy puddle, quite unconcerned by the fuss being made, and the fact that it was almost surrounded by birders! But the most incredible example of this tameness was shown by an Upland Sandpiper. By now I had got used to extraordinary events on the islands, and had had a Song Thrush eating crumbs from my lunch out of the hand on St. Agnes, but I did not believe what I was hearing, so I had to see for myself. An Upland Sandpiper, another North American wader, had arrived some days previously and flown around St. Mary's before finding a favourite spot, a field near the island's hospital, where it was finding grubs and worms in the grass. After a few days, it had become so approachable that one worthy decided to try and offer it a juicy worm, which it came and inspected, and then took from his hand! This then became a pastime, and "feeding the Sandpiper" was an interesting way of passing a spare quarter-of-an-hour or so between "bird spots" on the main island, observing an exceedingly rare bird at very close quarters. Eventually it got so fat that it could hardly move, and then suffered the final indignity of mouth-to-mouth feeding with yet another worm by someone with a new idea!

One final thought - it is sometimes difficult to get away from the crowds when there are a number of rarities one wishes to see, but when you eventually find a secluded spot (and this is quite easy to do if a conscious effort is made) and then you don't see anyone for an hour or two, a sort of panic can creep over you, and the inevitable question is asked: "where's everyone else?" The chances are that they are looking at some rarity or other that you don't know about, and I could recount details of one or two occasions that this has happened to me ....

But enough is enough; I hope that I have given you some idea of the extraordinary phenomena that occur in the work of natural history and especially in that twitcher's paradise, the Isles of Scilly. I hear that the American birdwatching is up to standard again, and I am sure you will see why I am looking forward with pleasant anticipation to going there again tomorrow.

Thank you for listening.



Presidential Address 1985  
Fungus Facts, Fictions and Fancies.  
Alan Brickstock.



'No Fad or Hobby  
is esteemed so contemptible  
as that of  
Fungus Hunter  
or  
Toadstool Eater'

W.D.Hay, British Fungi, 1887.

Honey fungus (Armillaria mellea).

Fungi are very ancient organisms, going back about 400 million years, compared to 600 My for Blue/Green Algae, 300 My for Mosses and Conifers, and less than 100 My for flowering plants. They differ from flowering plants, trees, etc. in several ways; in particular they have no chlorophyll and so cannot photosynthesise. Consequently they either parasitise living organisms - plants, trees, animals etc., or they are saprophytes, living off dead and decaying matter.

There have been many strange explanations for the appearance of fungi. The ancient Romans and Egyptians believed that they were formed where lightning struck the earth. They have frequently been declared to be 'earthie excrescences' or 'evil ferments of the earth', formed by a reaction between the earth and some evil, supernatural agency.

North European folklore tells us that as the god Odin rode through the sky on stormy nights, pursued by devils, blood-flecked foam fell from the mouth of his horse and where it struck the earth, red and white mushrooms grew.

Periodic fungal ravages in agriculture were attributed to the wrath of the gods, and the Romans even had a god of rusts, Robigus.

The reasons for these and many other beliefs probably stemmed from the rapid appearance of fungi, apparently from nowhere, their liking for damp, dark places, frequently in conjunction with decaying matter - light has little effect on their growth, although some species may require it for spore formation - and their apparent lack of seeds or any other means of reproductive process. Their spores, the analogue of seeds, are much too small to be seen with the naked eye, and only with the advent of the high powered microscope in the seventeenth century was their existence discovered.

'Mould and Mushrooms require no seminal property, but the former may be produced at any time from any kind of putrifying Animal or Vegetable substance.' - Robert Hooke, 'Micrographia' 1665.

Also, many had no visible 'roots': Theophrastes, a pupil of Aristotle, in 320 B.C. observed that truffles had 'neither root, stem, branch, bud, leaf, flower, nor fruit', and Jerome Bock, in 1552, believed that fungi and truffles were 'merely the superfluous moisture of the earth, of trees, of rotten wood, and of other rotting things'.

Incidentally, it is now known that the reason why sows were used so successfully to search out and dig for truffles is that truffles contain a

steroid which is a male sex pheromone, not only for pigs, but also for humans. So presumably women should be good at finding truffles!

Fungus spores are minute, of the order of a few microns in size, the largest only about one thousandth of an inch in diameter. They show a great variety in size, shape, texture and colour. Most keys for identifying fungi start from the colour of the spores, which can be found by taking an overnight spore-print, but which can, unfortunately, rarely be told in the field. Spores are produced in vast numbers: a three inch mushroom can produce something like two thousand million spores, occupying about a quarter of a cc, and a giant puffball can produce about seven million million, occupying about half a litre. Despite their minute size, the spores of the latter, placed side to side, would girdle the earth!

The names Toadstool and Mushroom are very confusing and have been used in all sorts of different ways: for example, Mushrooms are the edible species, all others are poisonous Toadstools; sometimes the name Mushroom is used to refer to only the cultivated species, and so on.

In 'The Grete Herball' of 1526 we find:

'There be two manners of them, one manner is deedly and slayeth them that eateth of them and be called tode stooles, and the other doeth not. They that be not deedly haue a grosse gleymy slimy moysture that is dysobedynt to nature and dygestyon, and be peryllous and dredfull to eate, and therefore it is good to eschew them.'

The name toadstool may have arisen because toads were thought to be venomous and creatures of the Devil, and since fungi were all thought to be evil and poisonous, they were obviously closely associated.

Dioscorides, in the first century A.D., ascribed the poisonous nature of fungi to the breath of serpents, and as late as 1597, Gerard, in his Herbal, suggested that rather than being intrinsically poisonous, mushrooms absorbed any noxious substances present near them.

The association of fungi with witchcraft and malevolent powers is reflected in the common names for some of them: Witches butter, Devil's snuff-box, fairy clubs, fairy cups, fairy rings etc.

Fairy Rings have for centuries engendered many curious beliefs:

In England they were thought to be the paths where fairies danced, and to bring good luck to houses built where they appeared. French peasants would not enter the rings because enormous toads with bulging eyes lived there. In Sweden anyone entering a ring came under the control of fairies. In Germany the bare part of a ring marked where a glowing dragon had rested, or it was made by witches dancing on Walpurgis night. In Holland it was thought that cows grazing in the rings would give milk which would make bad butter.

Many believed the rings contained buried treasure, which could only be found with the aid of fairies or witches. They were also thought to be generated by subterranean vapours, breathed out from the earth as smoke rings.

The true reason for the growth of fungus rings, although less romantic than these beliefs, is nevertheless very interesting. A ring starts from a spore, which begins to send mycelium outwards in all directions. Mycelium does two things to grass. Firstly it liberates nitrogenous salts which fertilise the grass, leading to a bright green circle. Secondly, it begins to feed on the grass and eventually kills it, leading to a brown patch in the centre of the ring. As the mycelium continues to spread outwards, at a rate between 3 and 15 inches a year, the fungus in the centre begins to use up all the available food, and to die off. Eventually the dead mycelium itself decays and once more liberates nitrogenous salts. Grass seeds can germinate again at the centre of the ring to produce a fresh, bright green centre. So now we have a bright green centre, a ring where the grass is more or less dead and the fungus fruits appear, and an outer bright green ring where the grass is being fertilised. Meeting rings never cross, although new rings often start in the centre of old ones.

If left undisturbed, rings can continue to grow for many years; some rings are believed to be two or three centuries old.

A number of common fungi grow in rings. The commonest is Marasmius oreades, which is edible and can easily be dried and stored, regaining its consistency when soaked. However, beware poisonous white Clitocybe species which sometimes grow mixed in these rings.

Other species forming rings include the very large Clitocybe gigantea. I used to know one ring of this species which was over 30 yards across, with individual fungi as big as dinner plates. Even in mid summer it was visible as a broad brown ring in the vegetation.

One of the more horrifying afflictions of the middle ages, prevalent in Northern Europe, was the Holy Fire or St. Anthony's Fire. The symptoms of this included an agonising burning sensation in the limbs, followed by gangrene, with fingers, toes and even limbs falling off. One form of the disease lead to convulsions and madness. An outbreak in Aquitaine, France, in 944 A.D. is said to have killed over 40,000 people.

For centuries it was believed to be a divine punishment for sin and debauchery. Not until the end of the nineteenth century was it shown to be due to poisoning by a fungus called Ergot. This grows on many grasses, but especially on rye; outbreaks of the poisoning are caused when infected grain is used for bread making. Modern grain cleaning and milling methods have practically eliminated the disease, but there was an outbreak in Russia in 1926, one in Manchester in 1928 and as late as 1951 there was an outbreak at Pont-Saint Esprit in France, with several deaths. There is no known cure.

For a long time Ergot was regarded as just a malformation of the grain. Baron Otto von Munchausen recognised it as a fungus in 1764, but this assertion was disputed as late as 1837, when Rennie in his 'New Supplement' declared that he had 'ascertained beyond doubt that it is an exudation caused by the puncture of an insect - namely Aphis graminis'.

Spores from Ergot land on the grass or grain stigmas and send mycelial strands down into the ovaries, eventually producing hard, purplish-black fungal growths called sclerotia. The name Ergot is derived from the French 'Argot', a cock's spur, which is shaped like these growths. Sclerotia overwinter on the ground, and in the spring produce tiny, pinkish fruiting bodies called stromata, which produce spores, ready to infect new grain.

Ergot contains LSD as well as various alkaloids. Because of its ability to produce muscular contractions, it has for at least four centuries been used, in controlled doses, to accelerate childbirth and to control haemorrhage after birth; references to its obstetric use go back as far as 1582.

When infected grain is harvested, much of the Ergot falls to the ground, and cattle subsequently grazing in the field may eat enough of it to cause abortion or death.

Fungi are responsible for decomposing dead animal and vegetable matter of all kinds. They are able to break down the cellulose of which plants are built. Recently it has been shown that one common white-rot fungus, at least, (Phanerochaete chrysosporium) is able to decompose even persistent environmental poisons such as DDT, Dioxin and PCB's.

Estimates of the number of fungus species in the world vary between about 85,000 and about 250,000. Of these about 3,000 to 6,000 are to be found in Britain. They range in size from the giant Puffball, which can attain a metre in diameter, to microscopic species too small to be seen with the naked eye. They include mushrooms, bracket fungi on trees, moulds on jam, yeasts, rusts on potatoes and on many other plants; some lead to the production of antibiotics such as penicillin, and others produce diseases such as ringworm, athletes foot and many others. Fungi of some species or other are able to grow in almost any environment. For example fungal growth on lenses of cameras and binoculars etc. is a serious problem in regions of high humidity.

It is tempting to think of the visible fungus as the analogue of a 'plant' and the mycelium which spreads through the medium on which the fungus is growing as the analogue of the 'roots'. However this is misleading: the visible fungus is the fruit and the mycelium is the 'plant'. The fruiting body forms below the surface, as a bud among the mycelial strands. When conditions are right, it rapidly absorbs moisture, swells and breaks through the surface. A large fruiting body may grow in a few days or even hours. Individual fungi can essentially live for ever, as long as suitable conditions are maintained: there may be fungi that have lived for thousands of years, if left undisturbed.

Some species are very specific to particular hosts - plants, trees, animals, pine needles etc.- others are normally found on one host, but may appear on others. Some, such as the Honey Fungus, will attack virtually any living tree and many other plants as well, almost invariably killing the host. This species produces thick black rhizomorphs, or 'boot-laces', which spread through the victim's sap channels, eventually causing death when all the channels are blocked.

Fungi do not always destroy their host. Some form what is called 'Mycorrhiza' with the roots of plants, benefitting both parasite and host. Many Orchids will not grow without the appropriate fungal partner.

Plant-fungus symbiosis can significantly improve the growth rate of many species of plants, especially on poor soils. Already many millions of Pine-seedlings are being treated with culture-grown mycelium in the United States.

Fungi have been used for many different purposes. Some mystical cults have worshiped species such as the Mexican 'magic mushroom'. The Fly Agaric has been used not only for killing flies, but also as an intoxicant and to give hallucinogenic 'trips'. Other species have been used as razor strops, for mounting insects etc. Puff balls were once dried and used to staunch bleeding, especially nose-bleeds, as well as being used as tinder; Gerard says of them 'In divers parts of England, where people dwell farre from neighbours, they carry them kindled with fire, which lasteth long'. But surely one of the most bizarre uses is quoted by Culpeper:

'The Laplanders have a method of using Toadstools ... to cure pains. They collect the largest funguses which they find on the bark of beech and other large trees, and dry them for use. Whenever they have pains in their limbs, they use some of this dry matter; pulling it to pieces with their fingers, they lay a small heap of it on the part nearest to where the pain is situated, and set it on fire. In burning away, it blisters up the part, and the water discharged thereby generally carries off the pain. It is a course and rough method, but generally a very successful one; especially when the patient has prudence enough to apply it in time, and resolution enough to bear the burning to a necessary degree' (!).

There are common names for relatively few fungi, and these vary greatly not only from one country to another, but also locally within countries. Worse still, the same name is sometimes given to different fungi. For this reason it is best to stick to Latin names, although even here there is considerable confusion with some species, stemming partially from several people finding and naming them independently, and partially from lack of knowledge about them and exactly what characteristics place them in particular families; species are not infrequently moved from one family to another.

Of the 3,000 or so British species, about a couple of dozen of the 'larger' fungi are 'edible and excellent', something like a couple of dozen are seriously poisonous. About half a dozen of the latter are deadly, with no reliable antidote, if any. The vast majority are inedible in the sense that they range from being not worth eating to being violently unpleasant to eat; for example the taste can be so unpleasant as to make one sick, without causing any other harm - this is not the same as being poisonous.

Euripides, in the fifth century B.C., was visiting Icarus when 'a woman, her maiden daughter and two grown sons were 'strangled' by the eating of fungi which they had gathered. All four died in one day'.

In 'Castel of Helthe' (1533) Elyot warns:

'Beware of musherons...and all other things which will soon putrifie'.

John Gerard in 1597 said:

'...they are all very cold and moist and therefore to approach unto a venomous and murdering facultie and ingender a clammy, pituitous, and cold nutriment if they be eaten. To conclude, few of them are good to be eaten, and most of them do suffocate and strangle the eater'.

Francis Bacon in 'Sylva Sylvarum' of 1627:

'...Mushromes are a venereous meat'.

However, over most of the European continent fungi of many species are eaten in vast quantities. Over 30 species are sold commercially in France, and in the fungus market in Munich, over 300 species are licensed to be sold.

There are many so-called rules or tests for distinguishing edible from poisonous fungi.

In the first century A.D. Pliny said:

'...some of the poisonous kinds are easily known by a dilute red colour, a loathsome aspect, and internally by a livid hue; they have gaping cracks and a pale lip around the margin'. (!)

However, this isn't very useful. Neither is the assertion that fungi growing near to serpent's dens are poisonous !.

There are many more specific tests for edible fungi, and with one exception all of them are quite useless. The Death Cap, Amanita phalloides, and the rarer Destroying Angel (Amanita virosa) and Spring Amanita (Amanita verna) which account for 90 to 95 % of all deaths from fungus poisoning, pass all the tests for edibility! - they even taste good!. But don't try tasting these species!.

The extreme toxicity of these three Amanita species cannot be overstressed. Even a small part of one specimen can be fatal; all parts, even the spores, are toxic. A characteristic of Amanita poisoning is that there are no symptoms for several hours, perhaps as long as 24 hours, and by then it is too late: death takes several agonising days.

Among the so-called 'rules' are:

- (1) All poisonous fungi are brightly coloured - the Destroying Angel is white!
- (2) All poisonous fungi are viscid, smell foetid, have a sharp, bitter taste, exude 'milk' when broken - Amanitas have none of these characteristics.
- (3) Blacken a silver coin or spoon cooked with them - the Death Cap does not; Badham in his 'Treatise on the Esculent Funguses of England' showed that this was false over a century ago, but Mrs. Beeton mentions it and it is still widely believed.
- (4) Other substances used in place of silver to test for poisonous fungi include gold, iron, tin, onions, garlic cloves, bread-crumbs etc. Amanitas do not change the colour of any of these.
- (5) Poisonous fungi turn salt yellow. Amanitas do not.
- (6) Poisonous fungi become brightly coloured when cut - Amanitas stay white.
- (7) Poisonous fungi don't peel, edible ones do - the Death Cap peels easily.
- (8) Poisonous fungi cause milk or egg white to coagulate, those that do not are edible - no!

- (9) Fungi smelling like flour are edible - Entoloma sinuatum, which could be mistaken for a mushroom, smells like flour and is dangerously poisonous!
  - (10) Fungi eaten by deer, badger, squirrel, rabbit, slug, snail etc. are edible - all these creatures can eat many substances toxic to man, without ill effect.
  - (11) The old practice of soaking fungi in water with salt and vinegar sometimes, but by no means always, renders them safe to eat - but not with the Death Cap. In any case it ruins their flavour, and so is quite useless.
- Finally two quite ludicrous ones:
- (12) Spring fungi are edible - not so the Spring Amanita!
  - (13) Late autumn fungi are edible - most fungi grow in late autumn, including the Death Cap!

Never eat fungi that are not young and fresh; even edible species, when decomposing, can be toxic, as can be many other foods. The toxicity of some species can vary with ecological conditions or with geographic location. In addition, some people are allergic to fungi normally considered edible, as some are allergic to many other foods.

The mushrooms Agaricus xanthoderma ('Yellow stainer') and Agaricus placomyces can be eaten without ill effect by many people. In other people they can cause coma, but without lasting ill effect - Friar Laurence and Juliet ?. Did Shakespeare know his fungi ?.

Despite the failure of all these commonly believed tests, the dislike or loathing of most British people for fungi - 'Oh my God, come away from him' has been said to children inspecting my fungus basket - helps to keep the number of fatalities in Britain low. However the vast increase of interest in fungi over recent years could well result in a great increase in this total, unless fungus eaters learn to identify their specimens correctly.

As a passing thought, why do so many people expect an infallible test for the edibility of fungi to exist ? - what about a test for fruits or berries or leaves?.

There is only one certain test for edibility of fungi, or for anything else for that matter, and for the benefit of posterity it is essential to reliably record the species before trying this test!.

Never eat fungi on the basis of a negative identification: 'It isn't any of the poisonous species so it must be OK to eat' is a recipe for disaster. Remember that you may only live to make one mistake.

Identification simply from a picture in a book is notoriously unreliable. There are many books on fungi, and illustrations in them differ to a most extraordinary degree. Sometimes this is due to age or abnormal variations in a specimen, and many species are normally very variable; Sometimes colours are badly printed. Read the text, test as many features as possible, check the habitat. If uncertain, don't eat it!. In the end, the only real way to identify fungi is by long experience, with the guidance of more experienced members of that contemptible band of fungus hunters or toadstool eaters.

BUT - There is more to fungi than eating them!. They are equally as varied and fascinating as wild flowers and fill in the late autumn and early winter days, when flowers are scarce. They are much more variable as regards when and where they appear than most flowers, so there is always the uncertainty of which species will be found in even the best-known area, with a real chance of rare finds. Once the initial hard work of starting to identify some of them has passed, they are as addictive and time-consuming as any other Natural History pursuit, but I can think of few more enjoyable ways to spend my time.

Note. Alert readers may have noticed numerous uses of common names, where I did not use them in my talk. This is to avoid having to disfigure my text with too many compulsory underlinings of scientific names.

Lavell's Lake Conservation Area  
Dinton Pastures  
Paul Andrew

The site was purchased in 1982 by Wokingham District Council (grant aided by the Countryside Commission). It is an area of 32 acres, of which about half is water. It is bounded to the north and east by the Emm Brook, and to the south by the River Loddon. The dominant vegetation is rough grassland with invasion by Alder.

The area is important from the natural history aspect because of the following factors:-

- a. It contains a number of known breeding species of birds and a number of possible species. Those known to have bred include great-crested grebe, mute swan, Canada geese, mallard, gadwall (the only regularly used site in Berkshire), kestrel, pheasant, moorhen, coot, little ringed plover, stock dove, wood pigeon, wren, dunnoek, robin, black-bird, sedge warbler, reed warbler, blackcap, willow warbler, long-tailed tit, treecreeper, carrion crow, starling and reed bunting. It is suspected that other species which nest include turtle dove, blue tit, great tit, chaffinch, greenfinch and goldfinch. Kingfishers may possibly have bred but there is no proof of this.
- b. The area is important for birds in two other aspects:-
  - i. as a wintering roost, particularly in the Hawthorn copse at the northern end;
  - ii. as a refuge for wildfowl which have been disturbed by the sailing which takes place at the adjoining Country Park.
- c. The rough grassland is very good for breeding and feeding butterflies. Common blue, gatekeeper, meadow brown, large skipper and small heath are all abundant, whilst it is possible that clouded yellow bred in 1983.
- d. About ten species of dragon and damselfly breed, the most noteworthy being Sympetrum sanguineum (Ruddy darter).
- e. The banks of the Emm Brook hold clumps of Loddon Lily, which is locally quite common but nationally very rare.

In 1984 it was designated a Conservation Area by Wokingham District Council, and a "friends" organisation was set up soon afterwards to raise funds for management work to be carried out and to create a forum from which there could be both ingoing and outgoing information about the area. A nominal fee is asked for membership, which really only covers mailing and information sheets during the year, but it is extremely important that as large a membership as possible is maintained to demonstrate to the Council that there is great support for the site. Further details can be obtained from the Secretary (F.O.L.L.), c/o Dinton Pastures Country Park, Davis Street, Hurst, Reading RG10 0TH.

Since its designation there has been a flurry of activity on the physical management side. A muddy scrape was dug almost immediately at the northern end, of about one acre in size, particularly to attract passage wading birds. This has proved very popular with certain dragonfly species, particularly Orthetrum cancellatum (Black-tailed skimmer). Chestnut fences were also erected to restrict access around the northern side of the Lake in the hope that the undisturbed areas may play host to even more wildlife. This particular part held a bittern for three months earlier this year, which undoubtedly relished the quieter conditions provided and often showed itself very well to the birders on the other side of the fence.

The large island (left by the gravel company after extractions in the 1970s) has had north-south-east-west hedges planted to provide cover for small birds and insects, whilst tit boxes have also been erected, and dragonfly pits dug.

Floating islands, covered in shingle, have been anchored out in the Lake, hopefully attracting further little ringed plovers and common terns to breed, and provide loafing sites for ducks in the winter.

Typha has selectively been removed from certain areas and replaced with Phragmites to encourage more nesting birds. Large stands of Typha will be left as it is preferred for ovipositing by certain dragonfly species.

The hawthorn copse will be opened up to more light very soon to promote more vigorous growth and increase the diversity of breeding birds.

The area of long rank vegetation in the south-east corner of the reserve will be cut down and kept shorter than before (possibly by grazing) to see if new species of flowers will come through, with the possible help from introductions from the Dinton Pastures wildflower nursery.

Further tree planting is envisaged in the future, whilst the provision of two hides is well under way.

Hopefully, this site will continue to flourish in the future, but it desperately needs your support, so please get in touch with the "friends" and join today!

Practical work on the reserve has been carried out in the main by the Manpower Services Commission scheme based at Dinton Pastures Country Park, but also by Berkshire Conservation Volunteers, and the Friends of Lavell's Lake themselves!

Lavell's Lake adjoins Dinton Pastures and the entrance is in Sandford Lane, Hurst. O/S SU 781 792.

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Our congratulations to Emma Cox on winning the schools' poster award. Her entry concerned ecology of the seashore. She will receive a copy of Studies in Biology and Kendrick School will receive a cheque for £75.

Well done Emma!



Caddis flies (Trichoptera)

M Ian Crichton BSc PhD

(Department of Pure and Applied Zoology, University of Reading)

Caddis larvae with transportable cases are familiar inhabitants of ponds and streams, but those which do not construct cases are less often seen. Even less familiar are the other stages in the life cycle of these insects. In recent years new publications on our British species have become available so that it is possible now to name most larvae and adults. These should stimulate interest in this rather neglected group of insects.

The latest check-list of the Trichoptera of Britain and Ireland (Barnard, 1985) lists 199 species and includes useful information on recent name changes, corrections of previous publications and a good bibliography. It is an essential starting point for anyone wishing to become acquainted with our native species.

The pioneering work of Norman Hickin on caddis larvae was triggered off by the suggestion in 1937 from N D Riley of the British Museum (Natural History) that he should describe the larvae and rear them through to the adults which could then be identified. Hickin was at that time looking for a research topic; as a dedicated naturalist and skilful artist he was the ideal person for such a study. His Forest Refreshed (1965) is the story of his development from a small boy fascinated by insects to a professional entomologist. The first of his long series of descriptions of caddis larvae, in the Proceedings of the Royal Entomological Society of London, appeared in 1942, and the work culminated in the volume Caddis Larvae in 1967, with a wealth of information and beautiful drawings. Thus he made it possible for us to name about 60% of the British species. Most of the remaining species have since been described by entomologists who started their research under Norman Philipson at the University of Newcastle upon Tyne or under John Edington at University College, Cardiff. The caseless caddis larvae are now covered in a useful key by Edington & Hildrew (1981), to be followed by one on the case-building species by Philipson & Wallace, in the same series from the Freshwater Biological Association. Thus, the naturalist taking up the study of caddis larvae, or the ecologist coming to the group from other fields, can now name larvae without difficulty.

It should be remembered that almost a quarter of our British caddis do not build the distinctive transportable cases. Some spin silk nets which collect their food in streams, others make galleries on rocks, while others are active predacious larvae. Then there are the tiny Hydroptilidae (31 species) which build cases only in their final instar. Caddis larvae, with their diversity of habit and feeding, play a vital part in the food webs of freshwater habitats. They may be indicators of pollution levels and are of increasing importance in studies of water quality and in the supply of unpolluted water. Mention may be made also of Enoicyla pusilla, the only British species whose larvae are not aquatic. They build a transportable case of sand grains and vegetable fragments and feed on leaf litter and moss around the bases of trees; both larvae and pupae are truly terrestrial. It was found over 100 years ago in Worcestershire, and re-discovered by Hickin's younger daughter in 1957 when she found the larvae crawling around their tent in the Wyre Forest. Recent collecting shows that it extends beyond the Wyre Forest, from the north of Herefordshire to the outskirts of Birmingham. Perhaps diligent search will turn it up in other parts of the country.

Adult caddis flies are retiring sombre-coloured insects, which at rest hold their wings in a characteristic roof-like manner over the body. They are usually found near water, but are not often seen because they are mostly night-flyers. However, on suitable warm humid nights, especially in autumn, the larger limnephilids fly actively and may be

caught at lighted windows or in light traps far from water. I have run a light trap in my garden in Mortimer every night for 20 years up to the end of 1984, as part of the Rothamsted Insect Survey, and have caught in it 1101 caddis flies, belonging to 51 species. This represents a quarter of our British list, from an essentially dry area with the nearest pond about half a mile away. I have also been operating a light trap at intervals since 1952 by the side of the 8½ acre Millbarn Pond, near Mortimer (Crichton, 1960). This has yielded immense numbers of caddis, belonging to a total of 73 species, most of which must have emerged from the pond or the outflowing stream. Continuous collections from light traps in the Rothamsted Insect Survey over a number of years have made it possible to construct histograms of the flight periods of many species and thus deduce the pattern of life cycles.

Most caddis flies are active in the summer and autumn months, when they find their mates and lay eggs. The leptocerids, of slender build and with excessively long antennae, may often be seen in swarming flight in the daytime over streams and ponds or adjacent vegetation. Members of other families fly mainly in the evening or at night. The Limnephilidae, with 59 species in Britain, are of medium to large size and may disperse far from the water in which they have developed. From an analysis of light trap records (Crichton, 1971) they may be grouped according to their flight periods as follows:-

1. those which may be found from spring through to the autumn, and normally spend part of this time in a resting diapause;
2. those found for a shorter time in spring and summer, without a diapause;
3. those found only in the autumn, without a diapause.

The limnephilids of the first group are of interest because their habit would appear to have evolved as an adaptation to temporary waters, so that the adults are resting in vegetation while their streams and ponds are dry. They become active again in response to the shortening days of autumn when they lay their eggs on warm and often wet nights. If kept in the laboratory under artificial long day conditions their gonads do not mature and they will remain in diapause for months. Practically all our limnephilids lay their eggs in a mass of jelly on leaves above, or very close to water. These egg masses can resist dry conditions for many weeks. With the coming of rain the jelly becomes more liquid and may extend as a long hanging drop, with the larvae collected at the bottom until they slip out into the water below. When a stream is completely dried out the flies will still lay their egg masses on leaves above the stream bed, and not elsewhere.

A total of 105 species of caddis flies had been recored in the County of Berkshire up to 1959 (Crichton, Baker & Hanna, 1956, 1957; Crichton & Baker, 1959). No comprehensive list for Berkshire has been published since then, and there is no doubt that a keen naturalist could find many more in the field. For those collectors wishing to know more about the distribution of caddis flies in Britain, Dr I D Wallace (County Museums Department, William Brown Street, Liverpool L3 8EN) is working on the 10km square system of the Biological Records Centre. He would be pleased to give advice and to have records.

The identification of adult caddis flies was fairly well covered in The British caddis flies (Mosely, 1939), but there was not enough information to name many of the females. Since then, D E Kimmins of the British Museum (Natural History) has filled many of the gaps, and species can be named, without too much difficulty, from Macan's key (1973) published by the Freshwater Biological Association. This should be used in conjunction with Barnard's 1985 Check-list.

During the past two decades an interesting development in entomology has been the emergence of groups of workers with a special interest in a single order, or even a family, of insects. They have set up organisa-

tions to arrange periodic symposia or working parties, or to produce newsletters. Perhaps this has happened because of the ever-increasing complexity and extent of entomological knowledge, and the sheer cost and size of the big entomological congresses. This has happened, for example, with the Odonata (dragon flies), the Ephemeroptera (mayflies), the Neuroptera (lace wings, etc.), the Siphonaptera (fleas), and for such families as the Ceratopogonidae (midges), the Chironomidae (non-biting midges) and the Carabidae (ground beetles). It has happened also for the Trichoptera, thanks to the initiative of Hans Malicky in Austria. He organised the 1st International Symposium on Trichoptera at the Biologische Station Lunz, in the mountains west of Vienna, in September 1974. It was attended by 39 workers from 17 countries, from as far afield as the USA and Australia. It set the pattern of a week crowded with papers and discussions, collecting trips in the field, and social gatherings. Reading came next in 1977, then Perugia in Italy in 1980, Clemson in South Carolina, USA, in 1983, and now we look forward to Lyons in France for 1986. Each time we meet old friends who have been active in the symposia from the beginning, and new faces from new countries, making a total of 77 participants at Clemson, '... the largest gathering of trichopterologists in history'. The published Proceedings have grown from the 31 papers at Lunz to 59 papers in the bulky volume for Clemson. This activity is a good example of the way in which science breaks down international barriers. We have had people from Bulgaria, Hungary, Poland, Romania, Czechoslovakia and Yugoslavia, but they are only a handful of those working on Trichoptera behind the Iron Curtain. We have had none from Russia, the Indian sub-continent or the Far East. Thus we make progress in the study of a fascinating and important group of insects, and we enjoy doing it.

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RED DATA BOOK PLANTS IN BERKS, BUCKS AND OXON

By HJM Bowen

Records of very rare plants in our region are scant, often out of date and sometimes unreliable. The following list is a critical summary of regional information about the sixty-six national rarities which have been recorded from fewer than thirty grid squares in Britain, and updates an earlier summary<sup>1</sup>. I would welcome information on finder, grid reference and date for any of the species mentioned on this list. There are several arable weeds, such as Agrostemma githago, Bupleurum rotundifolium and Scandix pecten-veneris, which are practically extinct in our region and which should probably be included in future lists.

Apera interrupta (Loose silky-bent). A Breckland species, sporadic in open sandy soils near Abingdon, found in two BBONT reserves.

Apium repens (Creeping Marshwort). A critical species near A. nodiflorum. It occurs in wet pasture in an SSSI near Oxford, and perhaps in three other sites.

Arnoseris minima (Lambs Succory). An annual, photographed in a sandy rhubarb field in Berks in 1965 and reported from Bucks in 1971.

Asarum europaeum (Asarabacca). This woodland perennial is not a native, though known from one locality in each county. The Bucks site is protected, and it has not been seen in Berks since 1915.

Bromus benekenii (Lesser Hairy-brome) is a critical woodland grass near B. ramosus. It is known from 8 sites, 3 of which are BBONT reserves, and probably occurs in others. It is often associated with Hypericum montanum.

Bunium bulbocastanum (Great Pignut). This umbellifer is easily overlooked, but has not been seen since 1952 in E. Bucks, where it should be sought.

Campanula patula (Spreading Bellflower). Though common in grassland in Europe, this beautiful plant has not been seen in its single Berks locality since 1968.

Cardamine bulbifera (Coralwort). A local woodland plant known from 14 grid squares, mostly in Bucks, and protected in 4 BBONT reserves. Not seen in Berks since 1944.

Carex appropinquata (Fibrous tussock-sedge). A critical sedge of fen carr, mostly in East Anglia, which was collected at Denham, Bucks in 1905 and never seen again.

Carex elongata (Elongated Sedge) likes wet woods on acid soil. Of its 3 sites between Reading and Sandhurst, only one appears to survive.

Carex montana (Hill Sedge). Its only locality was destroyed by roadworks at Bracknell in 1973<sup>2</sup>, where a tiny fraction of its acid grassland habitat survives.

Carex tomentosa (Downy-fruited Sedge) is known from 3 more or less wet calcareous grassland sites, all in BBONT reserves.

Carex vulpina (False Fox-sedge). A critical species near the common C. otrubae. It is known from one marshy site in each county, one of which is a BBONT reserve.

Cephalanthera longifolia (Narrow-leaved Helleborine) is a woodland plant which has not been seen in its Bucks site (a BBONT reserve) since 1954, and which faded away in its single Oxon site in 1970.

Cephalanthera rubra (Red Helleborine). A woodland plant protected by BBONT in its single locality.

Cynoglossum germanicum (Green Houndstongue). A plant of the woodland edge which survives unprotected in 3 Oxon sites.

- Cyperus fuscus (Brown Galingale). This late-flowering and inconspicuous plant of drying mud is known in one Berks SSSI; last seen in Bucks in 1933.
- Cyperus longus (Galingale). Not native here, but more or less naturalised in 3 waterside spots in Berks and Bucks.
- Dactylorhiza traunsteineri (Narrow-leaved Marsh Orchid). This critical fen species occurs in 4 sites near Abingdon, 2 of which are BBONT reserves.
- Damasonium alisma (Starfruit) is a sporadic aquatic from a few ponds in E. Bucks, where it was last reported in 1976.
- Daphne mezereum (Mezereon). A charming short-lived shrub of calcareous woods, known in small numbers from 12 sites, 4 of which have BBONT protection.
- Draba muralis (Wall Whitlow-grass) is a weed with recent records from only 3 sites near Oxford or north of it.
- Dryopteris cristata (Crested Buckler-fern) occurs in a Molinia bog within yards of the Berks-Surrey border, last seen on the Berks side in 1968.
- Epipactis leptochila (Narrow-lipped Helleborine) is present in small quantity in beechwoods in 20 grid squares, mostly in the Chilterns, and in 6 reserves.
- Epipogium aphyllum (Ghost Orchid) flowers sporadically in shady woods with deep leaf litter. It has protection in its 4 sites.
- Festuca heterophylla (Various-leaved Fescue) is doubtfully native, though well established in 10 localities, mostly old plantations.
- Filago lutescens (Red-tipped Cudweed) is extinct in all 3 counties; the last specimen known was collected in sandy fields near Abingdon in 1912.
- Filago pyramidata (Broad-leaved Cudweed) is declining in all 3 counties and may be extinct in Bucks; it is a plant of open sandy soils.
- Fritillaria meleagris (Fritillary). Very few water meadows of the Upper Thames and Loddon still hold large populations of this beautiful plant, but 4 are reserves. There are records from 14 squares which are probably native, and other records which are likely to be garden escapes.
- Fumaria vaillantii (Few-flowered Fumitory). Only 5 grid squares on the chalk are known to harbour this arable weed, which has been seen in 2 BBONT reserves.
- Gentianella ciliata (Fringed Gentian) is very local in chalk grassland in one protected site.
- Gentianella germanica (Chiltern Gentian). As its common name implies, this plant is nowhere so common in Britain as it is with us. It likes rough chalk grassland and 14 of its 25 sites are in reserves.
- Himantoglossum hircinum (Lizard Orchid). Plants have occurred sporadically in calcareous grassland in 7 sites in our three counties. The only current site is in a BBONT reserve, where management broke the dormancy of a resting tuber.
- Iberis amara (Candytuft). This showy annual of open chalk soil and arable is known from 9 BBONT reserves and 18+ grid squares.
- Illecebrum verticillatum (Coral-necklace) is poradic on wet, acid soils and lake shores in E. Berks where it was last seen in 1972.
- Leucojum aestivum (Summer Snowflake) is a characteristic plant of wet willow woods in the valleys of the Thames and Loddon, and an occasional garden escape. It is known in 2 BBONT reserves and 23 grid squares.
- Leucojum vernum (Spring Snowflake) is not native, but is more or less established in 3 parks in our region.
- Limosella aquatica (Mudwort) is sporadic on bare mud in 4 sites in Oxon and Bucks, and last seen in Berks in 1935. It is hard to conserve.

- Lythrum hyssopifolia (Grass Poly). A sporadic plant of sites which are wet in winter. Possibly extinct, as recent records may be of similar species introduced with bird seed.
- Marrubium vulgare (White Horehound) is probably extinct, though seen in Berks up to 1963. It likes dry, open calcareous soils in warm sites.
- Muscari neglectum (Grape Hyacinth). Recorded from 2 limestone grassland sites in N. Oxon, in one of which it was still present in 1984, though unprotected.
- Nymphoides peltata (Fringed Water-lily). This handsome aquatic is known from 8 sites where it is somewhat sporadic, and in some cases planted.
- Oenanthe silaifolia (Narrow-leaved Water-dropwort). A critical umbellifer of old water meadows by the upper Thames and Ray, known from 5 unprotected sites.
- Orchis militaris (Military Orchid). An orchid of calcareous scrub and woodland which suffered a catastrophic decline earlier this century, which still occurs in small numbers in 3 protected sites.
- Orchis purpurea (Lady Orchid). One plant occurred in a beechwood near Reading in the 1960s, but has not been seen there since 1964.
- Orchis simia (Monkey Orchid). A few diminutive specimens of this plant of calcareous grassland survive in one protected site on the edge of its range.
- Ornithogalum pyrenaicum (Spiked Star-of-Bethlehem). Very local in SW Berks in at least 4 unprotected woodland or ancient hedgerow sites.
- Orobanche loricata (Ox-tongue Broomrape). A critical parasite of chalk grassland, with 2 records from Bucks before 1955.
- Physospermum cornubiense (Bladderseed) survives in its single locality in old woodland at Burnham, Bucks.
- Poa bulbosa (Bulbous Meadow-grass), common in S. Europe, may be extinct in our region, but known until 1961 in a limestone quarry in N. Oxon.
- Polygonum dumetorum (Copse Bindweed). A sporadic climber by the edges of woods near Abingdon, last seen 1968 but likely to reappear.
- Potamogeton nodosus (Loddon Pondweed) still occurs as an aquatic in many sites on the Loddon in 2 grid squares; not seen in the Thames since 1941.
- Primula elatior (Oxlip) occurs in two unprotected woods in N. Bucks, outliers from its strongholds in East Anglia.
- Pulsatilla vulgaris (Pasque Flower) has suffered from habitat destruction but has records from calcareous grassland in 6 grid squares, and is in 2 BBONT reserves.
- Salvia pratensis (Meadow Clary). An attractive plant known in 12 sites, but introduced in some; found in 4 BBONT reserves but lacking protection in the Wychwood area.
- Silene conica (Striated Catchfly). This sporadic Breckland annual of sandy soil just survives in 2 sites near Abingdon, one with some protection.
- Sonchus palustris (Marsh Sowthistle). A tall plant of wet ditches, known in 2 sites near Otmoor where it became extinct around 1910 and 1925 respectively.
- Stachys germanica (Downy Woundwort). Hard to conserve because of its sporadic appearance in disturbed limestone soil. There are recent records from 11 unprotected sites in the Wychwood area, mostly in very small numbers.
- Stratiotes aloides (Water Soldier). A sporadic submerged aquatic of still water, known from 7 unprotected sites.
- Tetragonolobus maritimus (Dragons-teeth). This legume is steadily increasing and now occurs in 7 calcareous grassland sites, one of which is protected.

Thlaspi perfoliatum (Perfoliate Pennycress). A sporadic annual known from 2 unprotected calcareous sites in the Wychwood area, where it was once more widespread; in 1957 it was seen on a railway track in N. Bucks.

Verbascum lychnitis (White Mullein) occurs in small numbers on a sunny railway bank near Reading and may also be in E. Bucks.

Veronica praecox (Breckland Speedwell) was found on a gravel bank near Oxford in the 1960s but has not been seen since 1968.

Viola persicifolia (Fen Violet) is a sporadic fen plant seen near Otmoor up to 1968. It may reappear following soil disturbance. It is a critical species which hybridises with V. canina.

Vulpia unilateralis (Matgrass Fescue) is a tiny annual grass of bare soil known from 4 sites, 2 of which are in BBONT reserves.

Wolffia arrhiza (Least Duckweed). This easily overlooked aquatic, the smallest British plant, was found in N. Bucks in 1972.

Summary: Our region is a major British relictuary for 16 rare plants, Cardamine bulbifera, Epipactis leptochila, Epipogium aphyllum, Fritillaria meleagris, Gentianella ciliata, G. germanica, Iberis amara, Leucojum aestivum, Orchis militaris, O. simia, Potamogeton nodosus, Pulsatilla vulgaris, Salvia pratensis, Stachys germanica, Tetragonolobus maritimus, and Thlaspi perfoliatum. It contains important habitats along the Thames and its tributaries, in the Chilterns, the Wychwood area, Otmoor and the sandy soils near Abingdon. Of the 66 nationally rare species recorded, 11 are probably extinct and only 26 occur in reserves. The following steps should be taken to conserve these rarities:

- 1 support BBONT in maintaining suitable habitats in its reserves;
- 2 encourage BBONT to buy, or to obtain management agreements, protecting all sites with the rarities listed above. Most sites are very small;
- 3 maintain seed stocks, especially of the 18 annual rarities, or vegetative material of the 6 aquatics, by cultivation; and
- 4 re-introduce extinct and declining species, keeping records of what has been done.

#### References:

- 1 HJM Bowen, BBONT Bull. 76(1985)7
- 2 HJM Bowen, Reading Nat. 27(1975)23
- 3 KI Butler, Reading Nat. 15(1963)27

The Recorder's Report for Botany 1985  
B.M. Newman

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

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

List of Members' Records for 1985

EQUISETACEAE

Equisetum sylvaticum L. Wood Horsetail  
Rare, on Snelsmore Common, (HJMB)

POLYPODIACEAE

\* Onoclea sensibilis L.  
Grounds of Cliveden, Bucks., 15.6.85, (HJMB)

Blechnum spicant (L.) Roth Hard Fern  
Buscott Gully, 20.8.85, (JW)

Dryopteris carthusiana (Villar) H.P. Fuchs Narrow Buckler-fern  
Under Alder, Ufton Woods, 19.10.85, (HJMB)

OPHIOGLOSSACEAE

Ophioglossum vulgatum L. Adder's-tongue  
By River Thames near the Dreadnought, Reading, 16.6.85, (AB)

RANUNCULACEAE

Helleborus foetidus L. Stinking Hellebore  
Naturalised at Hennerton House; Sulham Wood, 24.4.85, (JW)  
This species was recorded at Sulham in 1942

Aconitum anglicum Stapf Monk's-hood  
Brimpton, near River Enborne, 15.5.85, (AB); Roundmoor Copse, 25.7.85;  
Hogmoor/Peatmoor Copse, 15.7.85, (JW)

\* Nigella damascena L. Love-in-a-mist  
Abundant by railway track between Goring Station and bridge, 27.7.85, (HHC)

Ranunculus lingua L. Greater Spearwort  
Aston Rowant, 3.7.85, (AB)

Ranunculus hederaceus L. Ivy-leaved Crowfoot  
In pond dredgings, Nuneham Park, Oxon, 19.5.85, (HJMB)

Ranunculus fluitans Lam. River Water-crowfoot  
River Enborne, Brimpton, 26.4.85, (AB)



PAPAVERACEAE

Meconopsis cambrica (L.) Vig. Welsh Poppy  
In cleared woodland, Greenfield Wood, Pishill Bottom, Oxon, 2.6.85.  
Very rare here (HJMB)

CRUCIFERAE

Lepidium heterophyllum Benth. Smith's Pennywort  
By River Thames near the Dreadnought, Reading, 16.6.85, (AB)

Thlaspi arvense L. Field Penny-cress  
By the River Pang, Bradfield, 6.5.85, (AB)

Arabis hirsuta (L.) Scop. Hairy Rock-cress  
Ladle Hill, 12.6.85, (AB)

Rorippa amphibia (L.) Besser Greater Yellow-cress  
By the River Thames near the Dreadnought, Reading, 16.6.85; canal west of  
Theale, 27.7.85, (AB)

Descurainia sophia (L.) Webb ex. Prantl Flixweed  
In new shrubbery, Whiteknights Park, 12.6.85, (HJMB)

VIOLACEAE

Viola palustris L. Marsh Violet  
Locally dominant in Ufton Woods, 19.10.85, (HJMB)

Viola tricolor L. Wild Pansy  
In cleared woodland, Greenfield Wood, Pishill Bottom, Oxon, 2.6.85, very  
rare here, (HJMB); canal west of Theale, 27.7.85, (AB).

HYPERICACEAE

Hypericum androsaemum L. Tutsan  
Remenham Wood, 7.8.85; High Knowl Wood, 27.6.85, (JW)

CARYOPHYLLACEAE

Silene dioica (L.) Clairv. Red Campion  
Langham Pond, 15.6.85, (SW)

Lychnis flos-cuculi L. Ragged-Robin  
Burghfield gravel pits, 15.6.85, (AB)

Saponaria officinalis L. Soapwort  
By the River Enborne near Brimpton, 15.5.85, (AB)

Cerastium arvense L. Field Mouse-ear  
Ladle Hill, 12.6.85, (AB)

Cerastium glomeratum Thuill. Sticky Mouse-ear  
Bucklebury, 4.5.85, (AB)

Stellaria neglecta Weihe Greater Chickweed  
Meadow by canal, Old Mill, Aldermaston, 8.5.85, (AB)

Stellaria palustris Retz. Marsh Stitchwort  
Emmer Bog, 11.5.85,(AB); Langham Pond, 15.6.85(SW)

Moenchia erecta (L.) Gaertn., Mey. & Scherb. Upright Chickweed  
Snelsmore Common, 6.7.85,(HJMB)

#### PORTULACACEAE

Montia fontana L. Blinks  
Sandford Mill/Dinton Pastures, 5.5.85,(AB)

\* Montia perfoliata (Willd.) Howell Springbeauty  
Bucklebury, 4.5.85,(AB)

\* Montia sibirica (L.) Howell Pink Purslane  
In the grounds of Yattenden Manor, 14.4.85,(HJMB)

#### TILIACEAE

Tilia cordata Mill. Small-leaved Lime  
Several trees in Redhill Wood, Hamstead Marshall, 1.6.85,(HJMB)

#### MALVACEAE

\* Althaea hirsuta L. Rough Marsh-mallow  
One plant at Remenham, S. Everett; a very rare casual (HJMB)

#### GERANIACEAE

Geranium rotundifolium L. Round-leaved  
Crane's-bill  
In old layby on Peppard Road, south of Sonning Common, 29.8.85,(HHC)

#### OXALIDACEAE

Oxalis acetosella L. var. subpurpurescens DC. Wood-sorrel  
Farley Hill, in sphagnum, 12.4.85,(HJMB)

#### PAPILIONACEAE

Ononis spinosa L. Spiny Restharrow  
Ridgeway, between Overton and Uffington, 8.8.85,(AB)

Trifolium arvense L. Hare's-foot Clover  
Meadow opposite AWRE main gate, 17.7.85,(AB)

Lathyrus nissolia L. Grass Vetchling  
Reading, by River Thames near the Dreadnought, 16.6.85,(AB)

#### ROSACEAE

Potentilla palustris (L.) Scop. Marsh Cinquefoil  
Emmer Bog, 11.5.85,(AB)

\* Potentilla recta L. Sulphur Cinquefoil  
Hogmoor Copse/Peatmoor Copse, 15.7.85,(JW)

Potentilla anglica Laicharding Trailing Tormentil  
In old grassland, Briff Lane, Bucklebury,(HJMB)

POLYGONACEAE

Polygonum aviculare ssp. rurivagum Jord. ex Bor. Knotgrass  
Waste ground on site of CWS printing works, Elgar Road, 8.10.85,(HHC)

Polygonum historta L. Common Bistort  
In the grounds of Yattenden Manor, 14.4.85,(HJMB)

\* Rumex cristatus DC. Greek Dock  
Abundant by Kennet above Waterloo Meadow, 8.10.85. Long established  
here, last published record 1969,(HHC)

URTICACEAE

Parietaria diffusa Mert. & Koch Pellitory-of-the-wall  
Reading, by R Thames near the Dreadnought, 16.6.85; Gatehampton, 18.7.85,(AB)

FAGACEAE

Quercus petraea (Mattuschka) Liebl. Sessile Oak  
Old Deer Park Wood, 15.7.85,(JW); Owlsmoor, 21.6.85,(AB)

SALICACEAE

Salix repens L. Creeping Willow  
Tadley Common, 14.8.85,(AB)

PRIMULACEAE

\* Cyclamen hederifolium Ait. Cyclamen  
Kidmore End, Oxon; Bucklebury; Hackwood Park,(HJMB)

GENTIANACEAE

Gentianella germanica (Willd.) Borner Chiltern Gentian  
Fawley Hill, 21.9.85,(AB)

Gentianella amarella (L.) Borner Autumn Gentian  
Wayfarer's Way & Old Burghclere Pit, 26.9.85,(AB)

MENYANTHACEAE

Menyanthes trifoliata L. Bogbean  
In old water meadows, Boxford, C Flower, 12.6.85,(HJMB); Emmer Bog,  
11.5.85,(AB)

BORAGINACEAE

Cynoglossum officinale L. Hound's-tongue  
By the side of track east of Hardwick House, in seed, 29.9.85,(HHC)

Pentaglottis sempervirens (L.) Tausch Green Alkanet  
Roadside verge, Goring/Woodcote Road, 18.7.85,(AB)

\* Pulmonaria officinalis L. Lungwort  
Garden outcast near Colemansmoor, 24.3.85,(HJMB)

Geum rivale L. Water Avens  
Moor Copse, 1.6.85,(AB)

Sanguisorba officinalis L. Great Burnet  
Langham Pond, 15.6.85,(SW)

Sorbus torminalis (L.) Crantz Wild Service-tree  
Bottom Boles Wood, 20.6.85; Gardener's Copse, 13.8.85,(JW); Five Oaken,  
19.10.85, J. Ward,(BMN)

#### CRASSULACEAE

Sedum telephium L. Orpine  
Bucklebury, 4.5.85,(AB)

\* Crassula helmsii (Tikirk) Cockayne  
In pond, Mortimer Common, 22.9.85,(HJMB)

#### SAXIFRAGACEAE

Chrysosplenium oppositifolium L. Opposite-leaved  
Golden-saxifrage  
Buscott Gully, 20.8.85,(JW); Fir Copse, Binfield Heath, Oxon,(HJMB)

#### LYTHRACEAE

Peplis portula L. Water Purslane  
Farley Hill, 12.4.85,(HJMB)

#### ONAGRACEAE

Epilobium lanceolatum Seb. & Mauri Spear-leaved  
Willowherb  
Moulsford, R C Palmer. Very rare here,(HJMB)

#### HIPPURIDACEAE

Hippuris vulgaris L. Mare's-tail  
Langham Pond, 15.6.85,(SW)

#### HYDROCOTYLACEAE

Hydrocotyle vulgaris L. Marsh Pennywort  
Emmer Bog, 11.5.85,(AB)

#### UMBELLIFERAE

Apium graveolens L. Wild Celery  
Sandford Mill/Dinton Pastures, 5.5.85,(AB)

Oenanthe pimpinelloides L. Corky-fruited  
Water-dropwort  
Reading, by the River Thames, 16.6.85, A Brickstock & S Diserens. A new  
County record for Berks.(HJMB)

SOLANACEAE

Solanum verriei

On dumped soil in three places, Whiteknights Park, 19.9.85. New to Britain, (HJMB)

SCROPHULARIACEAE

\*Linaria purpurea (L.) Mill.

Purple Toadflax

On dumped soil at old layby on Peppard Road, 29.8.85, (HHC)

Scrophularia nodosa var. verticillata

Bowdown Woods, R J Hornby. Leaves 3-whorled, (HJMB)

Pedicularis sylvatica L.

Lousewort

Owlsmoor, 21.6.85, (AB)

OROBANCHACEAE

Orobanche hederæ Duby

Ivy Broomrape

On Ivy, Whiteknights Park, D W Hadley. New County record for Berks, (HJMB)

VERBENACEAE

Verbena officinalis L.

Vervain

On track east of Hardwick House, 28.9.85, (HHC)

LABIATAE

Mentha x verticillata L. (M. aquatica x arvensis)

Restored land at Wasing, 20.9.85, (AB)

Acinos arvensis (Lam.) Dandy

Basil Thyme

Fawley Hill, 21.9.85, (AB)

CAMPANULACEAE

Jasione montana L.

Sheep's-bit

Wayfarer's Way & Old Burghclere pit, 26.9.85, (AB)

COMPOSITAE

Senecio aquaticus Hill

Marsh Ragwort

By River Blackwater near Farley Hill, 10.8.85, (HHC)

\*Doronicum plantagineum L.

Plantain-leaved  
Leopard's-bane

Roadside, Hedsor Park, Bucks, 15.6.85; still at Snelsmore Common, (HJMB)

Chrysanthemum segetum L.

Corn Marigold

Field between Bramshill Plantation and River Blackwater, 10.8.85, (HHC)

Arctium minus Bernh. ssp. pubens (Bab.) J. Arenes

Lesser Burdock

By River Kennet above Waterloo Meadow, (HHC)

\*Silybum marianum (L.) Gaertn.

Milk Thistle

Whiteknights Park, on old bonfire site, (HJMB)

Serratula tinctoria L. Saw-wort  
Hedge between Bramshill Plantation & River Blackwater, 10.8.85,(HHC)

Mycelis muralis (L.) Dum. Wall Lettuce  
Reading, by River Thames near the Dreadnought, 16.6.85; Aston Rowant, 3.8.85,  
(AB)

\*Cicerbita macrophylla (Willd.) Wallr. Blue Sow-thistle  
Grounds of Cliveden, Bucks, 15.6.85,(HJMB)

#### HYDROCHARITACEAE

Hydrocharis morsus-ranae L. Frogbit  
Langham Pond, 15.6.85,(SW)

#### LILIACEAE

Ruscus aculeatus L. Butcher's-broom  
Mosshall Wood, 29.4.85,(JW)

Ornithogalum umbellatum L. Star-of-Bethlehem  
Hogmoor/Peatmoor Copse, 15.7.85,(JW)

#### JUNCACEAE

Luzula sylvatica (Huds.) Gaud. Great Wood-rush  
Remenham Wood, 7.8.85,(JW)

\*Luzula luzuloides (Lam.) Dandy & Wilmott White Wood-rush  
Grounds of Cliveden, Bucks, 15.6.85,(HJMB)

#### AMARYLLIDACEAE

Leucojum vernum L. Spring Snowflake  
In old plantation, Shiplake, Oxon, possibly a relict of Victorian planting,  
E Charles, 5.6.85,(HJMB)

Narcissus pseudonarcissus L. Wild Daffodil  
In old wood, Irish Hill, Kintbury, 1.6.85,(HJMB)

Narcissus poeticus (agg.)  
Well established on banks of M4, 4 miles east of A34 junction, 25.5.85,(HJMB)

#### ORCHIDACEAE

Epipactis purpurata Sm. Violet Helleborine  
Great Copse, Tadley,(AB)

Neottia nidus-avis (L.) Rich. Bird's-nest Orchid  
Flobrigham's Copse, 11.6.85,(JW)

Ophrys apifera Huds. Bee Orchid  
Brimpton Gravel Pits, 3.7.85; Tadley Estate, 34 flowers, 9.7.85,(AB)

Dactylorhiza maculata (L.) Vermeul. Heath Spotted-orchid  
Snelsmore Common, 7.7.85,(AB)

Dactylorhiza praetermissa (Druce) Vermeul. Southern Marsh-orchid  
Owlsmoor, 21.6.85,(AB)

TYPHACEAE

Typha angustifolia x latifolia Godr.  
River Thames below Moultsford Ferry, R C Palmer,(HJMB)

CYPERACEAE

Eriophosum angustifolium Honck. Common Cottongrass  
Owlsmoor, 21.6.85,(AB)

Cyperus longus L. Galingale  
Dinton Pastures, M L Lorain; ponds at Oakley, N Hants; Hackwood Park, Hants,  
(HJMB)

Rhynchospora alba (L.) Vahl White Beak-sedge  
Owlsmoor bog, in small quantity, 6.10.85,(HJMB)

Carex pendula Huds. Pendulous Sedge  
Kiln Copse, 3.6.85,(JW)

Carex strigosa Huds. Thin-spiked Wood-sedge  
Greenfield Wood, Pishill Bottom, Oxon, 2.6.85. Very rare here,(HJMB)

GRAMINEAE

Sieglingia decumbens (L.) Bernh. Heath-grass  
In old grassland, Briff Lane, Bucklebury,(HJMB)

\*Festuca heterophylla Lam. Various-leaved Fescue  
Grounds of Cliveden, Bucks, 15.6.85,(HJMB)

Festulolium loliaceum (Huds.) P. Fourn  
Top of Winter Hill, Cookham, 15.6.85,(HJMB)

Lolium perenne x multiflorum Hausskn.  
In old gravel pit near Cock Marsh, 15.6.85,(HJMB)

Poa subcaerulea Sm. Spreading Meadow-grass  
Near Whiteknights Lake; Boxford water meadows,(HJMB)

\*Poa chaixii Vill. Broad-leaved  
Meadow-grass  
Grounds of Cliveden, Bucks, 15.6.85,(HJMB)

Ceratochloa carinata (Hook. & Arn.) Tutin California Brome  
Colemansmoor pit, 24.3.85,(HJMB)

Agropyron caninum (L.) Beauv. Bearded Couch  
Buscott gully, 20.8.85,(JW)

Additional 1984 Records

PAPILIONACEAE

Genista tinctoria L. Dyer's Greenweed  
Twyford, S Webster, (HJMB)

ROSACEAE

Crataegus oxyacanthoides Thuill. Midland Hawthorn  
Cutler's Coppice, 11.12.84, (JW)

Sorbus torminalis (L.) Crantz Wild Service-tree  
Cutler's Coppice, 11.12.84; Scarlett's Wood, 29.11.84, (JW)

SCROPHULARIACEAE

\*Verbascum blattaria L. Moth Mullein  
Temple Golf Course, near Hurley, S Webster, (HJMB)

ORCHIDACEAE

Dactylorchis fuchsii (Druce) Vermeul. x Gymnadenia Conopsea (L.) R. Br.  
West Woodhay Down, D Reed, 7.84, (HJMB)

GRAMINEAE

Alopecurus aequalis Sobol. Orange Foxtail  
Littleworth Common, Bucks, (HJMB)

Contributors:-

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The Recorder's Report for Entomology 1985

B.R. Baker

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

EPHEMEROPTERA

Mayflies

Habrophlebia fusca (Curtis)  
Pangbourne, 21.5.78, subimago (RGL)

ODONATA

Dragonflies

Gomphus vulgatissimus (L.)                      The Club-tailed Dragonfly  
Near Dreadnought Reach of River Thames, 16.6.85; Aldermaston, 16.6.85, a  
single specimen seen by Mr I Parker (AB). This very local species is well  
known to us from localities on or near the Thames, the Aldermaston record  
is therefore noteworthy. Graham Vick has pointed out that many of the  
larger dragonflies will fly well away from their breeding areas, returning  
again later, he also knows of one, well authenticated, previous record from  
the Kennet at Aldermaston Mill.

Hemiptera

Plant Bugs, Aphids, etc.

Aneurus laevis (Fabr.)  
Bix Bottom, 6.7.72 (RGL)

Lygocoris contaminatus (Fall.)  
Baynes Reserve, 26.8.85 (HHC)

Psallus falleni (Reut.)  
Sonning Common, 22.6.85 (HHC)

Ledra aurita (L.)  
Earley, Reading, 15.10.85, one adult (JFN); Moor Copse Nature Reserve,  
16.11.85, one nymph beaten from bracken (BRB)

Speudotettix subfuscus (Fall.)  
Baynes Reserve, 28.5.85, last recorded Tubney c. 1920 though said to be  
common (HHC)

Cixius pilosus (Olivier)  
Baynes Reserve, 28.5.85 (HHC)

LEPIDOPTERA

Butterflies and Moths

Hepialus fusconebulosa (DeG.)  
Bowdown Nature Reserve, 6.6.85 (NMH)

Map-winged Swift

Zeuzera pyrina (L.)                      Leopard Moth  
Aldermaston, 25,31.7.85 (AB,PS); Burghfield Common, Woolhampton, 13.7.85(DAY)

Thymelicus lineola (Ochs.)                      Essex Skipper  
Moor Copse Nature Reserve, 3.8.85, several in a limited area of the Reserve  
and extending into an adjoining wheat field, none recorded along River Pang  
banks where T. sylvestris (Poda) Small Skippers were very common. This is

a surprising, and new, record for the Reserve and one wonders if this first authenticated spread to the west of Reading has not been by way of the miles of grass verges of the motorway as it sweeps westward from near Wokingham, a known locality for Essex Skipper (BRB); Owlsmoor, 18.8.85 (BRB)

Gonepteryx rhamni (L.)                                      Brimstone  
Burghfield Common, 18.5.85, 15 recorded (DAY); Whiteknights, 2.4.85 (HJMB);  
Caversham, 8.3.85, 20.10.85 (HGB); Bracknell, 6.4.85, 29.9.85 (MJD);  
Tilehurst, 12.3.85, 31.10.85, very late (SW)

Quercusia quercus (L.) Purple Hairstreak  
Burghfield Common, Padworth Common, larvae at both sites but not as common  
as in the previous year (DAY)

Strymonidea w-album (Knoch) White Letter Hairstreak  
Maidenhead Thicket, 26.7.85 (MVA). An encouraging record of a species  
much decreased in our area since the ravages upon its foodplant by Dutch  
Elm Disease.

<u>Plebejus argus</u> (L.)	Silver-studded Blue
Burghfield Common, Padworth Common, small numbers noted (DAY)	

Celastrina argiolus (L.) Holly Blue  
Glebe Road, Reading, 18.5.85 (HJMB); Burghfield Common, Mortimer, first brood quite common, second brood in smaller numbers (DAY); Aldermaston, 8, 17.5.85 (PS); Caversham, 8.5.85, 1,8,24.8.85 (BRB); Bracknell, 1.5.85 (MJD)

*Ladoga camilla* (L.) White Admiral  
Maidenhead Thicket, 25.7.85 (TJGH); Burghfield Common, 31.7.85 (DAY);  
Aldermaston, 17.7.85 (PS)

Apatura iris (L.) Purple Emperor  
Woolhampton, 3.8.85, a good sighting of a male (DAY). An unusual and interesting record for this well worked locality indicating the periodic far ranging flight of this species.

Vanessa atalanta (L.) Red Admiral  
Glebe Road, Reading, 1.7.85 (HJMB); Burghfield Common, 6.4.85, others in mid August (DAY); Snelsmore Common, 6.7.85, Caversham 6.7.85, and several between 9 and 22.10.85 at ivy blossom (BRB); Bracknell, 27, 28.9.85 (MJD)

Cynthia cardui (L.) Painted Lady  
A very unusual early immigration of this species occurred in 1985, mainly during April, but an even earlier one had taken place before the snow of mid February as shown by our first record: Aldermaston, one seen 6.2.85 (PS); later records are: Vastern Road, Reading, 6.9.85, Well Barn, Berkshire Downs, 11.9.85 (BRB); Burghfield Common, commoner than Red Admiral and still in evidence on 12.10.85 (DAY)

Aglais urticae (L.) Small Tortoiseshell  
Aldermaston, Owlsmoor, Burghfield, larvae noted at each locality (DAY);  
Moor Copse Nature Reserve, 11.9.85, a very late nest of larvae which may  
not have been able to complete its development through to butterflies as  
Frohawk states that most Small Tortoiseshells enter hibernation at the  
end of September (BRB). Occasional butterflies are however seen in  
October, viz. Tilehurst, 20.10.85 (SW).

Argynnis paphia (L.) Silver-washed Fritillary  
Moor Copse Nature Reserve, 5.8.84 (MRH). Record received too late for last  
year's report.

- Melanargia galathea (L.) Marbled White  
Aldermaston fairly common, Aston Upthorpe common (DAY)
- Hipparchia semele (L.) The Grayling  
Burghfield Common, Padworth Common, small numbers(DAY); Padworth, 31.8.85(BTP)
- Aphantopus hyperantus (L.) The Ringlet  
Bucklebury, 30.6.85 (HJMB); Aldermaston, not common, Woolhampton, common(DAY)
- Gastropacha quercifolia (L.) The Lappet  
Shinfield Road, Reading, 27 to 29.7.85, a female on a shop window, reported to the Museum by Mr Kelly. The site was kindly visited by BTP who removed the moth and accrued eggs to safety. Aldermaston, 17.7.85 (AB,PS)
- Saturnia pavonia (L.) Emperor Moth  
Ufton Nervet, one female to light, 19.5.85. Larvae noted at Burghfield Common and Padworth Common (DAY); Snelsmore Common, 6.7.85, larvae (DAY,NMH)
- Tethea or (D. & S.) Poplar Lutestring  
Bowdown Wood Nature Reserve, 3.6.85 (NMH)
- Idaea sylvestriaria (Hb.) Dotted Border Wave  
Aldermaston, 14, 24.7.85 (AB, PS)
- I. straminata (Borkh.) Plain Wave  
Snelsmore Common, 6.7.85 (NMH,DAY)
- Rhodometra sacraria (L.) The Vestal  
Caversham, 19.9.85 - a specimen in Mrs B Kay's sitting room, noted during a committee meeting of RDNHS (and this species a decidedly uncommon immigrant!) After the meeting the specimen was released into St Peter's Avenue.
- Mesoleuca albicillata (L.) Beautiful Carpet  
Bowdown Wood Nature Reserve, 3.7.85 (NMH); Woolhampton, (DAY)
- Lampropteryx otregiata (Metc.) Devon Carpet  
Aldermaston, 25, 26.8.85, new vice county record (PS, BRB). This species was discovered in 1983 just outside our recording area by our member Col G G Eastwick-Field, thereby making a new vice county record for N Hampshire, and since that time several of us have worked in the hope that otregiata might be discovered in Berkshire. It is therefore now very satisfying to record this little Carpet from near Aldermaston. That the Devon Carpet has been overlooked by lepidopterists is not surprising for its habitats are dark, damp woods and gullies, often difficult to work or walk through. A prerequisite is an abundance of Galium palustre L., Marsh Bedstraw. It is to be hoped that other localities within Berkshire will now be discovered.
- Rheumaptera undulata (L.) Scallop Shell  
Burghfield Common, 10.8.85 (DAY)
- Perizoma affinitatum (Steph.) Large Rivulet  
Bowdown Wood Nature Reserve, 3.6.85 (NMH); Enborne Valley below Greenham Common, 15.6.85 (BRB)
- Eupithecia venosata (Fabr.) Netted Pug  
Aldermaston, 4.7.85 (AB, PS)

Anticollix sparsata (Treit.)  
Woolhampton, 31.7.85 (DAY,PS)

Dentated Pug

Asthena albulata (Hufn.)

Small White Wave

Aldermaston, 30.7.85 (AB,PS); Bowdown Wood Nature Reserve, 3.6.85 (NMH)

Plagodis pulveraria (L.)

Barred Umber

Bowdown Wood Nature Reserve, 29.5.85 (NMH)

Ectropis consonaria (Hb.)

Square Spot

Bowdown Wood Nature Reserve, 29.5.85 (NMH)

Selenia lunularia (Hb.)

Lunar Thorn

Aldermaston, 19.5.85 (AB,PS); Bracknell, 4, 10.6.85 (MJD)

Hyloicus pinastri (L.)

Pine Hawk-moth

Burghfield Common, 19.6 to 30.7.85, 15 recorded, Woolhampton, 13, 20, 27.7.85 (DAY,PS); Owlsmoor, 21.6.85, Snelsmore Common, 6.7.85 (NMH); Aldermaston, 14 recorded during the season with one remarkably late record, 12.9.85 (AB,PS); Bracknell, 27.6.85, 21.7.85, 6.8.85 (MJD)

Macroglossum stellatarum (L.)

Humming-bird Hawk-moth

Southcote, Reading, 17.4.85, reported to the Museum by Mrs S Kenna.

Hyles lineata (Fabr.)

ssp. livornica (Esp.)

Striped Hawk-moth

Aldermaston, 10.4.85, a single specimen at rest on a wall (PS). This and the Humming-bird Hawk-moth recorded above are indication of an early immigration of insects, the majority of which made landfall on our southern coasts and continued northwards in decreasing numbers. This striped Hawk-moth is only the second from this district known to the Recorder during thirty-three years of entomological reports, our member David Notton having had the good fortune to record one from Emmer Green on 3.7.82.

Deilephila porcellus (L.)

Small Elephant Hawk-moth

Aldermaston, nine between 1.6.85 and 22.7.85 (AB,PS9; Burghfield Common, 5.7.85 (DAY); Bracknell, 19.6.85, 11.7.85 (MJD)

Euproctis chrysorrhoea (L.)

Brown-tail Moth

Cutbush Lane, Earley, 20.5.85, a nest of larvae found on a bush of Crataegus growing on the motorway embankment (BTP). An interesting record of a species rarely recorded in our area, and never before to our knowledge in the larval stage. This is the moth which, from time to time, hits the headlines in the national press when larvae in pest proportions defoliate bushes on the south east coast.

Leucoma salicis (L.)

White Satin Moth

Snelsmore Common, 6.7.85 (NMH); Burghfield Common, 30.6.85, 9, 31.7.85, Woolhampton, 13.7.85 to 17.8.85, nine recorded (DAY)

Euxoa tritici (L.)

White-line Dart

Aldermaston, 22, 27.8.85 (AB,PS)

Rhyacia simulans (Hufn.)

Dotted Rustic

Aldermaston, 17.7.85, 6.8.85 (AB,PS9; Pinkneys Green, 12.9.85 (TJGH); Bracknell, 10.9.85 (MJD)

Spaelotis ravida (D. & S.)

Stout Dart

Burghfield Common, 26.7.85 (DAY)

- Naenia typica (L.) The Gothic  
Woolhampton, 10.8.85 (DAY); Woolhampton, 13.9.85, one at sugar (PS)
- Anaplectoides prasina (D. & S.) Green Arches  
Aldermaston, six between 26.6.85 and 17.7.85 (AB,PS9; Bowdown Wood Nature Reserve, 3.7.85 (NMH)
- Cerastis leucographa (D. & S.) White-marked  
Aldermaston, 18.4.85 (AB,PS)
- Polia hepatica (Cl.) Silvery Arches  
Owlsmoor, 21.6.85 (NMH, DAY)
- Lacanobia contigua (D. & S.) Beautiful Brocade  
Aldermaston, 13.6.85, 3.7.85 (AB,PS); Burghfield Common, 24, 26, 30.6.85 (DAY); Owlsmoor, 21.6.85 (NMH)
- Hadena compta (D. & S.) Varied Coronet  
Burghfield Common, 3.6.85 to 30.7.85; 18 recorded (DAY); Snelsmore Common, 6.7.85 (NMH); Bracknell, 12.6.85, 22.7.85 (MJD)
- Cucullia chamomillae (D. & S.) Chamomile Shark  
Burghfield Common, 26.5.85, 3.6.85 (DAY); Bracknell, 24.5.85 (MJD)
- Agrochola helvola (L.) Flounced Chestnut  
Burghfield Common, 15.10.85 (DAY)
- Apamea sublustris (Esp.) Reddish Light Arches  
Snelsmore Common, 6.7.85 (NMH, DAY)
- Apamea unanimitis (Hb.) Small Clouded Brindle  
Aldermaston, 23.6.85 (AB,PS); Burghfield Common, 9.6.85 (DAY); Unhill Wood, 28.6.85 (BRB,PS); Bracknell, 14, 25.6.85 (MJD)
- Mesoligia literosa (Haw.) Rosy Minor  
Bracknell, 4.8.85 (MJD)
- Pyrrhia umbra (Hufn.) Bordered Sallow  
Aldermaston, 16.7.85 (AB,PS)
- Helicoverpa armigera (Hb.) Scarce Bordered Straw  
Bracknell, 10.10.85 (MJD). A scarce immigrant, this being only the second dated record in the Museum's index of Berkshire lepidoptera
- Eustrotia uncula (Cl.) Silver Hook  
Woolhampton, 13.7.85 (DAY)
- Schrankia costaeistrigalis (Steph.) Pinion-streaked Snout  
Snelsmore Common, 6.7.85 (BRB, NMH); Aldermaston, 10, 25.9.85 (AB,PS)
- Hypenodes turfosalis (Wocke) Marsh Oblique-barred  
Snelsmore Common, 6.7.85 (BRB, NMH)

COLEOPTERA      Beetles

Trechus obtusus Erichson  
Leighton Park School, 10.10.84, amongst leaf litter in copse of deciduous trees (TDH)

Asaphidion flavipes (L.)

Leighton Park School, 10.10.84, amongst leaf litter in copse of deciduous trees (TDH)

Bembidion genei Kuster

Near Amners Farm, 20.8.85, at base of vegetation on bank of gravel pit (TDH)

B. obtusum Serville

Near Amners Farm, 20.8.85, at base of vegetation on bank of gravel pit (TDH)

Pterostichus oblongopunctatus (Fabr.)

Snelmore Common, 2.4.85, under a fallen branch (TDH)

Laemostenus terricola (Herbst)

Aston Upthorpe Downs, 14.10.84, under fence post on downland, Leighton Park School, 28.10.84, under a log in copse of deciduous trees (TDH)

Amara communis (Panzer)

The Ridges, Finchampstead, 13.10.84, under heather (TDH)

Agonum thoreyi (Dejean)

Near Theale, 16.3.85, under bark of willow on bank of stream (TDH)

Harpalus rufitarsis (Duft.)

The Ridges, Finchampstead, 13.10.84, under heather (TDH)

Anisodactylus binotatus (Fabr.)

Near Pingewood, 17.9.85, one male under stone on bank of gravel pit (TDH)

Bradycellus sharpi Joy

Whiteknights, 26.1.85, amongst leaf litter (TDH)

Stenolophus teutonius (Schrank)

Near Amners Farm, 20.8.85, at base of vegetation on bank of gravel pit (TDH);  
South Lake, Earley, 8.9.82 (RGL)

Acupalpus dubius Schilsky

Whiteknights, 29.10.84, under bark of tree stump (TDH)

Dromius angustus Brulle

Whiteknights, 30.1.85, under bark of felled tree (Aesculus sp.) (TDH)

Metabletus obscuroguttatus (Duft.)

Near The Coombs, 1.5.85, under a piece of wood on a tree stump (TDH)

Coelambus confluens (Fabr.)

Pingewood, 29.9.84, on bare mud beside pond, near gravel pit (TDH)

Helophorus flavipes (Fabr.)

Leighton Park, 13.4.85, in old bird's nest (TDH)

Coelostoma orbiculare (Fabr.)

The Ridges, Finchampstead, 15.5.85, obtained by treading vegetation into pond, in woodland (TDH)

Cercyon lugubris (Olivier)

Leighton Park, 13.4.85, in compost heap (TDH)

Helochares lividus (Forster)

The Ridges, Finchampstead, 15.5.85, obtained by treading vegetation into pond, in woodland (TDH)

Paromalus flavicornis (Herbst)

Whiteknights, 30.1.85, under bark of felled tree (TDH)

Metopsia retusa (Steph.)

Leighton Park School, 16.9.85, in pit-fall trap in garden cabbage patch (TDH)

Paederus riparius (L.)

Near Shinfield Grange, 1.5.85, under stone in meadow (TDH)

Philonthus cephalotes (Gravenhorst)

Leighton Park, 11.4.85, in compost heap (TDH)

P. sanguinolentus (Gravenhorst)

Leighton Park, 13.4.85, in compost heap (TDH)

Staphylinus aeneocephalus Degeer

Lower Basildon, 6.7.85, under a log (TDH)

Sinodendron cylindricum (L.)

Ipsden Heath, 31.3.85, inside rotting log (TDH)

Cetonia aurata (L.)

Rose Chafer

Padworth Common, 1.6.85, two of these beautifully coloured beetles flying in sunshine around a flowering Crataegus (BRB); Caversham, 1.6.85 (HGB); Clifton Park Road, Caversham, 9.9.85, reported to Museum by Miss S A Gilford

Agrilus laticornis (Illiger)

Leighton Park, 3.8.85, sweeping thistles under a Quercus robur (TDH)

Melanotus punctolineatus (Pelerin)

Owlsmoor, 22.6.85, at moth trap (HHC)

Lampyris noctiluca (L.) Glow-worm

Owlsmoor, 22.6.85, unexpected at so acid a locality (HHC)

Hemicoelus fulvicornis (Sturm)

Leighton Park School, 3.8.85, by sweeping Cirsium arvense growing on edge of deciduous wood (TDH)

Dasytes niger (L.)

Near Benyon's Inclosure, 23.6.85, resting on Cirsium palustre (TDH)

Rhizophagus dispar (Paykull)

Whiteknights, 30.1.85, under bark of felled tree (TDH)

Tritoma bipustulata (Fabr.)

The Ridges, Finchampstead, 8.5.85, in rotting tree stump (TDH)

Dacne bipustulata (Thunberg)

Near Ramsdell, 28.3.85, under bark of dead beech (TDH)

Corticaria gibbosa (Herbst)

Leighton Park, 1.9.85, by beating hawthorn tree (TDH)

Tetratoma desmaresti Latr.

Leighton Park School, 23.12.84, under bark of fungoid branch (TDH)

Orchesia undulata Kraatz

Whiteknights, 30.1.85, under bark of decaying logs (TDH)

Anaspis lurida Steph.

Leighton Park School, 1.7.85, on flower of Prunus lusitanica (TDH)

Oedemera nobilis (Scop.)

Whiteknights, 22.6.85, on flower of Rosa sp. (TDH)

Monochamus galloprovincialis (Olivier)

Caversham, 30.7.85, brought to the Museum for identification by Mr A R Graham of Direct Wines, Paddock Road

Lema cyanea (L.)

Leighton Park School, 3.8.85, by sweeping Cirsium arvense (TDH)

Lilioceris lili (Scop.)

Near Whiteknights, 25.6.84, larvae on Lilium sp., adults bred out and emerged 23.7.84 (TDH)

Hippuriphila modeeri (L.)

Leighton Park, 25.5.85, by sweeping Equisetum sp. (TDH)

Epitrix atropae Foudras

Hartslock, near Goring, 28.9.85, on plants of Atropa belladonna (TDH)

Psylliodes napi (Fabr.)

Leighton Park, 29.8.85, resting on ground beneath plants of Alliaria petiolata (TDH)

Cassida flaveola Thunberg

Whiteknights, 25.5.85, resting on vegetation in a meadow (TDH)

C. viridis (L.)

Near Sheffield Bottom, Theale, 20.8.85, sweeping Ranunculus (near plants of Mentha) (TDH)

Rhynchites longiceps Thomson, C G

Heckfield Heath, 12.6.85, resting on leaves of Salix sp. (TDH)

Apion assimile Kirby, W

Leighton Park School, 3.9.85, sweeping clover (TDH)

A. ervi Kirby, W

Leighton Park, 9.6.85, by sweeping a meadow (TDH)

A. malvae (Fabr.)

Leighton Park, 9.6.85, on inflorescence buds of Malva sylvestris (TDH)

Phyllobius viridicollis (Fabr.)

Seven Barrows, near Lambourne, 28.5.85, obtained by sweeping a meadow on calcareous soil (TDH)

Barypeithes pellucidus (Boheman)

Heckfield Heath, 12.6.85, walking on bare sand in birch scrub (TDH)

Sciaphilus asperatus (Bonsdorff)

Leighton Park, 27.5.85, resting on a leaf of buttercup in a meadow (TDH)



Magdalis carbonaria (L.)

Heckfield Heath, 12.6.85, resting on vegetation under birch (TDH)

Pentarthrum huttoni Wollaston

Whiteknights, 30.1.85, under bark of tree stump (TDH)

Rhinoncus inconspicuous (Herbst)

Child Beale, 30.6.85, on leaves of Calystegia sp. (TDH)

Phytobius olssoni (Israelson)

Nr Bracknell, old specimen recently re-determined and reported in Antenna, 1984

Ceutorhynchus floralis (Paykull)

Leighton Park, 25.5.85, by sweeping a weed infested garden allotment (TDH)

C. litura (Fabr.)

Leighton Park, 5.8.85, by sweeping Cirsium arvense (TDH)

C. melanostictus (Marsham)

Near Sheffield Bottom, 20.8.85, sweeping Lycopus europaeus (TDH)

Gymnetron pascuorum (Gyllenhal)

Seven Barrows, near Lambourne, 28.5.85, by sweeping a meadow on calcareous soil (TDH)

G. villosulum Gyllenhal

By River Blackwater near Farley Hill, 10.8.85, galls containing pupae and unemerged adults, on Veronica anagallis-aquatica (HHC)

Rhynchaenus avellanae (Donovan)

Leighton Park, 4.8.85, obtained by beating Turkey Oak (TDH)

HYMENOPTERA

Sawflies, Ichneumons, Bees and Wasps

Urocerus gigas (L.)

Horntail or Giant Woodwasp  
Bramshill, 22.8.85, a female of this impressive sawfly found indoors by Mr P Kops of Springwater Farm, insect submitted to the Museum.

Stethomostus fuliginosus (Schrank)

Shiplake College, 7.6.80 (RGL)

Tenthredo schaefferi Klug sensu stricto

Shiplake College, 7.6.80, rare in Britain where var. perkinsi (Morice) is the usual form (RGL)

Ctenichneumon messorius (Gravenhorst)

Shiplake College, 7.6.80 (RGL)

Cratichneumon clarigator (Wesmael)

Baynes Wood Nature Reserve, 28.5.85 (HHC)

DIPTERA

True Flies

Dicranota simulans Lackschewitz

Baynes Wood Nature Reserve, 30.9.85 (HHC)

Simulium ornatum Meigen

Baynes Wood Nature Reserve, 24.6.85 (HHC)

Rhamphomyia barbata (Macquart)  
Owlsmoor, 22.6.85 at moth trap (HHC)

Dolichopus nitidus (Fallen)  
South Lake, Earley, 8.9.82 (RGL)

Medetera impigra Collin  
Baynes Wood Nature Reserve, 24.6.85 (HHC)

Cheilosia albipila Meigen  
Baynes Wood Nature Reserve, 16.4.85 (HHC)

Criorhina ranunculi (Panzer)  
Baynes Wood Nature Reserve, 16.4.85, not a new species to the Museum's collection but noteworthy (HHC)

Cryptaciura rotundiventris (Fallen)  
River Kennet near Aldermaston Old Mill, 17.8.74 (EB)

Terellia longicauda (Meigen)  
Sinodun Hill, 15.7.70, on Cirsium eriophorum L., (HHC)

Trypeta ruficauda (Fabr.)  
Goring Heath, orchard at King Charles's Head, on Cirsium arvense (HHC,EB)

Sapromyza apicalis (Robineau-Desvoidy)  
2 College Road, Reading, 19.8.71 and 24.8.73 (EB)

Lonchaea corusca Czerny  
2 College Road, Reading, 17.8.71 (EB)

Chamaemyia juncorum (Fallen)  
Pamber Forest, 4.5.75 (RGL)

Pelignus durrenbergensis Becker  
South Lake, Earley, 8.9.82 (RGL)

Discocerina obscurella (Fallen)  
South Lake, Earley, 8.9.82 (RGL)

Parhydroptera discomyzina Collin  
South Lake, Earley, 8.9.82 (RGL)

Actia pilipennis (Fallen)  
Baynes Wood Nature Reserve, 28.5.85 (HHC)

Spanochaeta dorsalis (Von Roser)  
Tippings Lane, Woodley, 5.7.81 (RGL)

Schoenomyza litorella (Fallen)  
South Lake, Earley, 8.9.82 (RGL)

Phorbia sepia (Meigen)  
Bucklebury, 4.5.85 (HHC)

Craspedochaeta karli (Ringdahl)  
Baynes Wood Nature Reserve, 29.7.85 (HHC)

Helina atripes (Meade)

Kennylands Paddock, Sonning Common, 29.6.85 (HHC)

Coenosia atra Meigen

South Lake, Earley, 8.9.82 (RGL)

The Society's Entomological Evening - 6th July 1985

Following the pattern set in recent years, the moth night was again preceded by the Society's Barbecue, organised by Dr Humphrey Bowen and enjoyed at Snelsmore Common Country Park. Before lighting up at around 10.00 p.m. several members were busily sweeping larvae from Calluna, thereby producing several Sataurnia pavonia (L.) Emperor Moth. The weather was again kind to us and from the three well separated mercury vapour lamps we recorded a total of 88 species; those of particular interest are in the foregoing Report. Our thanks are due to Norman Hall, Peter Waite and David Young for providing equipment, also for writing detailed reports in which department they were joined by Sheila Ward. The Society acknowledges the valued permission of Newbury District Council to visit and work at this interesting locality.

Contributors

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

M.V. Albertini (MVA), Mrs. H.G. Baker (HGB), Dr. H.J.M. Bowen (HJMB), the late Dr. E. Burt (EB), Dr. A. Brickstock (AB), H.H. Carter (HHC), Dr. M.J. Dumbleton (MJD), N.M. Hall (NMH), T.D. Harrison (TDH), M.R. Hughes (MRH), T.J.G. Homer (TJGH), R.G. Leeke (RGL), J.F. Newman (JFN), B.T. Parsons (BTP), P. Silver (PS), Mrs. Sheila Ward (SW), D.A. Young (DAY). Additionally our thanks are due to the Director of Reading Museum and Art Gallery, Mr. C.A. Sizer, for allowing us to incorporate any relevant records from the Museum's collections.

ARACHNIDA

Spiders and Harvestmen

Xysticus lanio Koch

Baynes Wood Nature Reserve, 30.9.85, one immature female (HHC)

Savignya frontata (Blackwall)

Old Copse, Sonning Common, 25.3.85, under bark (HHC)

Gonatum rubellum (Blackwall)

Baynes Wood Nature Reserve, 30.9.85 (HHC)

Linyphia clathrata Sundevall

Twyford Gravel Pit, 21.4.84 (HHC). In the field this spider appeared to be an ant mimic.

Leiobunum blackwalli

Baynes Wood Nature Reserve, 26.8.85 (HHC)

CHILOPODA

Centipedes

Geophilus carpophagus Leach

Tilehurst, 6.10.85, specimen found in a house (HHC)

MILLIPEDES

Polymicrodon polydesmoides (Leach)

Two hibernating in crack in chalk with Eristalis tenax (L.), Playhatch Chalk Pit, 23.11.85, (HHC)

Occurrence of Cylindrinotus laevioctostriatus (Goeze)

(Coleoptera, Tenebrionidae)

H.H. Carter

This relative of the familiar Mealworm (Tenebrio molitor L.) and other less well known pests of stored food products is usually found by day resting under bark or decaying logs. In 1985 I observed it on an oak tree on the edge of Hagpits Wood (Sonning Common). At some time in the past a limb had been sawn off about two metres from the ground, and callus formation had begun round the periphery of the sawn surface. The beetle was first noted at this locality in November 1983. On 29.4.85 one was seen wandering slowly over the sawn surface at night, and similar observations were made on many subsequent dates up to July 12th. Sometimes two and occasionally three beetles were present. None were seen on other parts of the tree, though the deeply fissured and ivy-clad bark would have made this difficult, nor were any seen during daylight.

In September the beetles reappeared, and again up to three were seen until late October. They were not seen to feed or copulate, and the exposed wood appeared quite sound though some inconspicuous microflora - algal or fungal - may have been available.

The Recorder's Report for Fungi, 1985  
Alan Brickstock

As a result of a poor summer, followed by a long, exceptionally dry spell, there was an unseasonal 'flush' of fungi in July, but the woods this autumn were barer of fungi than I can ever remember. The total number of species for the year was 301, compared with the average for the last four years of 352; some of this shortfall was due to your recorder not going to the Mycological Society outing at Virginia Water this year, since it clashed with our own foray, which I was leading! The MS foray recorded a superb 200 species.

Many species which are usually abundant were to be found only in ones or twos, and that by careful searching. Despite this, there were some interesting finds, with more uncommon species: one searches more carefully when the normally common species are absent. Some uncommon species, such as Amanita porphyria and Inocybe patouillardii, were found with unusual frequency.

The Society forays produced 81 species at Holly Grove, Highmoor, on 5.10.85 (Judith Hack); thanks to Barry Bristow and Alick Henrici for their help with the identification of some of these species; and my double foray on 19.10.85 produced 53 species at Upton Nervet and 60 species at Five Oaken, a combined total of 91 species for the day.

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

Thanks to all those who have contributed records, including Barrie Bristow, Alick Henrici, Humphry Bowen, and especially Mary and Neville Diserens, who also shared many of our outings and subsequent deliberations.

Records, short or long, be the species rare or common, are always appreciated.

The following are a selection of the more interesting species found.

AGARICALES

Amanita porphyria

Satwell, 15.9.85 (D); Newtown Common, 29.9.85 (D), 12.10.85 (B&D);  
Upton Nervet, 19.10.85 (NH); Five Oaken, 19.10.85 (NH).

Asterophora lycoperdoides

The Chase, Newbury, 12.10.85 (B&D); Fence Wood, Hermitage, 2.11.85 (B&D).  
An uncommon fungus, growing on rotting Russula nigricans.

Boletinus cavipes

Sulham, 1.9.85 (D).

Boletus calopus

Newtown Common, 12.10.85 (B&D).

Boletus parasiticus

Wasing, 16.10.85 (B); Snelsmore Common, 20.10.85 (D).  
A small, uncommon Boletus, parasitising Earthballs (Scleroderma citrina).

Cortinarius armeniacus

The Chase, 12.10.85 (B&D).

Crepidotus mitis

High Copse, Frilsham, 2.11.85 (B&D).

Deconia (Psilocybe) montana

Fence Wood, 12.10.85 (NDFC).

Gomphideus roseus

AWRE, 9.10.85 (B); Newtown Common, 29.9.85 (D).

Hygrocybe russocoriacea

Virginia Water, 19.10.85 (MS).

Inocybe patouillardii

Sulham, 9.10.85 (B).

Present in large numbers; more than I have ever seen.

Leccinum durisculum

Whiteknights Park, 7.9.85 (D).

Lentinellus cochleatus

Holly Grove, Nettlebed, 5.10.85 (NH).

Nolanea staurospora

Fence Wood, 12.10.85 (NDFC).

Panaeolus subbalteatus

Fence Wood, 12.10.85 (NDFC).

Pluteus petasatus

Sulham, 14.9.85 (B).

Psathyrella marcescibilis

Five Oaken, 19.10.85 (NH).

Psathyrella multipedata

Redhatch Drive, Earley, 31.10.85 (D).

Pseudocraterellus sinuosus

Fence Wood, 12.10.85 (NDFC).

Russula brunneoviolacea

Burghfield Common, 27.10.85 (B).

Russula farinipes

Newtown Common, 12.10.85 (B&D).

Stropharia aurantiaca

Virginia Water, 19.10.85 (MS).

Stropharia inuncta

Mortimer (BB).

Tricholoma columbetta

The Chase, 12.10.85 (B&D).

Tricholoma inamoenum

Blacknest, Brimpton, 2.10.85 (B).

Tricholoma ustale

The Chase, 12.10.85 (B&D); Newtown Common, 12.10.85 (B&D).

A rare species, but found twice on one day!

Also Fence Wood, 12.10.85 (NDFC).

Tylopilus felleus

Bucklebury Slade, 28.9.85 (BBONT).

APHYLLOPHORALES

Coltricia perennis

Ufton Nervet, 13.10.85 (B); Five Oaken, 19.10.85 (NH);  
Burghfield Common, 27.10.85 (B).

Creolophus cirrhatus

Virginia Water, 19.10.85 (MS).

Hydnellus concrescens

Newtown Common, 12.10.85 (B&D).

Ischnoderma resinosum

Ufton Nervet, 19.10.85 (NH).

HETEROBASIDIOMYCETES

Pseudohydnum gelatinosum

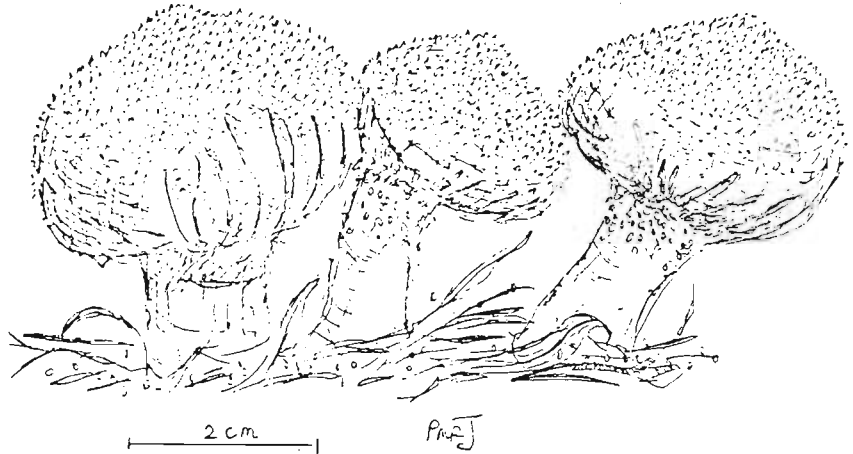
Ufton Nervet, 19.10.85 (NH).

Tremella foliacea

Five Oaken, 19.10.85 (NH).

Tyromyces lacteus

Pence Wood, 12.10.85 (NDFC).



ASCOMYCETES

Cordyceps capitatus

Five Oaken, 19.10.85 (NH).

Lycoperdon molle

Cordyceps ophioglossioides

Newtown Common, 12.10.85 (B&D).

An uncommon species, growing parasitically on the false truffle:

Elaphomyces granulatus

Five Oaken, 19.10.85 (NH).

False truffle, parasitised by the previous species.

Hymenoscyphus epiphyllus

Holly Grove, 5.10.85 (NH).

Mitrophora semilibera

Great Wood, Hambledon, 28.4.85 (D).

Otidea onotica

Pamber Forest (Impstone), 20.10.85 (B).

Tarzetta cupularis

Pence Wood, 2.11.85 (B&D).

Xylaria longipes

Whiteknights, 9.11.85 (B&D).

Similar to Dead Man's Fingers, but much slenderer.

Contributors

Ivy and Alan Brickstock (B), Barrie Bristow (BB), Barrie Bristow and Alick Henrici (B&H), Mary and Neville Diserens (D).

Society forays are denoted by (NH), (BBONT), (NDFC) for the Newbury and District Field Club foray, lead by (B&H), and (MS) for the Micological Society foray at Virginia Water.

Recorder's Report for Vertebrates 1984-85

H H Carter

FISH

Esox lucius L.

Pike

Small tatty specimen under bank of Thames above Purley, 6.4.85 (MJC)

Leuciscus cephalus (L.)

Chub

Some small Chub appeared in the Holy Brook under the new Central Library in early summer for a week or two but have not been seen since.

AMPHIBIANS

Rana temporaria L.

Frog

Two dead in Mill Lane (Henley), 10.3.85, are the only evidence for spring migration this year. Spawn a few days old in the Horse Pond, Gallowstree Common, 31.3.85. Tadpoles in a garden pond on Cockney Hill (Tilehurst) 15.4.85. Albino tadpoles on the same date near Impstone Road, Silchester Common (AB).

Bufo bufo (L.)

Toad

One dead in Kennylands Road (Sonning Common), 12.10.84 and one dead in Buckingham Drive (Emmer Green), 10.10.84 mark the date of last year's autumn migration. One dead in Binfield Heath Lane (Sonning Common), 25.1.85 and in Kiln Road (Emmer Green), 28.1.85. Main spring migration later, four dead in Binfield Heath Lane, 30.3.85, two dead there, 3.4.85, 28 dead Kiln Road, 30.3.85. 33 dead on 100m stretch of Folders Lane (Bracknell) 7.4.85 (MJD). On autumn migration this year, one dead Binfield Heath Lane, 3.10.85, one dead Kennylands Road 6.10.85.

Anguis fragilis L.

Slow Worm

One in Pamber Forest between 12.3.85 and 6.4.85 (AB). One regularly in garden at Beech Lane, Earley, basking on heat-absorbent black polythene, 25-31.10.85 (HL).

Natrix natrix (L.)

Grass Snake

An adult about 500 mm long at Moor Copse, 14.10.85 was torpid but discharged its anal glands when handled (PRC). Nine eggs found there in a compost heap (a typical site), 28.9.85 contained fully developed young 200 mm long but still attached to their yolk sacs (BRB). Juvenile killed by car, Reading, 8.5.85. An adult caught by boys on the site of Caversham Cork Factory and later released, 28.8.85, was about 1.2 metres long.

Vipera berus (L.)

Adder

From eight to eleven or more seen in Pamber Forest on various dates between 12.3.85 and 6.4.85 near their place of hibernation (AB).

MAMMALS

Prolemnodon rufogriseus

Red-necked Wallaby

One seen Witheridge Hill (Stoke Row), 17.1.85, reported in Henley Standard (RB). (Last report 1981)

Talpa europaea (L.)

Mole

Molehills following line of footpath (and of fence which had been removed) Frieze Farm (Sonning Common), 27.12.84; Dinton Pastures, 19.1.85; Pishill, 27.1.85; Peppard Common, 28.1.85; alongside Thames between Purley and Pangbourne, 6.3.85; Bucklebury, 4.5.85.



Erinaceus europaeus (L.) Hedgehog  
One dead in George St. (Caversham), 31.10.84; two dead Emmer Green 13.5.85 and one 29.6.85; one dead Upton, 21.9.85; Woodley 5.10.85; Woodcote 20.10.85; Stoke Row, 16.11.85. One alive, Kennylands Road (Sonning Common), 29.6.85. Frequent in Beech Lane, Earley, October 1985 (HL).

Pipistrellus pipistrellus (Schreber) Pipistrelle  
One found dead at Major Dent's house, Burghfield Common, 1.4.85.

Plecotus auritus (L.) Long-eared Bat  
One at AWRE (Burghfield), 23.9.85 (AB).

Vulpes vulpes (L.) Fox  
One in field by railway between Winnersh and Wokingham, November 1984 (HL). Calling in Sonning Common area 4 dates from 16.11.84 to 5.3.85. Two playing in snow Cockney Hill, mid January (IB). Tracks north of Withy Copse, 19.1.85. Smelt by RDNHS at Dinton Pastures, same date. Signs Watlington Hill, 3.2.85. Vixen in Bath Road, mid February 1985 (AB). One dead in ditch Grazeley, 10.3.85 (HL). Two cubs reared at 36 Allcroft Road (TS). One to two seen frequently Coley Park, July 1985 (FC). One in field by Pack Saddle (Mapledurham), 28.12.85 (MJC).

Meles meles (L.) Badger  
Sett in use Hockett Shaw (Peppard), 19.1.85. One dead on road at Bray, 18.3.85. One dead on Bath Road at Woolhampton (MM). One several days dead at roadside east of Goring, 27.7.85. Signs at Hardwick, 26.12.85.

Lutra lutra (L.) Otter  
One at Sheffield Bottom (Theale), December 1984 (PB). Last reported 1973.

Mustela erminea (L.) Stoat  
One dead near ROB (Burghfield), 11.10.84 (JRC)

Mustela eversmanni Lesson Polecat Ferret  
One dead on Peppard Road (Chalkhouse Green), 4.11.84.

Mustela nivalis (L.) Weasel  
One dead on Peppard Road, 14.5.85

Dama dama (L.) Fallow Deer  
Female dead at roadside, Green Dean Bottom (Mapledurham), 27.12.84, and three crossing road from College wood (Woodcote), 1.1.85 (JW). Several at Witheridge Hill (Stoke Row), 17.1.85 (RB).

Capreolus capreolus (L.) Roe Deer  
Two females at Moor Copse, 9.12.84 (MRH).

Muntiacus reevesi Ogilby Muntjac  
Calling at Kidmore End, 19.11.84; Hagpits Wood (Sonning Common), 27.8.85 (EMC) and 1.9.85; Crowsley, 18.5.85; and Fries Farm (Sonning Common), 27.11.85. Juvenile dead on Peppard Road, 20.3.85. Slots seen south of Holly Grove (Highmoor), December 1984 (MJC) and north of Withy Copse (SU 680 810), 19.1.85. One seen at 80 Kennylands Road (very close to Hagpits Wood), 26.5.85 (CK).

Oryctolagus cuniculus (L.)

Rabbit

Numbers in the Sonning Common area were the highest ever recorded, but in the absence of reports from other observers it is impossible to say whether this is a purely local phenomenon. Many tracks at New Copse and north of Withy Copse, 19.1.85. Signs at Watlington Hill, 3.2.85; and Bucklebury 4.5.85. Total sightings in the Sonning Common area 1306, with maxima of 45 at Chalkhouse Green, 16.4.85; 55 Kennylands, 21.5.85; 38 Chalkhouse Green pit, 16.7.85. Hedges grubbed out and grassland ploughed here, November 1985.

Lepus capensis Pallas

Hare

As usual, numbers low in a year of Rabbit abundance. One on Bishopsland Farm (north of Emmer Green), 15.6.85. One dead on road at Chalkhouse Green, 4.10.85. Three in field east of Cane End, 26.10.85 in an area largely free of Rabbits.

Muscardinus avellanarius (L.)

Dormouse

A nest of baby Dormice found apparently abandoned in a wood at Upper Basildon, 28.9.85 (Mrs P).

Clethrionomys glareolus Schreber

Bank Vole

One under roots of fig tree, 82 Kennylands Road (Sonning Common), 4.4.85.

Arvicola amphibius (L.)

Water Vole

Many burrows in bank of Thames below Pangbourne, 6.4.85.

Microtus agrestis (L.)

Short-tailed Vole

One dead on Peppard Road, SU 721 778, 27.3.85. One at 82 Kennylands Road, 11.7.85.

Apodemus sylvaticus (L.)

Wood Mouse

One dead at side of track, Pishill (SU 72 90), 2.5.85. One dead at 80 Kennylands Road (Sonning Common), another there, 29.8.85 (A & EK), and one 82 Kennylands Road, 15.10.85, all apparently killed by cat from 84 Kennylands Road.

Rattus norvegicus Berkenhout

Brown Rat

One dead in Reades Lane near Gallowstree Common. One at 82 Kennylands Road, 12.11.85 (MJC) and one in field north of 80 Kennylands Road, 13.11.85

Sciurus carolinensis Gmelin

Grey Squirrel

Tracks in New Copse (Sonning Common) 19.1.85. One dead on road at Grassland Research Institute (Hurley), 7.9.85. One dead at E P Collier School 18.7.85 per SYT. Frequent in Beech Lane (Earley), October 1985 (HL). Widespread throughout the year in South Oxfordshire, mainly ones or twos, at Chalkhouse Green, Goring, Sonning Common, Binfield Heath, Cane End, Carmel College (Crowmarsh) but 9 at Swyncombe (MJC).

Thanks are due to the following contributors:

Brian Baker (BRB); Alan Brickstock (AB) and Ivy Brickstock (IB); P Bristowe (PB); Richard Brough (RB); Elizabeth Carter (EMC) and Mary Carter (MJC); J R Cooper (JRC); Paula Cox (PRC); Fred Croucher (FC); Major Dent (MD); Michael Dumbleton (MJD); Michel Hughes (MRH); Christopher, Alexander and Edmund King (CK, A & EK); Hilda Lambden (HL); Mr Maskell (MM); Mrs Palmer (MP); Tony Stemp (TS); Shirley Townend (SYT); Janet Welsh (JW).

## The weather at Reading during 1985

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Department of Geography  
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1985 will be remembered as a year with a disappointing (even non-existent!) spring, with temperatures well below average in March and April, and a poor summer, with June receiving some 80% more rainfall than average and with August recording the highest number of raindays since 1956. However, since the Autumn was dry (about 25% of the rain expected) and warm (with the October extreme maximum the highest since 1959), this Indian Summer weather meant that the year ended up as about average in terms of pressure, rainfall and mean temperature.

In fact, the sunshine hours were the only major deviant being about 7% below the yearly average. However, the near-normal mean temperature did mask the abnormal number of air frosts and ground frosts which were the highest since the infamous winters of 1963 and 1979 respectively. The following monthly weather notes, based on Table 1, will reveal the detailed weather characteristics of 1985 and reference to Table 2 will confirm the normality of the main observations.

January was a cold month with temperatures about 3° below average, the most number of air frosts since 1979 and the last day of the month the only day without a recorded ground frost. Sunshine and rainfall were less than average.

February was mostly a cold (2°C below average), dry and sunny month associated with higher pressure than normal to reveal the anticyclonic dominance, which resulted in 70% of the winds (observed at 09.00hrs) from a NE-E-SE direction.

March continued to be cold and dry with rainfall some 22% below normal. Frosts again dominated the weather both in the air (highest number since 1970) and on the ground (highest since 1976).

April was the first month of the year with above (1°C) average temperatures with the highest mean temperature for 14 years. The first part of the month was very wet and windy (with 58 m.p.h. gusts on the 11th and 10.3mm rain on the 7th) which then changed to dry, calm and reasonably warm weather, with 19.5°C on the 19th (the warmest day of the year so far).

May began with a dry spell lasting until the 12th but very heavy falls of rain on the 14th (the most in one May day since 1952), the 21st and 26th made this the wettest May for 20 years (some 37mm above average). Temperatures for the month were about average but six ground frosts were still recorded, with -3.0°C as an extreme grass minimum on the 10th and -2.8°C on the 30th.

June started off warm and sunny but soon deteriorated to become cold, cloudy and wet. Rainfall was the main feature with the month's total some 80% above average and the highest number of raindays since 1935. Temperatures were below normal, with the mean temperature the lowest since 1977 and 0.9°C below average. Sunshine was well below average with a pathetic mean duration of only 5 hrs. for the mid-summer month, losing almost two hours per day compared with normal

conditions. Three ground frosts were recorded between the 8th and 15th, (about  $-2.4^{\circ}\text{C}$ ) which, at this late stage, were a headache for local gardeners.

July was a month of two distinctive halves, starting off dry and sunny with only one rain day up to the 13th and then changing to a wet second half, with 15 rain days between the 14th and 31st. The number of rain days was almost double the average number, and the number of wet days (1.0mm or more) was the highest for 15 years. However, overall, the total rainfall was very close to the average aggregate. Temperatures were about normal and in a brief respite from the rain, the highest recorded value of  $28.0^{\circ}\text{C}$  occurred on the 25th.

August was a disastrous month weatherwise being cool, wet and windy for the first three weeks with a welcome change to a warmer, drier and calmer last week. Consequently, temperatures were about  $2^{\circ}\text{C}$  below average, the number of raindays were the highest for any August since 1956 and the mean pressure the lowest since 1963. It was indeed a miserable and forgettable month, ruining the holidays of so many people in the south of England.

September After such a poor spring and summer, we all hoped for an Indian Summer which indeed appeared after the 5th. Consequently, temperatures were higher than normal (the highest mean since 1980), pressure was the highest for 8 years and with rainfall only 25% of the monthly average, the aggregate was the lowest since 1979.

October continued the Indian Summer with above average temperatures, pressure (the highest for 25 years) and sunshine and below average rainfall (which was only about half of the total expected). In fact, an absolute drought (ie., a period of at least 15 consecutive days, none of which receives 0.2mm rain or more) occurred from the 9th to 31st.

November ended the glorious Indian Summer after a warm, dry and sunny start and by the middle of the month, had a bleak mid-winter appearance with snow on the 11th and 18th and a minimum temperature of  $-5.4^{\circ}\text{C}$  on the 14th. Mean temperatures were  $2^{\circ}\text{C}$  below normal (the lowest since 1958) and the soil temperatures were the lowest since 1961. However, the month did have its compensations with sunshine hours 6% up on average and rainfall down by over 36%.

December was a very wet and cloudy month with pressure well below average and temperatures nearly  $2^{\circ}\text{C}$  above average, the highest for 11 years. The month started off reasonably warm, with a maximum temperature of  $15.8^{\circ}\text{C}$  on the 2nd (the highest for 25 years) and continued mild until the last few days of the month when the minimum on the 28th plummeted to  $-6.8^{\circ}\text{C}$ . Heavy rain characterised the holiday period, with a fall of 24.9mm on Christmas day being the highest total for any December day since 1954. This, added to the total, made the aggregate rainfall for the month the highest in 20 years.

Table 1. WEATHER RECORDS: 1985.

STATION: READING UNIVERSITY (WHITEKNIGHTS)

		Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Mean Daily temperatures C	Max.	3.4	5.7	8.9	13.3	16.0	17.6	21.6	18.1	19.4	14.9	7.6	9.4	13.0
	Min.	- 1.9	- 0.4	1.1	4.9	7.6	9.2	12.1	11.4	10.4	7.5	1.2	5.1	5.7
	Mean	0.8	2.7	5.0	9.1	11.8	13.4	16.9	14.8	14.9	11.2	4.4	7.3	9.4
	Range	5.3	6.1	7.3	8.4	8.4	8.4	9.5	6.7	9.0	7.4	6.4	4.3	7.3
Extreme temperatures C	Extreme Max. Date	11.4 31st	13.6 24th	14.6 31st	19.5 19th	20.9 17th	23.8 3rd	28.0 25th	24.0 29th	24.6 12th	25.5 1st	15.9 8th	15.8 2nd	28.0 25/7
	Extreme Min. Date	- 8.1 17th	- 9.6 13th	- 5.0 20th	- 2.3 26th	3.4 16th	2.9 8th	7.8 7th	7.1 27th	3.6 7th	0.6 21st	5.4 14th	- 6.8 28th	- 9.6 13/2
	Extreme Grass Min. Date	-14.2 17th	-15.9 13th	-13.2 20th	- 9.7 26th	-3.1 10th	- 2.4 8th	1.9 7th	2.5 27th	- 1.1 7th	-5.0 21st	-11.0 3rd	-12.9 28th	-15.9 13/2
Days with air frost		24	13	13	2	0	0	0	0	0	0	11	5	68
Days with ground frost		30	19	23	11	6	3	0	0	1	12	17	8	130
Sunshine hours	Sum	50	81	102	143	164	151	222	179	136	113	83	38	1462
	% of possible	19	29	28	34	34	31	45	40	36	34	31	15	33
	Daily Mean	1.6	2.9	3.3	4.8	5.3	5.0	7.2	5.8	4.5	3.6	2.8	1.2	4.0
Precipitation	Amount in mm	48.9	35.9	41.1	37.0	87.2	99.3	43.5	75.6	13.9	26.6	37.8	91.8	638.2
	Rain Days	15	7	19	15	8	20	16	21	5	6	9	18	159
Maximum rain in one day "		11.2	14.6	6.0	10.3	31.8	17.3	13.6	17.3	10.2	11.9	8.2	24.9	31.8
	Date	25th	8th	1st	7th	14th	6th	28th	4th	2nd	6th	16th	25th	14/5
Longest run of consecutive in days		7	4	8	5	4	10	6	13	3	3	3	8	13 Aug
Longest run of consecutive days		4	10	4	6	11	3	7	6	9	22	3	4	22 Oct.
Snow or sleet days		8	2	3	0	0	0	0	0	0	0	2	0	15
Days with snow lying		10	6	0	0	0	0	0	0	0	0	0	0	16
Visibility	Days with fog at 0900 GMT	0	4	0	0	0	0	0	0	1	0	0	1	6
Thunderstorm activity	Days of thunder	0	0	0	0	1	1	0	0	0	0	0	0	2
	Days of hail	1	0	1	1	0	0	0	0	0	0	0	0	3
Barometric pressure	Mean Highest Date	1013 1032 14th	1021 1035 20th	1013 1042 11th	1012 1032 17th	1014 1028 31st	1014 1028 1st	1015 1030 7th	1013 1025 29th	1020 1029 27th	1025 1039 13th	1015 1038 18th	1013 1032 12th	1016 1042 11/3
	Lowest Date	983 21st	1001 8th	979 22nd	990 8th	999 5th	1001 22nd	995 29th	993 5th	1002 3rd	1004 3rd	980 5th	988 26th	979 22/3

Table 2

MONTHLY WEATHER SUMMARY AVERAGES READING UNIVERSITY -  
WHITEKNIGHTS

TEN YEAR PERIOD 1971-1980

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YEAR
BAROMETRIC PRESSURE MEAN	1012.9	1013.6	1013.9	1016.1	1015.0	1016.4	1017.0	1016.9	1017.8	1016.2	1016.1	1015.4	1015.6
TEMPERATURE MEAN	4.0	4.5	5.9	8.1	11.4	14.3	16.7	16.5	13.8	10.6	6.7	5.5	9.8
" MEAN MAX	6.8	7.6	9.6	12.2	16.0	18.9	21.4	21.2	18.2	14.3	9.9	8.2	13.7
" MEAN MIN	1.2	1.5	2.3	4.1	6.7	9.6	12.0	11.8	9.5	6.8	3.5	2.8	6.0
" DAILY RANGE	5.6	6.0	7.3	8.1	9.3	9.4	9.5	9.4	8.7	7.5	6.4	5.4	7.7
EARTH TEMP. 30cm	5.0	5.0	6.0	8.1	11.3	14.4	16.5	16.6	14.6	11.7	8.4	6.4	10.3
" " 50cm	5.5	5.3	6.2	8.2	11.0	14.1	16.0	16.4	14.9	12.3	9.2	7.0	10.5
" " 100cm	6.6	6.0	6.5	7.9	10.1	12.7	14.7	15.6	14.7	12.8	10.6	8.0	10.5
" " 5cm	2.9	3.1	4.7	8.6	13.5	17.0	19.2	18.0	14.3	9.8	5.5	4.1	10.1
" " 10cm	3.2	3.4	4.5	7.7	12.0	15.6	17.7	16.8	13.6	9.7	5.8	4.5	9.5
" " 20cm	4.0	4.1	5.2	7.8	11.5	14.9	17.2	16.8	14.2	10.7	7.0	5.3	9.9
RAINFALL AGGREGATE	57.9	46.0	52.6	38.8	50.0	55.3	42.5	58.8	56.5	48.6	59.2	61.7	627.9
RAIN DAYS (0.2mm or more)	17	14	15	13	14	11	9	11	11	13	14	16	158
WET DAYS (1.0mm or more)	11	9	11	8	9	8	7	8	8	9	10	10	108
SUNSHINE No. OF HOURS	53.6	61.8	112.9	150.6	202.2	203.4	207.0	192.7	152.7	111.0	78.5	50.8	1577.2
MEAN DURATION	1.73	2.19	3.65	5.02	6.52	6.78	6.68	6.22	5.12	3.58	2.62	1.64	4.31
MEAN DURATION POSSIBLE AT LATITUDE 51°N	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