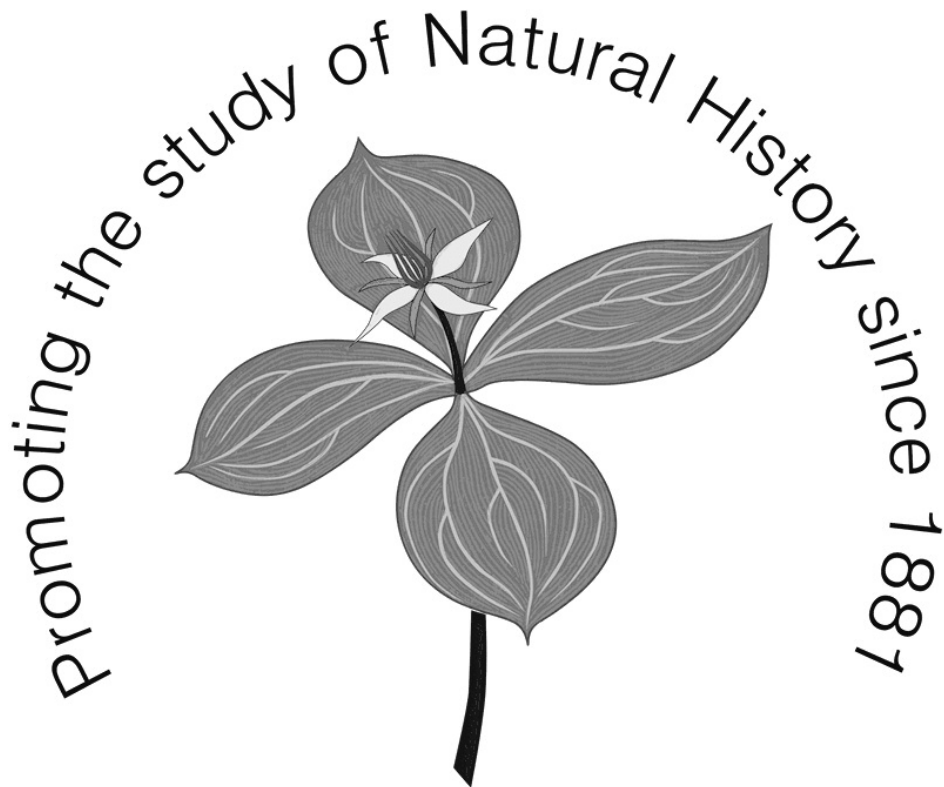


The Reading Naturalist

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THE READING NATURALIST

No 69 for the year 2016

The Journal of the Reading and District Natural History Society

President

Mrs Jan Haseler

Honorary General Secretary

Mr Rob Stallard

Honorary Editor

Mr Ken White, Yonder Cottage, Ashford Hill, Reading, RG19 8AX

Honorary Recorders

Botany: Dr Renée Grayer, 16 Harcourt Drive, Earley, Reading, RG6 5TJ

Fungi: Position Vacant

Lichens: Position Vacant

Lepidoptera: Mr Norman Hall, 44 Harcourt Drive, Earley, Reading, RG6 5TJ

Entomology & other Invertebrates: Position Vacant

Vertebrates: Mr Tony Rayner, The Red Cow, 46 Wallingford Road, Cholsey, Wallingford, OX10 9LB

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Thanks go to all the contributors for their efforts in meeting the deadlines whilst carrying on with busy lives. The Honorary Recorders do a fantastic job and are totally reliant on all of us to send them information during the year.

My special thanks go to Jan & Laurie, Rob, Renée, Ian & Julia, Sean, Ailsa, Jerry, Peter, Ian E, Richard, Colin, Norman, and Sarah for the records of the walks, excursions & meetings, articles and help with validating and proof reading.

So now it is time to get your thinking caps to create interesting articles for the next RDNHS Naturalist journal. The spring, summer and autumn stretch is imminent to inspire you in your particular field of interest. So don't forget to document and photograph those interesting expeditions and discoveries, whether they are near or far and submit them for publication.

Ken White (Hon. Editor)

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Presidential Ramblings

It may be that 2016 will be remembered as the year when Ash-dieback became established in the area around Reading. It is a disease of Ash *Fraxinus excelsior* trees which is caused by the fungus *Hymenoscyphus fraxinus* (previously called *Chalara fraxinea*). On our Wednesday walk westwards along the Thames Path from Whitchurch-on-Thames in September, we noted young Ash saplings with curled, blackened leaves. Diseased young Ash trees have also been seen on the wildlife walks at the National Trust's Basildon Park. Bare twigs emerge from the crowns of many of the mature Ash trees at the Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust's Moor Cope Nature Reserve at Tidmarsh. Hosehill and Clayfield Cope Local Nature Reserves both have young Ash saplings which show signs of disease. Members in North Hampshire and South Oxfordshire report similar sightings. According to the Forestry Commission website, the first reports of Ash trees dying in large numbers were from Poland in 1992. Ash-dieback was first discovered in Britain at a nursery in Buckinghamshire in February 2012. The disease causes leaf loss, crown dieback and bark lesions in affected trees. Once a tree is infected, the disease is usually fatal, either directly, or indirectly by weakening the tree to the point where it succumbs more readily to attacks by other pests or pathogens. Evidence from continental Europe suggests that older, mature Ash trees can survive infection and continue to provide their landscape and wildlife benefits for some time. The best hope for the long-term future of Britain's Ash trees lies in identifying the genetic factors which enable some trees to tolerate or resist infection, and using these to breed new generations of resistant Ash trees.

This year we have had several mammal-themed field trips. In February, Dr Pat Morris gave a fascinating talk about the Edible Dormouse *Glis glis*, which was introduced to Britain in the Chilterns near Tring in 1902. It has become a significant pest and is still expanding its range. Dr Morris described the findings of an ongoing 20-year study of the Edible Dormouse in the Chilterns, the only long-term investigation anywhere in Europe. In September, members of the Society were invited to join the volunteers who were inspecting the nest boxes which have been put up to monitor the Edible Dormice at Hockeridge Wood near Berkhamstead. A total of 32 adults and 72 juveniles were found in the 40 nest boxes which were opened. In November, members were joined by Dr Amanda Lloyd of the Berkshire Mammal Group on a hunt for Harvest Mouse nests at BBOWT's Moor Cope reserve. The Harvest Mouse is Europe's smallest rodent and it weaves a spherical nest out of grasses or reeds. We were delighted to find a total of 24 nests.

Some distinctive bees were my most memorable wildlife sighting of 2016. It was early June and my husband & I were doing the Aston Upton butterfly transect in the Berkshire Downs. We had reached the sixth leg of the transect, my least favourite part. When the transect was originally set up in 1993, leg 6 was probably a wide ride through Hazel woodland. At that time, Duke of Burgundy butterflies were still being seen in good numbers - they have not been recorded on the transect since 2007. Nowadays, despite the best efforts of the volunteers on the winter work parties, leg 6 is a struggle up a steep hillside through dense Sycamore regrowth, with the ever-present danger of breaking a leg while putting a foot down one of the many rabbit holes. There are a number of big Buckthorn bushes amongst the Hazels, so Brimstones and Speckled Woods are regularly recorded, but other butterfly sightings can be sparse. But on this occasion, as we struggled up the steep path, a small bee flew past us, carrying an enormous dead grass stem. The stem was perhaps as much as 10cm long and it was carrying it transversely. Aerodynamically, it would have made more sense to carry it longitudinally, like an Osprey carries a fish. We saw where it landed and it appeared to be building a nest on the ground. We watched as approximately 2 bees per minute flew in, carrying grass stems or very light twiggy bits, probably mostly nearer 5 cm long. Then later on, we found another nest being built by similar looking bees, on flowery grassland on the other side of the valley. We had no idea what the bees were, so I sent several pictures plus a description to local naturalist Richard Lewington, who had painted the wonderful illustrations in the recently published 'Field Guide to the Bees of Great Britain and Ireland'. Richard was able to identify the bees as Red-tailed Mason Bee *Osmia bicolor*. They nest in empty snail shells and then cover the shell with leaves and grass stalks. The field guide describes their habitat as chalk and limestone grassland, rides and clearings of calcareous woodland, chalk and limestone quarries and calcareous brownfield sites.

MEMBERSHIP

Norman Hall, Ian Duddle

Membership figures as they stand at the end of December 2016

Single members	86
Family/Couples	64
Student	1
Total	151

of which there were 19 new members.

Christine Tull	Christine(Chris) Harford	Rachel ER Chilton
Richard & Anjali Barber	Annette(Netty) Bell	Maggie Bridges
Richard Huggins	Rachel Paton	Dr A(Alison) Ries
Hilda Reynolds	Barbara(Babs) Spence	Susanne Earl
Catherine Keogh	Valerie(Val) Siddiqui	
Mr P. (Paul) & Mrs P. (Penny) Briggs	Mr D. J. (David) & Mrs M. (Marguerite) Roberts	

MEMBERS' OBSERVATIONS 2016

Julia Cooper, Rob Stallard

5 Jan

Avril Davies – roost of Pied Wagtails near the Heathrow bus stop at Reading station.

Tony Rayner – near outskirts of Didcot, fence line had 7 posts occupied by Red Kites.

Susan Twitchett – Yucca in full flower and clematis “Freckles” flowers in garden at Upper Basildon visited by Buff-tailed Bumblebee.

Sue White – worker *Bombus terrestris* bees in garden (Whitley) for the first time in January.

Graham Saunders – also reported *B. terrestris* workers and a Red Admiral yesterday in garden at Pamber Heath.

Jan Haseler – more than 30 plant species in flower on our last walk at Silchester on 19th December, again most unexpected.

19 Jan

Janet Welsh - Ivy Broomrape growing on ivy near bus stop to south of main entrance of Royal

Berks Hospital last Wednesday.

Alan Parfitt - at the Warburg reserve, Scarlet Elfcup, *Daphne mezereum* in flower and Green Hellebore coming into flower. In the hibernaculum, at least 10 bats which is more than usually seen, probably *Myotis* spp - Natterer's and Daubenton's.

Fiona Cummins – Siskins and Blackcap in her garden at Sonning Common.

Ailsa Claybourn – two Blackcaps in garden.

Trish Marcouse – Blackthorn in flower.

2 Feb

Sheelagh Hill – Hedgehog which resides under bushes in their garden at Binfield Heath has appeared every night for the last 2 weeks, coming to eat food in rat trap.

Tony Rayner – a flock of at least 50 Siskins on the outskirts of Upper Basildon today, the largest flock he has seen.

Ailsa Claybourn – a Peregrine Falcon near the Oracle in Reading while she waited at the traffic lights at 9.30 last Wednesday.

Ken White – flushed a (presumably hibernating) Red Admiral from a hedge he was cutting at Colnbrook this morning. Ken also commented on last meeting's observation of Blackthorn in flower. He has been unable to find any flowering and suggested *Prunus cerasifera* (Cherry Plum) was more likely. This non-native flowers earlier than Blackthorn, which has smaller petals and longer stamens.

Dick Croker – Blackcap in garden in Tilehurst this week, the first time in 15 years there. Blackcap also seen at Basildon Park two weeks ago.

16 Feb

Ailsa Claybourn – a flock of twenty Yellowhammers in a fallow field at the top of Sulham Hill on 7th February, and eight Scarlet Elfcups by the Pang at Moor Copse today.

Ken White reported on 3rd February that he had seen seven Yellowhammers each day in his garden at Plastow Green, Ashford Hill.

1 Mar

Jan Haseler – about 60 frogs now in their garden pond in Tilehurst. Dick Croker reported one and Ailsa Claybourn many, also in Tilehurst gardens.

John Lerpiniere – two Blackcaps in his Tilehurst garden, and a Firecrest by the canal at Padworth Lane gravel pit last week.

Reneé Grayer – Goldcrest in her Earley garden.

Sheelagh Hill – Brimstone butterfly in their garden at Binfield Heath last week.

15 Mar

Jan Haseler has a pond in Tilehurst with more frogspawn than water.

Michael Keith-Lucas had ten clumps of frogspawn in his pond in Earley on 3rd March which is the earliest for many years.

Roger Frankum saw two Chiffchaffs at Woolhampton and three Shelducks at Midgham Bridge.

4 Oct

Jan Haseler – Waxcap fungi on garden lawn in Tilehurst. Several types including Parrot and an orange conical one, possibly the Blackening Waxcap.

Grahame Hawker – Convolvulus Hawk-moth at Brimpton Common.

Ken White – Lime Hawk-moth caterpillar crossing the road at Colnbrook.

Ailsa Claybourn – 4 Ravens heard and seen from her garden in Tilehurst yesterday. Other members reported seeing Ravens in Tilehurst previously.

Brian Sargent – Saw a Polecat a month ago, possibly reducing rabbit population near Padworth. 2 Goldcrests and about 60 Parasol Mushrooms in his garden near Padworth.

Tony Rayner – Reported that it has been a poor year for Small Coppers but he has seen some at home in Cholsey recently. Jan Haseler commented that the second brood has been more successful.

Rob Stallard – Humming-bird Hawk-moth in his Tilehurst garden on Sunday 2nd October.

18 Oct

Jan Haseler – A bat, probably a Pipistrelle, in their Tilehurst garden last night.

Dick Croker – only a few butterflies in their Tilehurst garden this summer but recently saw one male Brimstone. Also very few birds last month, but a flock of Long-tailed Tits visited recently.

Jane Sellwood – juvenile Hedgehog in her garden in Lower Earley recently. A tracking camera supplied by a University of Reading study for five nights showed it was out all night.

Ailsa Claybourn – had heard that the Mammal group had found a female Dormouse with babies in Hogmoor Copse (Moor Copse reserve) during a survey.

Roger Dobbs – at Headley, a Blue Tit is using their porch lantern as a roost, which makes the sensor controlled light come on. Fortunately the bulb is low energy so not too hot.

Brian Sargent – Common Lizard in the sun in his garden at Beenham.

Richard Barber – Fox in their Tilehurst garden one recent night. He had taken some photographs with an infra-red camera.

1 Nov

Jan Haseler – three Brimstones and a Red Admiral at Basildon Park last Friday (28th Oct).

Julia Cox – a Red Admiral at Sainsburys, Calcot this morning.

Veronica Vincent – two Brimstones in Reading on Sunday.

Roger Frankum – two Pintails at Lower Farm, Thatcham yesterday.

Ken White – Redwings and Fieldfares in their garden at Plastow Green since Sunday.

Ian Duddle – about 40 Harlequin Ladybirds in the roof space of a beehive at Grazeley – the first time he has found them in a hive. They didn't appear to be interfering with the bees.

Michael Keith-Lucas – melanic form of Two-spot Ladybird seen yesterday.

15 Nov

Roger Frankum – four Red-crested Pochards at Woolhampton gravel pits on the 7th.

Ailsa Claybourn – a Kingfisher on the Pang at Moor Copse this morning.

Rob Stallard – a Red Admiral in his garden in Tilehurst on Sunday 13th. Norman Hall had also seen a Red Admiral at Caversham Court.

6 Dec

Jan and Laurie Haseler – a Great Grey Shrike on the Ridgeway at Churn last Saturday (3rd).

Grahame Hawker – a Red Admiral flying at Lower Earley ASDA on Sunday (4th).

Ken White – a female Blackcap eating whole Mistletoe berries near Windsor today..

EXCURSIONS 2016

Reports by Renée Grayer, Ken White, Sarah White, Norman Hall, Sean O'Leary, Jan Haseler, Ailsa Claybourn and Peter Cuss.

20 December 2016

Saturday 9 January

The first field trip of 2016, organised by Ian Duddle, was a coach trip on Saturday 9 January to the Wildfowl & Wetland Trust's **Slimbridge** Reserve in Gloucestershire. On arrival at the Wetland Centre, the 34-strong party split into two groups, led by Ken and Sarah White. At the Zeiss Hide, which looks out over wet grassy fields to the Severn Estuary, large numbers of Lapwings *Vanellus vanellus* and Golden Plovers *Pluvialis apricaria* rose up on several occasions, separating in the air into distinct flocks, with the Golden Plovers climbing higher in the sky. Careful searching revealed a large Peregrine *Falco peregrinus*, probably a female, perched on a post near the river bank. Wigeon *Anas penelope*, Teal *A. crecca*, Shelduck *Tadorna tadorna*, a few Bewick's Swans *Cygnus columbianus* and two distant Cranes *Grus grus* were seen here. Next stop was the Holden Tower, which looks out over the Severn Estuary from the other end of the Reserve. The group were able to get a much closer view of the Cranes from here. A small party of White-fronted Geese *Anser albifrons* was feeding in one of the fields. The next hide looked out over flooded fields. Pintail *Anas acuta*, Curlew *Numenius arquata*, Redshank *Tringa totanus*, Snipe *Gallinago gallinago* and Dunlin *Calidris alpina* were amongst the sightings here. A smaller male Peregrine was spotted in a tree at the far side of the field. Before taking off, it moved its head from side to side. In the afternoon, a walk round the collections of ducks, geese and waders was followed by a talk on the reintroduction of Cranes, using eggs taken from the Black Forest. A flock of Cranes is now being established on the Somerset Levels and some of these birds have returned to Slimbridge to winter on the Severn Estuary. Final stop of the day was the warm and comfortable Peng Observatory, from where the group watched the late afternoon feeding of large numbers of ducks, geese and swans, including family parties of Bewick's Swans.

Saturday 13 February

Undeterred by falling sleet and a temperature of 3°C, 17 members turned out on the morning of Saturday 13 February for another of Lesley Dunlop's excellent geology walks. The walk started from **Chapel Farm, Leckhampstead**, where the base of one of the farm buildings had been constructed from local flint and sarsen stone. The route led south-eastwards over first Clay-with-flints, then Chalk. A Skylark *Alauda arvensis* sang from above the fields and a Yellowhammer *Emberiza citrinella* called from a distant hedge. The track dropped down into a typically asymmetric dry valley, with one side steeper than the other. The valley was formed by run-off in colder conditions, when the Chalk bedrock was frozen. Trees marked out the alluvial deposits in the bottom of the valley. The track climbed up out of the dry valley and continued southwards. Three Brown Hares *Lepus europaeus* ran across the fields. Lesley pointed out circular depressions which marked out areas where the underlying Chalk had been dissolved by acid groundwater. These were concentrated towards the top of the field near the boundary with sandy Lambeth Group (formerly known as Reading Beds) deposits. Rounded flints beside the path, smoothed by wave action on a beach, contrasted with the angular flints which had been seen earlier in the walk. The gradient of the path increased slightly as the bedrock went forward 30 million years from the Chalk, laid down about 85 million years ago, to the Lambeth Group, laid down about 55 million years ago. The buildings of North Heath Farm were on the Lambeth Group deposits. At this point, in better weather conditions, there would have been a good view of the Hampshire Downs to the south, the southern boundary of the syncline, or downward fold of the bedrock, which was formed in the Alpine mountain-building time, when the African plate collided with the European plate. Looping back, a Kestrel *Falco tinnunculus* and a herd of about 15 Fallow Deer *Dama dama* were seen. The final track headed back towards Chapel Farm up a much shallower dry valley. The soil at the bottom was 'head', formed by soil creep down the valley sides. At the side of the path was a pile

of enormous sarsen stones which had been moved by the farmer from the adjacent field. Lesley explained that these were lumps of hard sandstone, formed by localised patchy cementation of the Tertiary sands which formerly covered the Chalk. Fossil root holes indicate that this cementation occurred near the surface. Evaporation of ground water in the warm Tertiary period would have concentrated dissolved silica to the point where locally it crystallised out, cementing the sand grains together. Subsequent erosion of the uncemented bulk of the Tertiary beds left these hardened blocks behind as sarsen stones.

Saturday 5 March

A bitter wind and a suggestion of snow in the air meant that only the hardiest moss enthusiasts met at the **Cowleaze Wood** car park on Saturday 5 March for an introduction to mosses and liverworts with Sean O'Leary. Nonetheless, 8 members assembled, including a number of moss-walk regulars. Cowleaze is a mixed woodland near Christmas Common with some conifer plantation and fine views over the Wormsley Estate, the site of the original re-introduction of the Red Kite *Milvus milvus* into Britain. Their fluty whistles could be heard overhead throughout the afternoon. There were new lambs in the adjoining fields and the first Bluebell *Hyacinthoides non-scripta* flowers were spotted. Much of the walk was spent concentrating on epiphytic bryophytes (those which grow on trees) and several species were found which, once rare, have recently increased in frequency possibly due to cleaner air and global warming. *Orthotrichum stramineum* was particularly abundant and Sue White also found *O. pulchellum*. A small amount of the tiny *Cololejeunea minutissima* was scrutinized at high magnification, revealing tiny 5-sided perianths. The rarest find was *Herzogiella seligeri*, often overlooked due to its similarity to commoner species, which was growing on a rotten log, its usual home. Now becoming something of a tradition, members enjoyed a slice or two of Louise's muesli crunch to round off the walk.

Saturday 16 April

On Saturday 16 April, Michael Keith-Lucas led a group of 15 members and friends, who braved rain and wind for a walk on **Winter Hill, Cookham**. Fortunately, the rain soon stopped and later the sun came out. From the car park there was a fine view of the Thames below and of Marlow north of the river. Setting off downhill, plants in flower included Wood Forget-me-not *Myosotis sylvatica*, Cowslip *Primula veris*, Ground-ivy *Glechoma hederacea*, Blackthorn *Prunus spinosa* and Lesser Celandine *Ficaria verna*. Michael pointed out the leaves of Lords-and-Ladies *Arum maculatum*, only half of which were spotted, although the Latin name means 'spotted Arum'. Further along we saw Garlic Mustard *Alliaria petiolata*, a plant belonging to the Cabbage family but smelling of onions. This is a food plant of the Orange-tip butterfly that lays only one egg on each flower head, so that the larvae will have plenty of food. Also along the path both female and male plants of Dog's Mercury *Mercurialis perennis* were seen, distinguished by their flowers and to a certain extent by the leaves, which are slightly larger and more blue-green in female plants. Each plant usually produces many off-shoots, so that a big patch of Dog's Mercury may only be one plant. Michael told us that 'Dog' in wild plant names means 'common' and not an animal. Both the Early *Viola reichenbachiana* and Common Dog-violet *V. riviniana* were in flower, distinguished by the colour of their spur, which is whitish in the Common Dog-violet and purple in the Early one. Jelly Ear fungus *Auricularia auricular-judae* was growing on a piece of dead wood. At the bottom of the hill, we came to Cock Marsh, an area with ponds which are relics of old channels of the Thames. These are full of rare water plants such as Water-violet *Hottonia palustris* but most of them were not visible yet. However, we did see the leaves appearing of Brooklime *Veronica beccabunga*, Yellow Iris *Iris pseudacorus*, Hemlock Water-dropwort *Oenanthe crocata*, Flowering-rush *Butomus umbellatus*, Floating Sweet-grass *Glyceria fluitans* and Rigid Hornwort *Ceratophyllum demersum*. Marsh-marigold *Caltha palustris* was already in flower. There also was a distinct dandelion microspecies, the Marsh Dandelion, which has very deeply dissected leaves. Climbing steeply back up the hill, we saw the leaves of many chalk grassland species, including Salad Burnet *Poterium sanguisorba* and Hoary Plantain *Plantago media*. Growing on ant hills were Parsley-piert *Aphanes arvensis*, Sticky Mouse-ear *Cerastium glomeratum* and Early Forget-me-not *Myosotis ramosissima*, the latter two in flower. We also found a patch of Meadow Saxifrage *Saxifraga granulata* in bud. Approaching the car park we saw a Wild Cherry *Prunus avium* in full flower and heard the songs of Chiffchaff *Phylloscopus collybita* and Mistle Thrush *Turdus viscivorus*, while Red Kites were flying above us.

Saturday 30 April

After several cold weeks, warmer weather brought out 26 walkers for a trip on Saturday 30 April to **Harefield Copse & Boxgrove Wood**, west of Tilehurst. The walk was led by Renée Grayer and started on a public footpath off Pincents Lane. Along the path, Dove's-foot Crane's-bill *Geranium molle*, Petty Spurge *Euphorbia peplus* and Garlic Mustard were flowering. The footpath opened up into a field full of Bulbous Buttercup *Ranunculus bulbosus*. In the hedgerow the starry yellow flowers of Lesser Celandine were greeting us. Also in the hedgerow were Ground-ivy and both male and female plants of Dog's Mercury, the female plants already in fruit. A stile led into Harefield Copse, where we turned right onto a path surrounded by Bluebells, which were magnificent this year because they started flowering early in the season, but were then held back by the cold weather, so they kept their deep blue colour. Leaves of Woodruff *Galium odoratum* were seen here and there, not yet in flower, whereas Wood Anemone *Anemone nemorosa* had almost finished flowering. Early Dog-violet was fully in bloom and later we also saw Common Dog-violet. Walking along a narrow path we saw one specimen of Early-purple Orchid *Orchis mascula* among thousands of Bluebells. Further along Box *Buxus sempervirens* was growing, varying from small to very large shrubs; they gave their name to this wood. It is not certain whether Box is native here or has naturalized after having been planted centuries ago. We continued down the hill until we reached the public footpath on the western fringe of the wood, which we followed northwards. Along the path, the white flowers of Greater Stitchwort *Stellaria holostea* and the yellow ones of Primrose *Primula vulgaris* were mixed with the Bluebells. Several patches of Moschatel *Adoxa moschatellina* were found. In this area there were also more plants of Early-purple Orchid, mainly as rosettes of spotted leaves. Only a few had flowers or buds, but there was a large flowering specimen behind chicken wire. To get back to the road, we had to follow a very slippery muddy stretch of the path. On the way up the hill, we saw many leaf rosettes and inflorescences in bud of Sanicle *Sanicula europaea* and also flowers of Barren Strawberry *Potentilla sterilis*. There was one specimen of Butcher's-broom *Ruscus aculeatus* with red berries. This was followed by a big patch of Yellow Pimpernel *Lysimachia nemorum*, not in flower yet, Hairy Wood-rush *Luzula pilosa* and Wood-sedge *Carex sylvatica*. At the end of our walk we heard a Mistle Thrush singing.

Sunday 15 May

On the sunny afternoon of 15 May 2016, 20 members led by Sally Rankin and Alan Parfitt gathered at **Kings Barn Farm, Medmenham**, for a walk through the large estate of Susan and Leonard Phillips. This was the second visit of the Society to the site; the previous one was on 16 June 2013. Before the walk started we admired newts and tadpoles in the pond near the farm house. Rigid Hornwort was growing in the pond with Meadow Buttercup *Ranunculus acris* and Cuckooflower *Cardamine pratensis* adorning the margins. A Buzzard *Buteo buteo* and two Red Kites flew over. On the previous visit, Susan Phillips had explained the management plans for the estate, such as excavating scrapes in the fields to encourage butterflies and other insects. One field had been sprayed in 2011 and sown with wildflower seeds the following year. Cowslips were flowering and thriving here, but Oxeye Daisies *Leucanthemum vulgare* were only in bud. Susan took us to the scrapes where we saw Horseshoe Vetch *Hippocrepis comosa*, Common Rock-rose *Helianthemum nummularium*, Wild Thyme *Thymus polytrichus*, Meadow Saxifrage, Wild Strawberry *Fragaria vesca*, Kidney Vetch *Anthyllis vulneraria* in bud, White Champion *Silene latifolia*, leaves of Betony *Betonica officinalis*, Thyme-leaved Sandwort *Arenaria serpyllifolia*, Wall Speedwell *Veronica arvensis* and very large specimens of Salad Burnet, which may have been the Fodder Burnet *Poterium sanguisorba* subsp. *muricata*. To our delight we also rediscovered the Long-stalked Crane's-bill *Geranium columbinum*, which we had admired there three years ago. Throughout the fields, the deep-blue flowers of Germander Speedwell *Veronica chamaedrys*, pale blue ones of Thyme-leaved Speedwell *V. serpyllifolia*, pink ones of Dove's-foot Crane's-bill and the tiny pink starry flowers of Field Madder *Sherardia arvensis* were greeting us. Looking up, there were splendid views of the sloping meadows and woods beyond, with the leaves of the trees in various shades of light green. A further field was bordered by hundreds of flowering Garlic Mustard plants and here we also saw leaves and buds of Bee Orchids *Ophrys apifera* that had recently been planted there. One of the members caught a beautiful orange-yellow moth in his net called Clay Triple-lines *Cyclophora cinearia*. Butterflies seen included Common Blue *Polyommatus icarus*,

Brimstone *Gonepteryx rhamni*, Peacock *Aglais io* and Red Admiral *Vanessa atalanta*. A stony patch had some interesting weed species, such as Parsley-piert, Grey Field-speedwell *Veronica polita* and Scarlet Pimpernel *Anagallis arvensis*, and we heard a Song Thrush *Turdus philomelos* singing. On the way back we went through the woods of the estate, with acres of Bluebells, which had just finished flowering, as had Lesser Celandine, Dog's Mercury, Spurge-laurel *Daphne laureola* and Primrose. Still in flower were Greater Stitchwort, Yellow Archangel *Lamium galeobdolon* and Bugle *Ajuga reptans*. Other plants included Common Figwort *Scrophularia nodosa* and Hairy St John's-wort *Hypericum hirsutum* (not yet in flower), Box and Spindle *Euonymus europaeus*. The final field, covered with a natural vegetation of chalk plants, was another highlight. A Bee-fly *Bombylius major* poked its long proboscis into the flowers, seemingly hovering above them, but clinging with one pair of legs to the flowers. We saw Common Milkwort *Polygala vulgaris*, leaves of Wild Basil *Clinopodium vulgare* and Marjoram *Origanum vulgare*, Common Quaking-grass *Briza media*, Glaucous Sedge *Carex flacca*, Downy Oat-grass *Avenula pubescens*, leaves of Harebell *Campanula rotundifolia* and, unfortunately, also the invasive Tor-grass *Brachypodium rupestre*. We were very pleased to rediscover Adder's-tongue *Ophioglossum vulgatum*. Between the long grasses we saw dozens of fronds of this rare fern, with the sporangia just appearing.

Saturday 28 May

On the evening of 28 May, 11 members and friends set off for a memorable walk across **Silchester Common**, expertly led by Graham Saunders. Despite the fact that thunderstorms had been predicted, the skies were clear and during the walk we saw a beautiful sunset over the heathland. Graham first took us to the woods adjacent to the Common to show us the rare Wild Service Tree *Sorbus torminalis*, covered with flower buds. Then we went onto the heath where a large area had recently been cleared from invading Gorse *Ulex europaeus*. Plants seen here included Sheep's Sorrel *Rumex acetosella*, abundant Early Hair-grass *Aira praecox*, Toad Rush *Juncus bufonius*, Tormentil *Potentilla erecta*, Heath Milkwort *Polygala serpyllifolia*, Heath Speedwell *Veronica officinalis*, Heath Bedstraw *Galium saxatile*, Lesser Stitchwort *Stellaria graminea*, Slender Trefoil *Trifolium micranthum*, Germander Speedwell, Sticky Mouse-ear in fruit, Pill Sedge *Carex pilulifera*, Wood Sage *Teucrium scorodonia* (not yet in flower), Wavy Hair-grass *Deschampia flexuosa*, Heather *Calluna vulgaris*, the semi-parasitic Common Cow-wheat *Melampyrum pratense* and Green-ribbed Sedge *Carex binervis*. We heard the screeching noises of Jays *Garrulus glandarius* and the songs of Willow Warbler *Phylloscopus trochilus* and Chiffchaff. We then entered the denser area where Gorse had been left. Here we saw Honeysuckle *Lonicera periclymenum* climbing over the bushes, Wall Speedwell, Herb-Robert *Geranium robertianum*, Sweet Vernal-grass *Anthoxanthum odoratum*, Thyme-leaved Speedwell, Mouse-ear-hawkweed *Pilosella officinarum*, Lousewort *Pedicularis sylvatica* and Squirrel-tail Fescue *Vulpia bromoides*. A board walk led us into a swampy area, where cows were grazing. Plants included Lesser Spearwort *Ranunculus flammula*, Marsh St John's-wort *Hypericum elodes*, Star Sedge *Carex echinata* and Bog Pondweed *Potamogeton polygonifolius*. Further along the path we found a dead Common Shrew *Sorex araneus*. When it was getting darker, two Woodcocks *Scolopax rusticola* flew over. A Song Thrush was singing loudly, and when it stopped, we heard a Tawny Owl *Strix aluco*. Soon afterwards, we heard a Nightjar *Caprimulgus europaeus* calling, very close by and continuing for a long time. We all stopped talking and listened to the bird, a magical moment. Several members of the group recorded the sound. After a while the call was repeated and we saw a Nightjar flying over. When the Song Thrush started singing again, it was imitating the call of the owl and flight call of the Nightjar. It was nearly dark when we returned, stopping near a pond where we saw bats flying. Graham switched on his bat-recorder and at two different frequencies bats could be heard, at 45 kHz the Common Pipistrelle, *Pipistrellus pipistrellus*, and at 50 kHz the Soprano Pipistrelle, *P. pygmaeus*.

Saturday 11 June

On Saturday 11 June 18 members led by Julia Cooper paid a return visit to the 1,000ha **Cholderton Estate** near Andover. The owner Henry Edmunds kindly spent the day taking us to parts of the organically managed estate which demonstrated his major objectives: to achieve sustainability, to protect the environment and conserve nature. Transport was also provided by his P.A. Adam Lowe and members Ken White and John Lerpiniere. First we went to the garden of

Henry's house, where an area is dedicated to preserving rare arable weeds such as Shepherd's-needle *Scandix pecten-veneris*, Field Gromwell *Lithospermum arvense*, Weasel's-snout *Misopates orontium* and Small Toadflax *Chaenorhinum minus*. In his Arboretum, Henry preserves rare native trees and shrubs such as the true Service-tree *Sorbus domestica*, Wild Service-tree, Arran Whitebeam *S. arranensis*, Plymouth Pear *Pyrus cordata*, Barberry *Berberis vulgaris* and Fly Honeysuckle *Lonicera xylosteum*. Here we also saw White Helleborine *Cephalanthera damasonium*. We were then transported to the Wiltshire part of the estate, where there is a Woodland Burial Site. Henry explained how he managed an adjacent field for Lapwings - two pairs had raised chicks which had fledged recently. Here we saw two running Hares and a Roe Deer. Another field sown with oats was coloured red by many flowering Common Poppies *Papaver rhoeas*. There were also many other interesting weeds, such as Long-stalked Crane's-bill, Henbit Dead-nettle *Lamium amplexicaule*, Sun Spurge *Euphorbia helioscopia*, Common Broomrape *Orobanche minor*, Field Pansy *Viola arvensis*, Field Madder, Rye Brome *Bromus secalinus* and Parsley-piert. The weeds do not reduce the value of the crop because the oats are used for animal feed on the farm. The advantage of these weeds for wildlife is that they supply nectar for bees and seeds for farm birds during all seasons and not just for a few weeks, as is the case with rapeseed. At another site, two distant Stone-curlews *Burhinus oedicnemus* and a Grizzled Skipper *Pyrgus malvae* were seen.

It had been raining slightly all morning, but after we had sat down for lunch the drizzle fortunately stopped. We picnicked close to a true arable weed paradise which was coloured dark-red by thousands of flowering fumitories. The main species was Dense-flowered Fumitory *Fumaria densiflora*. Yellow spikes of Wild Mignonette *Reseda lutea* towered above them. Further inspection revealed the rare white-flowered Fine-leaved Fumitory *Fumaria parviflora* as well as Narrow-fruited Corn-salad *Valerianella dentata*, Musk Thistle *Carduus nutans* and four different species of poppy - Common Poppy, Long-headed Poppy *Papaver dubium*, Rough Poppy *P. hybridum* and Prickly Poppy *P. argemone*, which could be distinguished not only by their fruits, but also by their flower colour. We were then shown restored chalk downland with a good selection of native chalk plants such as Dropwort *Filipendula vulgaris*, Horseshoe Vetch, Sainfoin *Onobrychis viciifolia*, Common Milkwort, Mouse-ear-hawkweed, Wild Thyme, Cowslips in fruit, Salad Burnet, Chalk Fragrant-orchid *Gymnadenia conopsea*, Pyramidal Orchid *Anacamptis pyramidalis* and a leaf rosette of Woolly Thistle *Cirsium eriophorum*. Lepidoptera included the butterflies Common Blue, Small Blue *Cupido minimus*, Small Heath *Coenonympha pamphilus* and Painted Lady *Vanessa cardui* and the moths Five-spot Burnet *Zygaena trifolii* and Cistus Forester *Adscita geryon*. Transported back into Hampshire, we visited another superb chalk meadow with more special plants, such as Common Rock-rose, Quaking-grass, Hoary Plantain *Plantago media*, the leaves of Hairy Violet *Viola hirta*, Common Spotted-orchid *Dactylorhiza fuchsii* and three clumps of the rare Meadow Clary *Salvia pratensis*. A Wood Tiger moth *Parasemia plantaginis* was also observed. Henry showed us an area managed for Duke of Burgundy *Hamearis lucina* butterflies where he had seen four flying the previous day, but the overcast conditions today were not suitable for them. The final visit was to the south of the estate where three pairs of Corn Bunting *Miliaria calandra* were nesting. Back at the farmyard we thanked Henry and Adam for the magnificent tour.

Saturday 18 June

The annual coach trip was to the **New Forest** on 18th June and was led by Renée Grayer. Our previous trips to the same locations had been a month later, so that we saw different plants in flower this time. We were lucky with the weather as it was dry after a wet week, with a pleasant temperature. Only 19 members were on the coach, but 5 more joined us at Hatchet Pond, our first stop. Even the bog in the car park is a botanical hotspot, so we spent a happy half hour exploring the plants. There was a good display of flowering Bog Pimpernel *Anagallis tenella*, Lesser Spearwort, Tufted Forget-me-not *Myosotis laxa*, Lousewort and the rare Slender Marsh-bedstraw *Galium constrictum*, while the soil was covered with the round leaves of Marsh Pennywort *Hydrocotyle vulgaris*, but unfortunately also with the invasive New Zealand Pygmyweed *Crassula helmsii*. We were delighted to see several flowers of the rare Lesser Water-plantain *Baldellia ranunculoides* and two flowers of Marsh Speedwell *Veronica scutellata*. Both the Round-leaved Sundew *Drosera rotundifolia* and Oblong-leaved Sundew *D. intermedia* were in bud, and a tiny plant was identified as Allseed *Radiola linoides*. Walking around the main lake, large areas of the

very rare Hampshire-purslane *Ludwigia palustris* were noted, and also of Bogbean *Menyanthes trifoliata* and White Water-lily *Nymphaea alba*. In ditches along the lake we saw the light pink flowers of Pale Butterwort *Pinguicula lusitanica*, an insect-eating plant. Going back towards the car park, we crossed the road to visit a small pond, where we had found many rare plants around the margins during previous visits, but which we did not see this time, presumably because of the high water level caused by recent heavy rain. But in the drier areas we found Trailing and Marsh St John's-wort *Hypericum humifusum* and *H. elodes*, Bog Myrtle *Myrica gale*, more Hampshire-purslane, Lousewort, Bog Pimpernel, Marsh Pennywort, Tormentil and Allseed, Heath Speedwell, some specimens with the usual lilac flowers but others with purple-blue petals, Bell Heather *Erica cinerea* and Royal Fern *Osmunda regalis*. During our lunch with views onto the lake, we heard the songs of Willow Warbler and Chiffchaff and saw several Oystercatchers *Haematopus ostralegus*. After lunch the coach drove us to a car park close to Beaulieu Road Station. The vegetation was rather monotonous at the start of our walk, dominated by non-flowering Heather. Gorse in this area had recently been removed. In the distance, a Peregrine Falcon perched on a solitary dead tree. A bridge led over a boggy area, where Common Cottongrass *Eriophorum angustifolium*, Marsh St John's-wort, Tormentil, Round-leaved Sundew, Bog Myrtle, Bog Pondweed and Cross-leaved Heath *Erica tetralix* were growing. An area with Bracken *Pteridium aquilinum* followed, in which fruiting Wild Gladiolus *Gladiolus illyricus* had been discovered during previous trips. This species is very difficult to spot as it grows underneath Bracken, but fortunately we did find one specimen, still in bud. Growing in another bog were Water-purslane *Lythrum portula*, Bog Stitchwort *Stellaria alsine*, Pill Sedge and many specimens of Heath Spotted-Orchid *Dactylorhiza maculata*. Lesser Spearwort, Cuckooflower and the rare New Forest Crowfoot *Ranunculus x novae-forestae* were seen in a further bog, and Yellow Pimpernel, Wood-sorrel *Oxalis acetosella*, Butcher's-broom and Pignut *Conopodium majus* in a wooded area. The tiny Bird's-foot *Ornithopus perpusillus* was spotted when we were nearly back at the coach.

Saturday 25 June

Ken and Sarah White led a walk at **Thursley Common** on Saturday 25 June. The visit followed a week of very heavy showers, but fortunately the rain all but held off and we were lucky enough to get away with just one heavy afternoon shower. The group of 11 started by looking at the Common Wintergreen *Pyrola minor* in the car park, noting the distinguishing feature that the style did not extend beyond the petals. We then set off along the boardwalk, having to tread carefully to avoid the Common Lizards *Zootoca vivipara* basking along the edge, some of which were distinctly pregnant. Plants in flower here included Lesser Bladderwort *Utricularia minor*, Round-leaved and Oblong-leaved Sundew, Meadow Thistle *Cirsium dissectum*, Marsh Orchids *Dactylorhiza* sp., White-beaked Sedge *Rhynchospora alba* and Bog Asphodel *Narthecium ossifragum*. A Hobby *Falco subbuteo* made a brief appearance ahead of us and performed a spectacular vertical dive while a Curlew called overhead. The rare bracket fungus *Phellinus pini* was pointed out, easily overlooked, growing out of one of the Scots Pines *Pinus sylvestris* around which the boardwalk was built. Invertebrates were in short supply in the somewhat dull conditions, though a Small Red Damselfly *Ceriagrion tenellum* and a Raft Spider *Dolomedes fimbriatus* carrying its egg sac were seen. An impressively huge green caterpillar, 50mm long, found on a clump of Purple Moor-grass *Molinia caerulea* was later identified as the larva of the Red Sword-grass *Xylena vetusa* moth. The record is a valuable one since it proves that this species has actually bred at Thursley; until now it was considered a vagrant only at this site. We then followed the heathland trail around the edge of the bog with flowering Cross-leaved Heath and Bell Heather. A Tree Pipit *Anthus trivialis* posed briefly in the pines before we found the benches at Shrike Hill for lunch; two Hobbies and distant Buzzards performed for us as we munched. There wasn't sufficient sunshine to tempt butterflies to fly, though a single fresh Silver-studded Blue *Plebejus argus* perched obligingly on the Ling while we looked for the silver spots along the edge of its underwing. Continuing along the trail, Trailing St John's-wort and the tiny Bog Stitchwort were in flower in the wet woodland. On the return path, we caught up with a family of Redstarts *Phoenicurus phoenicurus* and had good views of recently-fledged young. We also heard a Dartford Warbler *Sylvia undata* singing and had close views of two birds, a female and a fledgling, as they fed in the bottom of a Gorse bush. The last notable plants of the day were the aquatic Marsh St John's-wort and a fine clump of Royal fern growing on the edge of a ditch.

Saturday 9 July

Peter Cuss led a walk to see the butterflies of **Maidenhead Thicket** on Saturday 9 July. The weather proved less than ideal for butterfly spotting and the main target species, the White-letter Hairstreak *Satyrion w-album*, sadly eluded us. A few other species did brave the slightly gloomy conditions: Red Admiral, White Admiral *Limenitis camilla*, Large Skipper *Ochlodes sylvanus*, Essex Skipper *Thymelicus lineolus*, Marbled White *Melanargia galathea*, Ringlet *Aphantopus hyperantus*, Meadow Brown *Maniola jurtina*, Large White *Pieris brassicae*, Small White *P. rapae* and Silver-washed Fritillary *Argynnis paphia* were all seen, so just making it into double figures. The Emperor Dragonfly *Anax imperator* was also recorded. The botanists in the group seemed to find plenty to look at, with much discussion as to whether an Agrimony was Common *Agrimonia eupatoria* or Fragrant *A. procera* ! Pyramidal Orchids *Anacamptis pyramidalis* and Common Spotted-orchids were seen as well as both Trailing and Slender St John's-wort *Hypericum pulchrum* and an unusually large patch of Sanicle. It was a first visit to the Thicket for several of the 15 members who attended.

Wednesday 20 July

Sarah and Ken White led 10 members on a walk at **Greywell Fen** Reserve on Wednesday 20 July. The previous few days had been very hot, but thankfully the morning of our meeting was comfortably cooler. The Hampshire and Isle of Wight Wildlife Trust Reserve Manager kindly arrived to unlock the gate at the Pumping Station for us, avoiding an otherwise precarious climb. The meadows at this north-eastern end of the reserve require a permit for access and were new to most of the group. There was a wonderful display of flowers, most notably Marsh Helleborine *Epipactis palustris*, including many plants of the uncommon white form var. *ochroleuca*. These were a little past their best after the recent warm spell but the Marsh Fragrant-orchid *Gymnadenia densiflora* was in full flower and smelling delicious. We noted a number of marsh orchids, probably Southern Marsh *Dactylohriza praetermissa*, as well as Common Twayblade *Neottia ovata*. Fen Bedstraw *Galium uliginosum* was identified by the mucronate tips to the leaves and the backward-pointing prickles on the leaf margins, the whole plant feeling very rough to the touch. A single flower of Blue Fleabane *Erigeron acris* was spotted. As we wandered through the meadow, two juvenile Common Buzzards called continuously and a Green Woodpecker *Picus viridis* was heard. Butterflies included Marbled and Green-veined White, Brimstone, Red Admiral, Small Skipper, Comma and Meadow Brown. Aware that there was some distance to cover before lunchtime, we reluctantly tore ourselves away from this beautiful part of the reserve, pausing to admire a fine specimen of pink and white striped Hairy Bindweed *Calystegia pulchra* on the roadside. We then walked through the main part of the reserve, past the mill pond and along the river. In the woodland we disturbed a family of recently-fledged Song Thrushes and by the Mill pond a Spotted Flycatcher *Muscicapa striata* was perching on a dead tree. Huge tussocks of Greater Tussock-sedge *Carex paniculata* lined the path and we saw Hedge Woundwort *Stachys sylvatica*, Marsh Woundwort *S. palustris* as well as their hybrid *S. x ambigua*. Across the pond a Reed Warbler *Acrocephalus scirpaceus* left the reeds carrying a faecal sac – proof of breeding; everyone was able to delight in the 4-banded Longhorn Beetle *Leptura quadrfasciata* feasting on the pollen of Hogweed *Heracleum sphondylium* but only those at the rear of the group saw a female Grey Wagtail *Motacilla cinerea*. The river had a covering of Water Fern *Azolla filiculoides* and we saw Brown Hawker *Aeshna grandis* and Banded Demoiselle *Calopteryx splendens* as well as mating Large Red Damselflies *Pyrhosoma nymphula*. Fledged Swallows *Hirundo rustica* and House Martins *Delichon urbica* perched on the wires in the village. After lunch at the Fox and Goose in Greywell, we walked down the canal to Odiham Castle, pausing to reflect on the importance to bats of the Greywell Tunnel and to admire the stands of Marestail *Hippuris vulgaris*. A family of Little Grebes *Tachybaptus ruficollis* could be seen swimming under the incredibly clear water. In the increasing heat, we returned to the Pumping Station in the shade of the canal path rather than across the meadows.

Saturday and Sunday 30/31 July

Norman Hall organised the Society's annual mothing event, which this year was held at **Chalkhills, Whitchurch-on-Thames** on the night of 30-31 July, with the kind permission of, and great help from the owner, Sandra Parkinson. It was a very successful night: 183 species were recorded (33 micro-moths, 29 pyralid moths, 2 plume moths and 118 macro-moths). Highlights

among the macro-moths included The Mocha *Cyclophora annularia*, Chalk Carpet *Scotopteryx bipunctaria* (a Biodiversity Action Plan (BAP) species, of which 72 were recorded), Kent Black Arches *Meganola albula*, Brown-veined Wainscot *Archanara dissoluta* (unexpected) and Square-spotted Clay *Xestia rhomboidea* (another BAP species). There were an impressive collection of pyralid moths, including *Mecyna flavalis* (4), *Nomophila noctuella* (1), *Rhodophaea formosa* (1), *Delplanqueia dilutella* (1) and *Oncocera semirubella* (71). The total of 71 for *semirubella* was quite unexpected. First seen in Berkshire on Greenham Common in 2009, they are now being recorded in increasing numbers in the region. The site is a long curving valley above a former Vineyard, with a new plantation on the south-west side, and a wooded bank called 'The Skippets' on the north-east side. The latter is the boundary bank of a prehistoric fort and may have provided a reservoir of fauna and flora for repopulation of the valley following farming activities. Five members brought moth traps: Norman Hall, Paul Black, Ian Esland, Jan Haseler and Roy Dobson, so we were able to spread out across the whole of the valley and Norman also ran a trap in a neighbouring garden. On the Sunday morning about 20 members and visitors came to view the catch – but it also gave the trappers time to look at each other's specimens as they had between them put examples of almost every species caught into glass tubes, where they are easy to examine and pass around. Norman gave a short talk putting the catch into perspective, and selected one group – the Prominents – to make the point that it often the smaller 'families' of moths that are most interesting. The Prominents include many spectacular-looking species with very effective camouflage.

Sunday 7 August

On the sunny but very windy afternoon of Sunday 7 August, 21 members gathered at BBOWT's **Chinnor** Nature Reserve, Bucks, for a tour organised by Sally Rankin and Alan Parfitt and led by the volunteer warden Mike Turton. Mike has been working here for 40 years, so he was able to show us many interesting natural history features. First, we visited a wood where there were many plants of Violet Helleborine *Epipactis purpurata*, now a very rare orchid. A wasp nest under a fallen Ash *Fraxinus excelsior* had been dug out by Badgers *Meles meles* and Mike showed us its remarkable structure. The wood opened up onto a chalk grassland hillside, which gave us a spectacular view over many miles. In this field many different chalk-loving plants were growing, such as Wild Basil, Greater Knapweed *Centaurea scabiosa*, Musk Thistle, Red Bartsia *Odontites vernus*, Burnet Saxifrage *Pimpinella saxifraga*, Wild Parsnip *Pastinaca sativa*, Harebell, Perforate St John's-wort *Hypericum perforatum*, Agrimony, Lady's Bedstraw *Galium verum* and several Juniper bushes *Juniperus communis* with ripening berries. We were invited to each taste one berry, but they were very bitter! It is a problem to establish new plants of Juniper from seed, because the seedlings are readily eaten by wildlife. Mike carefully lifted a sheet of corrugated iron to see whether any reptiles had congregated here, but none were present. He showed us three Slow-worms *Anguis fragilis* that he had collected earlier. One was bigger and appeared to be a pregnant female. We were allowed to handle one carefully, making sure that we did not hold it by the tail as they are lizards and can shed them. Later, under another sheet, a Slow-worm was found that had lost its tail. All of a sudden we heard a whistle blowing and saw a steam train with four carriages down below. We continued downhill and saw more interesting chalk flowers, including Fairy Flax *Linum catharticum*, Common Rock-rose, Wild Thyme, Common Centaury *Centaureum erythraea*, Marjoram, Upright Hedge-parsley *Torilis japonica*, Black Bryony *Tamus communis*, Dwarf Thistle *Cirsium acaule* and White Helleborine. There were not as many butterflies as we had hoped for, perhaps because of the high wind, but we did see several specimens of Gatekeeper, Meadow Brown, Silver-washed Fritillary, Essex Skipper, and the moth Six-spotted Burnet *Zygaena filipendulae*. Continuing our walk we found Deadly Nightshade *Atropa belladonna*, Common Spotted-orchid (in fruit), Small Scabious *Scabiosa columbaria* and dozens of Autumn Gentian *Gentiana amarella* plants in bud. After a steep walk down through a wood, we found other chalk-loving plants in the next meadow, such as Clustered Bellflower *Campanula glomerata*, Field Scabious *Knautia arvensis*, Yellow-wort *Blackstonia perfoliata*, Tall Melilot *Melilotus altissimus* and Pyramidal Orchid (in fruit). Here Yellow-rattle *Rhinanthus minor* is encouraged to keep the grass down, as it parasitizes on grass roots. However, the field is starting to be invaded by Dogwood *Cornus sanguinea*, which will cause problems in the future. A long upward-sloping path through the woods took us back to our starting point. On the way we saw Nettle-leaved Bellflower *Campanula trachelium*. From the top of the hill, we noticed that the steam train had caused a fire in the dry stubble beside the trackside. The fire brigade was called and we later heard that the fire had been

extinguished.

Saturday 20 August

On the morning of Saturday 20 August, 7 members braved the weather forecast of heavy blustery showers and very high winds for a circular walk led by Renée Grayer through **Longmoor Bog, California Country Park**, Finchampstead. However, the weather turned out better than expected; we only had two small showers and even some sunshine. First stop was Longmoor Lake, with Cormorants, Canada Geese, Mallards, Coots with young chicks and a Moorhen. Along the lake was a strip of vegetation where the grass was depleted by the Canada Geese and only strong-smelling or tough plants had survived and were even thriving, such as the rare Pennyroyal *Mentha pulegium*, Common Knapweed *Centaurea nigra* and Marsh Yellow-cress *Rorippa palustris*. The path along the lake led to a wood where few plants were still in flower apart from Enchanter's-nightshade *Circaea lutetiana*. We went through a gate into heathland; this is Lowland Heath, which is becoming increasingly rare in Britain. The vegetation here is dominated by Purple Moor-grass and several species of tall rushes, such as Soft Rush *Juncus effusus*, Hard Rush *J. inflexus* and Sharp-flowered Rush *J. acutiflorus*. The much smaller Bulbous Rush *J. bulbosus* showed vivipary; the flowers had developed into new plantlets, each with a bulbil. Heather, Cross-leaved Heath, Tormentil and Greater Bird's-foot-trefoil *Lotus pedunculatus* were seen here. Leaves of Bog Pondweed were floating in a small pond and Bottle Sedge *Carex rostrata* was discovered close by. Tall spikes of the elegant Marsh Thistle *Cirsium palustre* rose high above the other vegetation. A board walk led through Longmoor Bog, a Site of Special Scientific Interest (SSSI), in which the mud and stream are coloured orange. Water entering the bog is iron-rich and iron bacteria metabolise the metallic ions to colour the water. Water Horsetail *Equisetum fluviatile* grows abundantly in this bog and so does Alder *Alnus glutinosa*, some branches covered with moss, algae and lichens, which together with the horsetails give the area a prehistoric feel. One of the lichens was identified as *Peltigera membranacea*. Here and there were tall leaves of Yellow Flag, flowering plants and leaves of Wild Angelica *Angelica sylvestris*, Gypsywort *Lycopus europaeus* in flower and Common Spotted-orchid and Alder Buckthorn *Frangula alnus* in fruit. Both Broad and Narrow Buckler-fern *Dryopteris dilatata* and *D. carthusiana* were growing here and also Hard Fern *Blechnum spicant*. At the end of the board walk we saw Small Sweet-grass *Glyceria declinata* and a large area covered with Bogbean *Menyanthes trifoliata*. Another gate led into a wet and flowery meadow, with Purple-loosestrife *Lythrum salicaria*, Lesser Spearwort, Slender and Square-stalked St John's-wort *Hypericum pulchrum* and *H. tetrapterum*, Redshank *Persicaria maculosa*, Jointed Rush *Juncus articulatus*, Slender Rush *J. tenuis*, Lesser Stitchwort, Hoary Willowherb *Epilobium parviflorum*, Marsh Cudweed *Gnaphalium uliginosum* and Sneezewort *Achillea ptarmica*. When the sun came out we saw a Small Copper butterfly *Lycaena phlaeas* and a number of dragon and damselflies near a pond, of which we only could identify the Common Darter *Sympetrum striolatum* with any certainty. Bulrush *Typha latifolia* and Water-plantain *Alisma plantago-aquatica* were growing in the pond and we also saw a newt in it. The path led us back to Longmoor Lake and as we still had nearly an hour left of parking, we quickly went round the reserve again to enjoy this unusual heathy and boggy area once more.

Saturday 3 September

Watlington Hill has been a favourite destination of the Society for many years because of the abundance of interesting chalk plants in this National Trust reserve, which tend to be at their best at the end of the summer. 14 members and friends came to the walk led by Michael Keith-Lucas on Saturday 3 September, despite the forecast of heavy rain. Fortunately, the first half an hour of our walk was dry and we admired the flowers of Wild Parsnip, Marjoram, Yellow-wort, Eyebright *Euphrasia* agg., Wild Basil, Harebell, Small Scabious and Dwarf Thistle. Common Centaury and Autumn Gentian were already in fruit because of the long dry spell. However, by now the rain had started, appreciated by the garden owners, but we would have preferred it to have come a few hours later. Michael pointed out the vegetation on ant hills, which differs from that of the surrounding area. Wild Thyme tends to grow on the south side of the hills, while Germander Speedwell and Wild Strawberry may be found on the north side. Here and there we saw plants associated with acid soil instead of the alkaline chalk, such as Gorse and Heather. These grow in quite deep hollows in the chalk dating from the last glaciation which subsequently filled with sand.

Perhaps the best part of the hill botanically is just before it slopes down steeply. Here dozens of the rare Chiltern Gentian *Gentianella germanica* were in flower and we also saw many flowering Frog Orchids *Coeloglossum viride*. Only a few flowers were left of Common Rock-rose, but there were thousands of fruits, so it must have been a spectacular sight when they were all in flower. The return journey went through a wood, which sheltered us from the rain. This was dominated by Yew trees *Taxus baccata*, full of fruits which contain a very toxic seed, although the red aril is not toxic. These trees became established by germinating around bushes of Juniper which used to grow here and which were avoided by browsing animals. Only a few Junipers are left now, but their dead wood, smelling of freshly sharpened pencils when broken, can still be found beneath some of the Yews. We also saw some ancient Hazel trees, Beech and Traveller's-joy *Clematis vitalba* in this wood. Interesting plants growing in small meadows between the trees and along the verges included Clustered Bellflower, Wild Mignonette, Vervain *Verbena officinalis*, Ploughman's-spikenard *Inula conyzae*, White Bryony *Bryonia dioica*, Black Bryony, Deadly Nightshade, Carlina Thistle *Carlina vulgaris*, Chalk Fragrant-orchid (in fruit), Burnet-saxifrage, Squinancywort *Asperula cynanchica* and Buckthorn *Rhamnus cathartica*. Because of the wet weather we saw a splendid slug, *Arion ater*. A path flanked with Wall Lettuce *Mycelis muralis* led us back through woodland to the car park.

Sunday 4 September

Following on from his talk last winter, Pat Morris invited members of the Society to join one of the monthly monitoring sessions of the Edible Dormouse nest boxes at **Hockeridge Wood**, a beech wood in the Chilterns near Berkhamstead. Five members spent a fascinating day there on Sunday 4 September. Four teams of surveyors were working in the woods. The team which the Reading group joined surveyed 20 boxes before lunch and another 20 after lunch. One of the team carried a ladder in order to be able to reach the boxes, which were suspended from fixed plates attached to trees. Most of the boxes were occupied, either by single adults, or by females with 1 to 7 youngsters, though the commonest numbers were 4 to 6. The animals were shaken out into a large polythene bag. The people who handled the dormice wore thick gloves, since they have a strong and painful bite. First the adult would be extracted and scanned. All the adults had already been electronically tagged. The oldest one found had first been tagged 7 years ago and had not been retrapped in 5 of the intervening years. The sex of the animal was recorded and then it was weighed, with the weights of the adults in the range 120 – 205 grams. Then the juveniles were checked to see if they had already been tagged. Any untagged specimens which were sufficiently large were tagged. Most of the juveniles were weighed together in family groups, but a few were weighed individually. Their weights ranged between 36 and 60 grams. They were then returned to the nest box and while the box was being returned to the tree the entrance hole was blocked with a fist-sized soft toy. A total of 32 adults and 72 juveniles were measured.

Saturday 15 October

On Saturday 15 October, Mike Waterman led a fungus identification walk, attended by 18 members, at the National Trust's **Simon's Wood** near Finchampstead. The woodland has tall Scots Pines, with birch, oak, Sweet Chestnut and a few Beech trees. A number of different fungi were found close to the car park, including Brown Rollrim *Paxillus involutus*, Deceiver *Laccaria laccata*, Bay Bolete *Boletus badius* and Amethyst Deceiver *Laccaria amethystina*. Several specimens of the Parasitic Bolete *Pseudoboletus parasiticus* were growing on a somewhat deflated Common Earthball *Scleroderma citrinum*. A few of the braver members of the group tried testing small fragments of the bright red Beechwood Sickener *Russula nobilis* for hotness. Later in the walk, the paler pink Birch Brittle Gill *Russula betularum* was found growing under birch; its cap peeled easily. A large specimen of Beefsteak Fungus *Fistulina hepatica* was growing on the trunk of a Sweet Chestnut. Rarest find of the day was probably the Conifercone Cap *Baeospora myosura* which was growing on a pine cone. On the eastern side of the wood, a fallen log was covered with yellow Sulphur Tuft fungi, while several clumps of Fly Agaric *Amanita muscaria* added a splash of scarlet to the woodland floor. Mike cut open a brown Bolete with a pale black-speckled stem. After several minutes, when it had not changed colour, he was able to confirm that it was Brown Birch Bolete *Leccinum scabrum*. The walk continued round the lake, with Coal Tits calling from the trees nearby. A specimen of the pale yellow False Deathcap *Amanita citrina* was examined. The base of the stem was growing out of a cup-like volva and it had a prominent ring

on the stem. A whitish fungus with a mealy smell was identified as The Miller *Clitopilus prunulus*. Two different kinds of Milk-cap were found - Woolly Milkcap *Lactarius torminosus* and Oakbug Milkcap *L. quietus*. Small drops of white fluid appeared when their gills were cut. The route crossed a more open, heathy area, where another member of the Amanita family, *A. excelsa* var. *spissa*, was found. Towards the end of the walk, a number of specimens of Chanterelle *Cantharellus cibarius* were spotted. Their thick, disorderly gills were compared with the forked gills of the False Chanterelle *Hygrophoropsis aurantiaca*, which had been seen in some numbers earlier in the walk.

Saturday 19 November

On the morning of Saturday 19 November, Ailsa Claybourn led a hunt for Harvest Mouse *Micromys minutus* nests at BBOWT's **Moor Copse** reserve near Tidmarsh. The 18 participants included members of the Berkshire Mammal Group, with the invaluable support of Dr Amanda Lloyd, an expert on small mammals. This nest hunt followed the discovery of the reserve's first two Harvest Mouse nests in 2014, and a BBOWT hunt in 2015 which notched up eleven. The Harvest Mouse is Britain's smallest rodent and our only mammal with a truly prehensile tail. They make nests in which to shelter, or raise a family, from spring to autumn, weaving them in situ. While Ailsa was explaining what the nests look like, Amanda spotted one in the brambly hedge next to where the group were gathered and the hunt began. In 2014 Ailsa had found the nests in Corner Field, but a determined sweep along the hedge line found only one more, so the group moved into Barton's Field, where two nests had been found the day before. These were in tussocks of Cock's-foot *Dactylis glomerata* and Tufted Hair-grass *Deschampsia cespitosa*; one had been appropriated by a vole overnight and incorporated into its nest. Nine more nests were found in Barton's Field, predominantly near the boundary with Cottage Field. We crossed the boundary and Amanda was suddenly spotting nests like a greyhound on speed! The ground is soft and damp along the fence line, favouring the growth of Reed Canary-grass *Phalaris arundinacea*, which is clearly a very popular building material amongst Harvest Mice. The blades of grass are wider than Cock's-foot, but still pliable and easily woven, giving a robust structural integrity. One of these nests was freshly made, reflecting the mildness of the autumn so far. As the winter progresses, the mice will move down to ground level, utilising other rodents' burrows (and have been found in birds' nests and haystacks). A total of twenty-four nests were found. The hunt was well-timed as soon after, the weather changed, bringing heavy rain and wind, which quickly demolished many of the grasses, and their nests; the degradation of the Cottage Field site has been made complete by the hungry and inquisitive attentions of BBOWT's Dexter cattle.

Sunday 11 December

The church at **Remenham** was the starting point for a walk along the Thames towards Hambleden on Sunday 11 December, led by Sally Rankin and attended by 14 members. It was a sunny afternoon and we still found a few wild plants in flower, including Hogweed and White Dead-Nettle *Lamium album*. Other plants were still recognisable from their fruits, such as Canadian Fleabane *Conyza canadensis*, Sticky Mouse-ear, Yarrow *Achillea millefolium*, Gypsywort, Ribwort Plantain *Plantago lanceolata*, Dandelion and Water Figwort *Scrophularia auriculata*. Wild Angelica leaves were identified by their trifoliate structure and red nodes. Birds on the Thames included Mute Swan *Cygnus olor*, Tufted Duck *Aythya fuligula*, Mallard, Great Crested Grebe *Podiceps cristatus* and Cormorant and we heard a Tawny Owl. Canada Geese were grazing in the adjacent fields. Sally pointed out the ponds on the other side of the river in which the local toads breed. When the toads migrate to these ponds in February/March, they have to cross the busy Henley to Marlow Road. They do this at dusk, the time of the rush hour. This has caused many casualties, so there is now a Toad Rescue group. A barrier is placed in the woods and here the toads are picked up and transferred safely to the ponds. Continuing along the Thames, further plants in fruit included Shepherd's-purse *Capsella bursa-pastoris*, Black Bryony, Meadowsweet *Filipendula ulmaria*, Hemp-agrimony *Eupatorium cannabinum*, Purple Loosestrife, Perforate St John's-wort, Bittersweet *Solanum dulcamara* and Great Willowherb *Epilobium hirsutum*. The Alder catkins for next spring were already visible. When we reached Hambleden Lock, a Paddle Steamer had just arrived. We went back along different paths through the countryside via Aston. Red Dead-nettle *Lamium purpureum* was in flower here and Groundsel *Senecio vulgaris*, Dark Mullein *Verbascum nigrum* and Mugwort *Artemisia vulgaris* in fruit. We watched a flock of Long-tailed Tits *Aegithalos caudatus*. The light was beginning to fade as we returned to Remenham.

MID-WEEK WALKS 2016

Jan Haseler, Renée Grayer, Jerry Welsh and Rob Stallard

The first Wednesday walk of 2016 was on 20 January, when Susan Twitchett led 12 members on a circular walk which started from the Red Lion at **Upper Basildon**. It was a bright sunny morning following a hard overnight frost and all the mud on the paths was frozen. First stop was Emery Down Wood, which has recently been purchased by a local charity in order to allow public access and provide an outdoor classroom for the local primary school. The top of the wood is dominated by Oak, tall Holly and Cherry, with Honeysuckle climbing over a few of the trees. The root plate under a fallen tree showed a gravel of rounded pebbles, some of them crystalline, with sandy soil below. Bluebells were pushing up through the woodland floor. Nuthatch and Green Woodpecker called and a Redwing was feeding on the Holly berries. Lower down in the woodland, there was a row of Beech trees. After a short stretch on roads, the walk continued on footpaths towards Quick's Green, then down towards Ashampstead Common. As the path dropped down onto the Chalk, Old Man's Beard draped the vegetation and Dog's Mercury appeared beside the path. There were many active-looking Badger holes. Two large old Yew trees had been labelled by the Yattendon Estate. The next track led back towards Upper Basildon. Surprisingly, an Oak and a Hazel beside the path still had a good covering of green leaves. The walk was followed by lunch at the Red Lion.

On 17 February, Jan and Laurie Haseler led 8 members on a walk which started from **Snelsmore Common**, then headed south over the A34 and down to Donnington Castle. It was a damp morning, with heavier rain forecast for later in the day. Just before reaching the castle, there was an impressive healthy-looking old oak beside the path. It took 5 people to encircle it with outstretched arms. Pellitory-of-the-wall and Ivy-leaved Toadflax, the latter in flower, were growing on the castle walls. The walk continued through Castle Wood, where Bluebell leaves were showing well, back across the A34 and on to Bagnor. A Little Egret flew up from the bank and landed in a riverside tree. The group crossed two narrow bridges over the Lambourn River to reach BBOWT's Rack Marsh reserve, where the meadow area has recently been fenced. The walk continued up the hillside behind the village, then along the bridleway which leads back towards Snelsmore. Many Spurge-laurel plants were in flower beside the track. Two Bullfinches flew up into the hedge ahead. Back in the woods at the bottom of the Common, Opposite-leaved Golden-saxifrage was in flower beside a muddy section of the track. Exmoor ponies were browsing on Holly leaves in the woods behind the car park. All the Holly bushes showed a distinct browse line, and one less-prickly bush had a particularly high browse limit. A Song Thrush was singing loudly nearby. The walk was followed by lunch at the Castle pub in Donnington.

Ian Esland led 12 members on a walk which started from the Sun Inn at **Whitchurch Hill** on the cool, bright morning of 16 March. The route started out along footpaths to Path Hill. Red and White Dead-nettles and Celandines were in flower beside the path and Blackthorn blossom was just beginning to appear. Continuing through Hardwick Woods, Spurge-laurel was in flower and there was a clump of Butcher's-broom with red berries, greenish-white flowers and a visiting 7-Spot Ladybird. The brick structure and tunnel into the walls of a deep chalk pit were later confirmed to be part of a former ice house. A Goldcrest was calling, a Great Spotted Woodpecker was drumming and a Green Woodpecker flew up. Coltsfoots were in flower beside the track at the back of Hardwick House. The walk continued up a steep grassy hillside with splendid views back across the Thames Valley towards Reading. Several clumps of Mistletoe were growing at eye height on a small Hawthorn bush. The path then led into woodland, where there were a scattering of Bluebells, Primroses and Wood Anemones and abundant Wild Garlic leaves. Towards the end of the walk, the group watched 3 Lapwings perform their tumbling display flight in a field next to the path. The walk was followed by an excellent lunch and delicious puddings at the Sun Inn.

Rob Stallard picked a day of strong sunshine for his circular walk, starting from the Six Bells at **Beenham**. 7 members set out along the village street towards the church on 20 April. The daffodils in the churchyard were past their best, but 10 days earlier they had been identified as Wild Daffodils. A footpath led from the churchyard into Old Copse, where there was a superb display of Bluebells, together with Wood Anemones, Wood-sorrel, Opposite-leaved Golden-saxifrage, Yellow Archangel, Wood Spurge and about a dozen Early-purple Orchids. High above the wood, the blossom of the Wild Cherry Trees was white against the blue sky. The walk continued down a lane which was edged by a mossy earth bank with abundant Common Polypody ferns. The next footpath led across a grassy field. There were new leaves on a hedgerow oak, a Swallow flew overhead and an Orange-tip butterfly flew along the hedgeline. Continuing to Upper Woolhampton churchyard, Meadow Saxifrage was found on an old grave and a Small Tortoiseshell butterfly was seen in a nettle patch. The route then led to Channel Wood, where there was another splendid display of Bluebells, together with Common Dog-violet, Moschatel and Cuckooflower. Towards the end of the walk, a large area of standing water and mud in a ploughed field split the party into the ones who waded through and got their boots very muddy, and the ones who took a drier alternative footpath. Grayfield Wood had some fine Wood Spurge plants in flower, and several Brimstone butterflies were seen nearby. Following the walk, lunch was enjoyed at the Six Bells.

Despite heavy rain which was sending a torrent of water down the adjacent lane, 10 members met in the car park of the Red Lion at Upper Basildon on 18 May for a walk led by Susan and Peter Twitchett. The route led through the village to **Emery Down Wood**. Three-cornered Garlic, a plant which appears to be getting commoner in the neighbourhood, was seen in flower on a roadside bank. Within the wood, Sanicle and Broad Buckler-fern were noted and a number of Rowan trees were in flower. The rain stopped and the walk continued along lanes to a track which led westwards towards Quick's Green. Tiny-flowered Early Forget-me-not and Common Vetch were found on a flowery bank at the start of the track. The route led through an attractive Beech wood, with fresh green leaves on the trees, and came out at the old chapel in Quick's Green. High above, a Buzzard and a Red Kite were circling together, while a Song Thrush and a Blackcap sang nearby. Woodruff and Yellow Archangel were in flower on the bank beside the lane. The next footpath led steeply up beside an old chalk pit, across a wheat field and into a wood above old clay pits. There was a big patch of Wood Spurge above one of the pits. A zig-zag route back through Upper Basildon included a footpath near the school where Wych Elm and Field Maple were noted in the hedge. The walk was followed by an enjoyable lunch at the Red Lion.

The sky was overcast when 12 members gathered at the grain dryer on 15 June for a walk up to **Lowbury Hill**, led by Jan and Laurie Haseler. Flowers seen on the side of the valley leading up to Aston Upthorpe Downs included Dropwort, Wild Candytuft, Wild Thyme and Horseshoe Vetch. With new knowledge gained on the recent field trip to Cholderton, the flower heads of Nodding Thistle were searched, and the tiny stripy-winged flies of the Nodding Thistle Gall Fly *Urophora solstitialis* were quickly found. The route continued up through Juniper Valley, with frequent sightings of Small Heath and Common Blue butterflies, together with a single Large Skipper. The first of a series of Corn Buntings was singing its jangling song from the top of a small Hawthorn bush. The field leading up to Lowbury Hill was alive with Skylarks. It appeared to have been planted at some point with a grass and wildflower mix, which included lots of Yellow Rattle and Kidney Vetch. Pyramidal Orchids were just coming into flower and a single tiny Small Blue butterfly was seen. Long-headed and Prickly Poppies were in flower on the bank at the top of the field. The view from the top extended south to the Hampshire Downs and north to the Chilterns, with much of Oxfordshire in between. On the walk back, there were more good sightings of Corn Buntings and two Curlews flew over and landed in a grassy field. The road was very wet on the drive to the Red Lion at Blewbury, indicating that the group had had a narrow escape from a heavy shower.

The excursion on 13 July was led by Jan and Jerry Welsh. On a fine day, 12 members met at the Red Lion at **Rotherfield Peppard** to look at the flora of the Chiltern beechwoods. The walk down to Littlebottom Wood took us past the old trees on the boundary bank of Peppard Common, near

which was a white specimen of Herb-Robert *Geranium robertianum*. The north-east slope of the wood has a rich flora in spring and has a greater variety of tree species than is normal for Chiltern woodlands. The hedge linking Littlebottom Wood to Greatbottom Wood was also rich in species, particularly with Spindle *Euonymus europaeus*. In Greatbottom Wood, a steep climb to the north-east had a variety of ancient woodland indicator species; Woodruff *Galium odoratum*, Wood Anemone *Anemone nemorosa*, Three-veined Sandwort *Moehringia trinervia* and some Ramsons *Allium ursinum*, the latter possibly originating from a disused pheasant enclosure at the top of the slope. Close by was a chalk pit with a track just inside the edge of the wood with Spurge-laurel *Daphne laureola*, Sanicle *Sanicula europaea* and Wood Spurge *Euphorbia amygdaloides*. Further down the slope there were old saw-pits and orchid species were present in the vicinity of chalk pits; White Helleborine *Cephalanthera damasonium*, Green-flowered Helleborine *Epipactis phyllanthes*, Bird's-nest Orchid *Neottia nidus-avis* and a single specimen of the saprophyte Yellow Bird's-nest *Hypopitys monotropa*. We passed the sandy excavations from a badger sett before reaching the boundary of Greatbottom Wood and Oveys Wood. This is the location where Vera Paul, then a schoolgirl, had found Ghost Orchid *Epipogium aphyllum*, though it has not been seen in this area for a number of years. Numerous White Helleborines were seen around an old wood boundary and within a further chalk pit an unusual sub-species of Violet Helleborine *Epipactis purpurata rosea*, with little or no chlorophyll, was seen and photographed. The walk returned along the valley bottom to the pub where a good lunch was enjoyed.

On the hot morning of 17 August Rob Stallard led 13 members and guests on a four mile walk through a diverse range of habitats around **Crookham**. Crookham Common is much less visited than neighbouring Greenham Common to the west. Rob took the group from the Travellers Friend pub through Silver Birch woodland to the southern boundary which had an impressively large oak stool right next to an ephemeral pond formed by gravel extraction. The oak had an impressive growth of Chicken-of-the-woods fungus. Continuing west in the welcome shade of the birch trees, Wood Sage *Teucrium scoxrodonia* and Common Earthballs *Scleroderma citrinum* were seen and one was dissected, showing its black interior full of spores. A small clearing had Betony; Greater bird's-foot-trefoil and Common Toadflax. Across the road the second part of Crookham Common is open heathland with Ling *Calluna vulgaris*, Bell Heather *Erica cinerea*, Gorse and Dwarf Gorse *Ulex minor*. An ancient path then went down the steep slope to the ford across the River Enborne; it had a shady stretch with a fine colony of Hard-fern *Blechnum spicant*. The walk then followed the meandering river for two miles. The field to the south had grown peppermint and a good range of butterflies were seen on the few remaining plants on the field edge including: Green-veined White, Small Skipper, Comma and Painted Ladies. The banks of the river were mainly cloaked in Himalayan Balsam but other plants included Small Teasel *Dipsacus pilosus*, Dame's-violet *Hesperis matronalis* and Trifid Bur-marigold *Bidens tripartita*. Leaving the river the route went through a conifer plantation and then along an ancient trackway with many old pollarded Field Maples. Near a bridge over a ditch a Common Frog was seen. A steep climb back up to Crookham had a nice flowery ditch on one side. Red Admirals, Holly Blues, Gatekeepers and Speckled Wood butterflies were seen. Along the walk back to the pub, the Swallows already appeared to be thinking of departing. At the pub many had lunch and a welcome drink after the heat of the sunny day.

On 21 September, Ian Esland led 12 members on a walk which started from the car park of Goring Heath Parish Hall at Whitchurch Hill. The route started out along footpaths and across fields to the top of Whitchurch-on-Thames, then continued north-westwards along the Thames Path towards **Hartslock**. A Red Admiral butterfly was seen on Ivy blossom, while House Martins and juvenile Swallows flew high overhead and several Chiffchaffs were spotted. Butcher's-broom, Spurge-laurel, Hart's-tongue Fern and Wall Lettuce were amongst the sightings along this stretch. Some of the smaller Ash trees beside the path had dead leaves, possibly suffering from Ash Die-back. The route then led steeply up through the lower field of BBOWT's Hartslock Reserve. Hawkweed Ox-tongue, Small Scabious, Clustered Bellflower, Marjoram and Wild Basil were all still in flower. Turning back eastwards along the track at the top of the reserve, Buckthorn and Spindle bushes were laden with berries and there were Dark Mullein and Toadflax flowers at the side of the track.

A Bullfinch and several Long-tailed Tits were heard. A Beefsteak Fungus was growing out of the side of an oak tree near Coombe End Farm. The next footpath crossed a field where a worn Small Copper butterfly was seen. Back in the car park, there was an enormous bracket fungus, more than a foot wide, at the base of a Douglas Fir. It was later identified as Dyer's Mazegill *Phaeolus schweintzii*. The walk was followed by lunch at the Sun Inn.

On 19 October, Renée Grayer led 10 members on a walk along the river Loddon from the George Inn at Woodley to **Sandford Lake & Lavell's Lake** in Winnersh. The sun had just come out when we started the walk on the south-east side of the river. We followed this path until we reached a pedestrian bridge, which we crossed, as the path here on the north-west side is better and less muddy. Through a gate we entered a field grazed by cows. Knapweed and Fleabane plants in fruit suggested that this field will be full of flowers in the summer. Along the next stretch of the Loddon we saw and smelled many plants of the invasive Indian Balsam *Impatiens glandulifera*, still in flower and apparently not pulled out here. We also saw the big spiky fruits of Branched Bur-reed *Sparganium erectum* on the edge of the water. On our right-hand side was White Swan Lake on which white (Mute) Swans were swimming indeed and also a Great Crested Grebe. After crossing Sandford Lane to the Lavell's Lake area, one of the members led us to a site where she had recently observed the unusual Moth Mullein *Verbascum blattaria*, a rare alien plant. There were three or four specimens showing fruits and red buds, but unfortunately no flowers. Three Red Admirals were flying between the hedgerows full of Brambles. Here and there were Spindle trees with beautiful pink berries, some of which had opened showing their orange seeds. Water Mint and Purple-loosestrife were in fruit along Lavell's Lake and Bristly Ox-tongue was still in flower. Looking from the hide we saw a Lapwing, many Tufted Ducks, Gadwalls, Pochards, Canada Geese, Coots, Snipes and a Heron. On the way back, a Cormorant was drying its wings on an island in Sandford Lake. Along the Loddon was a stand of Bulrush *Typha latifolia* in fruit, and the hedgerow showed two pretty Hedge Bindweed flowers, white with pink stripes. In the grassy edge of the path were some Water Chickweed plants *Myosoton aquaticum* still fully in flower. On our return, we enjoyed lunch in the George Inn.

On 23 November, Jan and Laurie Haseler led 12 members on a walk around the woods and heathland between **Burghfield Common & Mortimer**. Starting point was Wokefield Common car park, which was very full because a conservation group were working at the nearby pond, clearing out some of the Bulrush and removing overhanging branches. The walk started out across Wokefield Common and Starvale Woods, where sightings included a flock of Redwings and a mixed flock of tits. In the south-west corner of Starvale Woods is a line of magnificent old Beech trees. Growing up one of them was a line of Porcelain Mushrooms and a tuft of Oyster Mushrooms. The Porcelain Mushrooms were a dull off-white, no longer the glossy white specimens that had emerged several weeks before. The route continued across the road and into the eastern section of Holden's Firs, where there had been a forest fire at the beginning of May 2016. Most of the burnt trees had been cleared away. Dull yellow tufts of Purple Moor-grass dominated the wetter sections. Gorse, Dwarf Gorse and heather were all regenerating in the drier sections. Both Cross-leaved Heath and Bell Heather were found in flower and there were waist-high flowering plants of Heath Groundsel. A number of species of fungi were noted in the fire area, including False Chanterelle, Purple Brittle-gill and the Deceiver. In the south-east corner of Holden's Firs is an open heathery clearing with two Bronze Age round barrows. On the way back, a large clump of Orange Peel Fungus was found on bare gravel at the side of the track. There was some debate as to whether a *Hypericum* species with red stems and glossy black berries, which was growing on the bank of a sunken trackway, was Tutsan or a garden escape. The final section of the route led back across Starvale Woods, where Red Campion and White Dead-nettle were still in flower. The track dipped steeply down and more steeply up as it crossed a stream valley, before returning to the car park, where the conservation group had been making good progress with their pond-clearing. Most of the group then went on to the Red Lion at Mortimer West End for lunch.

INDOOR MEETINGS 2016

by Renée Grayer, Rob Stallard

5 January 2016

Peter Creed (Nature consultant and author and artistic director of Naturebureau)

Wild orchids in Berks, Bucks and Oxon

Peter started his talk by saying that more species of wild orchid are found in Berks, Bucks and Oxon than anywhere else in Britain. These counties together are home to 36 of the 53 native species and around 30 of these can be readily observed in BBOWT and other reserves. The Chilterns with their chalky soil and beech woods are especially rich in orchids, as many species need an alkaline habitat and some thrive in woodland areas. Peter then showed slides and gave descriptions of many of the orchid species native to the three counties (although some of them are now extinct or have not been seen for many years), starting with the most primitive ones, the Hellebores belonging to the genera *Cephalanthera* and *Epipactis*. Species of *Cephalanthera* have upright flowers and fruits on their inflorescences, whereas they are drooping in *Epipactis*.

Orchids have three petals and three sepals, one of the petals often grown out to form a lip. The lip is ontogenetically the top end of the flower, but in most orchids the flower stalk is twisted 180°, so that the lip is at the bottom of the flower. There is one stamen in most orchids with two masses of pollen, the pollinia. Pollinating insects land on the lip of the flower to get to the nectar inside, and then the pollinia stick to the head of the insect and so can pollinate the next flower that is visited.

The White Helleborine (*Cephalanthera damasonium*) is the commonest of our *Cephalanthera* species. The egg-shaped flowers rarely open, but when they do their yellow lip can be seen. Because of the combination of white and orange-yellow, the species got the folk name 'poached egg plant'. In the Narrow-leaved Helleborine (*Cephalanthera longifolia*), the orange-yellow lip can be seen more readily. It is a nice-looking plant with long leaves and a long spike of pure white flowers. It was last seen in 1970 in a Chiltern woodland and thought to be extinct in the three counties now, but it can still be seen in the neighbouring county Hampshire. The Red Helleborine (*Cephalanthera rubra*) has dark pink flowers arranged alternately on a wavy stem. It is found in a single site in Bucks managed by BBOWT. Although extremely rare in Britain, it is not so rare on the Continent.

There are five *Epipactis* species in the three counties, the Marsh Helleborine *Epipactis palustris* being the most beautiful, with relatively big flowers with a frilly white lip and reddish sepals that resemble wings. It grows in wet and marshy areas and is plentiful at Dry Sandford Pit near Abingdon, managed by BBOWT. The Violet Helleborine (*Epipactis purpurata*) can be found in shady Chiltern beechwoods, including those in Aston Rowant National Nature Reserve, Warburg Reserve and Chinnor Hill. The flowers are greenish-white and less variable than in the Broad-leaved Helleborine (*Epipactis helleborine*) which can vary from green to purple. The latter plant is more common and widespread and usually grows in less shady woodland. It can be found in most BBOWT reserves in the Chilterns. The Narrow-lipped Helleborine (*Epipactis leptochila*) likes deep shade and is nationally scarce, but one of the best places in the country to see it is the Warburg Reserve. Equally rare is the Green-flowered Helleborine (*Epipactis phyllanthes*), which is the smallest of our *Epipactis* species (up to 40 cm). It has regularly been seen in Lambridge Woods near Henley, not far from the Warburg reserve.

The scientific name of the Common Twayblade has been changed from *Listera ovata* to *Neottia*

ovata, because DNA studies have indicated that this species is closely related to the Bird's-nest Orchid, *Neottia nidus-avis*. Twayblade is one of the commonest orchids in Britain and can be seen in the BBOWT reserves Dry Sandford Pit, Sydlings Copse, Hartslock and Warburg. As the name suggests, it has two leaves. These are boat-shaped and heavily veined. The flowers are dull green and the species grows in a variety of different habitats from early till late summer. The Bird's-nest Orchid received its name because of the knobbly underground tubers. It has honey-coloured flowers and is a saprophyte, which means that it depends on a fungus for its food and has no chlorophyll. Therefore it does not need sunlight and can grow in dark woods. It can be found in Chiltern beech woods, including Pulpit Hill (National Trust) and Dancersend (BBOWT).

The Ghost Orchid (*Epipogium aphyllum*) is also a saprophyte. It has not got leaves and only few flowers (white with pink and brown) on the stem. Plants do not flower very often, perhaps only once every ten or twenty years. The species has not been recorded in the three counties since the 1990s, but may still be present in Chiltern Beech woods between Marlow and Henley.

Autumn Lady's-tresses (*Spiranthes spiralis*), flowers in August and September. It has a slender spike with white flowers arranged in a spiral along the hairy stem. The lip is green inside. Although it is a rare orchid generally, it grows abundantly on Greenham Common and also can be found around Nettlebed.

The Musk Orchid (*Herminium monorchis*) is a small plant (up to 15 cm) that can only survive in short, well-drained, alkaline grassland. The flowers are like yellow-green fingers, pointing down, and have a nice scent. It is rare in the three counties, but can be found on Noar Hill in Hampshire, which is the best site in Britain.

The Greater Butterfly Orchid (*Platanthera chlorantha*) and Lesser Butterfly Orchid (*Platanthera bifolia*) have beautiful white or greenish white flowers with a long and narrow lip and even longer spur. Therefore they need pollinators with a long tongue such as moths. The heavy scent in the evening attracts the moths. The two species can be distinguished by their pollinia, which are widely spaced and converge towards the top in *P. chlorantha*, whereas the pollinia are closely spaced and parallel in *P. bifolia*. Both can be found in the Warburg Reserve, but *P. chlorantha* is more common in our area.

The Chalk Fragrant-orchid (*Gymnadenia conopsea*) has a long spike with pink to purplish flowers, which have a long down-curved spur. The nectar in the spur is especially fragrant in the evening to attract moths for pollination. A place to see them is the BBOWT reserve Aston Clinton Ragpits.

The Marsh Fragrant-orchid (*Gymnadenia densiflora*) has only recently been split from the Chalk Fragrant-orchid on the basis of DNA studies. It is a much larger plant and the flowers smell like cloves. It can be found in Dry Sandford Pit and Sydlings Copse.

The Frog Orchid (*Coeloglossum viride*) is often a very small plant with reddish brown or greenish flowers and is often difficult to spot because of its size or flower colour. The small variety can be found on Watlington Hill (Nat. Trust) and a taller variety on meadows in Oxon.

The Common Spotted-orchid (*Dactylorhiza fuchsii*) has solid dark spots all over the leaves. It is the commonest orchid in the three counties with flowers varying in colour from pale pink to lilac, the 3-lobed lip often patterned with darker lines and spots. The orchid can be found in a variety of different habitats such as woodlands and grasslands, mainly on chalk, and fens. In the new Yoesden BBOWT reserve there is a rare form with red-purple velvet-like flowers.

In the Heath Spotted-orchid (*Dactylorhiza maculata*), the spots run across the leaves and this orchid likes acid soil in marshy heathlands. The middle lobe of the flower is wider than that of the Common Spotted-orchid and the lip has daintier spots.

The Early Marsh-orchid (*Dactylorhiza incarnata*) is the rarest of our marsh-orchids and grows in wet grasslands. It is getting rarer because of land drainage. It can be found in Pilch Field (Bucks) and Dry Sandford Pit (Oxon).

The Southern Marsh-orchid (*Dactylorhiza praetermissa*) is much more common in the three

counties and prefers damp meadows, fens, marshes and can be found in BBOWT reserves in West Oxon and West Berks. The Narrow-leaved Marsh-orchid, *D. traunsteineroides*, used to be a separate species, but now is a subspecies of the Southern Marsh-orchid. It needs very wet habitats and can be found in Parsonage Moor near Abingdon. All *Dactylorhiza* species hybridise very easily.

The Early-purple Orchid (*Orchid mascula*) flowers in the spring in coppiced Bluebell woods. It has tall red-purple flower spikes and spotted leaves with length-wise blotches. It occurs in many local sites including Moor Copse and the Warburg reserve.

The Lady Orchid (*Orchis purpurea*) is one of our tallest orchids with up to 50 flowers on each spike which have a dark red 'hood' formed by sepals and the top petals, whereas the lip is white with purple spots and edges, looking like two arms and a frilly skirt or trouser bottoms. It only occurs in one locality within the three counties, Hartslock reserve, where it hybridises with the Monkey Orchid.

The Military Orchid (*Orchis militaris*) also has pretty flowers with a hood (light pink) and a lip (dark pink with white) which has the shape of a figurine with two arms and two legs. When it was first found in the three counties, the location (Homefield Wood near Marlow) was kept a secret, but when the numbers there increased dramatically, the site could be revealed.

The Monkey Orchid (*Orchis simia*) with its white and pink flowers is also very rare and only occurs in Britain in the Hartslock reserve and in Kent. The inflorescence looks rather untidy because the flowers open from the top downwards.

The Man Orchid (*Orchis anthropophora*) has been lost from much of its historical range and now occurs in the three counties in only one private site in Oxon. However, it can still be seen in Kent and Wiltshire and also on the Continent. The flowers have a green hood with brown stripes, and the deeply lobed copper coloured lip looks like thin arms and legs.

The Burnt Orchid (*Neotinea ustulata*) is a small plant (5-20 cm) with very dark red-coloured buds at the top of the inflorescence, giving the impression that it has been burnt. The fully opened flowers lower on the flower stalk are white with a few dark red spots. There are some small populations in the neighbourhood of Aston Upthorpe, but the plant is more numerous in Hampshire and Wiltshire.

The Pyramidal Orchid (*Anacamptis pyramidalis*) is one of our more common orchids and widespread. It has a pyramid-shaped spike of deep pink flowers and grows on dry, well-drained chalky grassland. It can be found in many BBOWT reserves.

The Green-winged Orchid (*Anacamptis morio*, previously *Orchis morio*) has large deep red-purple to pink or white flowers with green parallel veins in the hood. It used to be common in damp pastures and grassland, but has become rare because of agricultural changes in the 1950s. They still occur abundantly in Bernwood Meadows (BBOWT) near Oxford and in Greenham Common.

The Lizard Orchid (*Himantoglossum hircinum*) is a large plant with long spikes of flowers, which have a white hood with red stripes and a reddish lip with a few short curly lobes (the 'legs' of the lizard) and one very long protruding and twisted lobe (several centimetres, the 'tail') which points downwards at 45° and give the plant a funny appearance. Recently a specimen was found in West Oxon. The species can be seen in Sandwich in Kent.

The Fly Orchid (*Ophrys insectifera*) has only a few flowers in the inflorescence. The flowers are brown in the shape of a fly and are pollinated by a male digger wasp, which is attracted to the flowers by their shape and their scent, which mimics the female wasp's sexual pheromones. It grows in the Warburg reserve, Homefield Wood and Dancersend.

The Early Spider-orchid (*Ophrys sphegodes*) is very rare in the area and has a large brown and round underlip with lighter marks on it, looking like the common garden spider. It flowers very early in the season (April) and may be extinct in the three counties. However, in Swanage (Dorset), thousands of specimens may be found.

The Bee Orchid (*Ophrys apifera*) is one of the region's most beautiful flowers with its pink triangular

sepals and velvet-like brown underlip with yellow and red markings. The flowers attract male bees as pollinators although they are also self-pollinated. The species is widespread in the three counties, including Homefield Wood and Chimney Meadows.

19 January 2016

Timothy Walker (Oxford University)

Sex, Lies and Putrefaction

Timothy Walker is a lecturer at the University of Oxford and former 'Horti Praefectus' (Director) of Oxford University's Botanic Garden and Harcourt Arboretum. In 2011 he presented 'Botany – A Blooming History' on BBC4, a three part series on the history of Botany.

Timothy's humorous talk dealt with pollination biology and pollination syndromes, the flower traits that have evolved because of different pollination vectors. According to him, Darwin was one of the first scientists to realise that there is an important interaction between plants and their animal pollinators. He postulated that a certain orchid would be pollinated by a moth with a long tongue, because it was a night flowering orchid with a very long spur. Many years later this moth was indeed found and confirmed Darwin's theory.

Pollen grains, which contain the male sex cells of plants, are produced by the anthers and have a great variety of shapes and sizes. The problem for pollen grains is to find a female stigma of the same species for fertilising the ovules underneath, but avoid self-pollination. Different plant species have solved this problem in different ways. In a minority of cases, pollination is abiotic, by wind or by water, but in the majority of species pollination is biotic, carried out by animals.

Wind pollination was thought of as a primitive way of fertilisation until recently, but it now appears to have evolved many times independently from animal pollination. For example, DNA and chemical research have indicated that plantains, which are wind-pollinated, evolved from speedwells, which are insect-pollinated. Important wind-pollinated plant groups are the grasses, including many of our staple foods such as wheat, rice and maize. Catkin-bearing trees are also usually wind-pollinated. There is only a one in a million chance that pollen from the male Hazel catkin reaches the tiny red female Hazel flower. Therefore, millions of pollen grains have to be produced by wind-pollinating species. Strategies to reach the female flower include pollen that 'flies' out of the male cone by pines and the firing of pollen from the flower of *Cornus canadensis* with supersonic speeds, 2000 times the force of gravity!

Water pollination is rare and most water plants are insect-pollinated. An example of water-pollinated flowers is found in the Canadian Waterweed, *Elodea canadensis*.

Biotic pollination carried out by animals occurs in the majority of higher plants. Pollination by beetles may be the most ancient form and has occurred for millions of years, e.g. in the genus *Magnolia*. In the conifer genus *Macrozamia*, the female cones are pollinated by weevils. Midges pollinate the flowers of *Theobroma cacao*, the fruits of which are used for producing chocolate. Bee-pollinated flowers are often tubular and can have a variety of different colours, but bees often prefer yellow or purple-blue petals. The flowers are often scented and may have nectar guides, the colours of which may be visible to us or only to bees if they are in the ultraviolet part of the spectrum. Plants that are moth-pollinated often flower at night, are white, have tubular flowers and produce a strong scent at night. They produce much nectar as a reward. Hawkmoths especially need a lot of nectar as they hover in front of the flowers with rapid beating of the wings, which uses a lot of energy. Butterfly-pollinated plants flower in the daytime, often have pink or violet tubular flowers and are usually scented. Their tongues are shorter than those of moths, so that the corolla

tubes tend to be shorter in butterfly-pollinated flowers.

Birds are usually very delicate pollinators, e.g. humming birds. They are especially attracted to red flowers, so that bird-pollinated flowers are usually red, e.g. *Tecoma capensis* (Cape Honeysuckle) which is popular with sunbirds in South Africa. They also produce much nectar as a reward. For example, the flowers of *Erythrina crista-galli* (Cockspur Coral tree) produce one millilitre of nectar in each flower each night, which is approximately the contents of a thimble.

Bat-pollinated flowers are nocturnal like those of moth-pollinated ones, tend to be large, are often bell-shaped and have a strong odour. They may emit sulphur-containing compounds. An example is *Strongylodon macrobotys* (Jade Vine), which has pale blue flowers. Some species of *Banksia* in Australia are pollinated by marsupials such as possums.

An attraction or reward is often needed for animals to pollinate the flowers of a plant. Flies that lay their eggs in dung or on dead animals are attracted by flowers that smell of poo or rotten fish. For example, species of *Stapelia*, which have very unusual and not unattractive large brown flowers, have a very unpleasant smell to humans. Another example is *Amorphophallus titanum* from Sumatra, which has one of the largest inflorescences of herbaceous plants and emits a bad smell at night.

Nectar is the classic reward to animal pollinators. Snapdragons (*Antirrhinum majus*) are pollinated by bees that go into the flower tube for the nectar and get dusted by pollen that way to pollinate the next flower. But some bees are lazy and make a hole in the bottom of the flower, so that they can get at the nectar without having to go inside; that way they do not pollinate the next flower they visit.

Some orchid flowers have evolved to look like a bee or a fly and also emit chemicals that imitate the pheromones of the female insect. The male insect is attracted to the scent and tries to copulate with the flower, causing the pollinia of the orchid to get attached to his head. These will pollinate the flower of the next orchid of the same species that the bee or fly will visit.

In general, plants try to achieve cross-pollination, but when they are not pollinated by an animal vector, self-pollination may occur as a last opportunity for fertilisation.

Some plants, such as *Victoria amazonica* and species of *Arum* and fig, trap the pollinating insect for a night or so and only release them after their flowers have been pollinated. The *Victoria amazonica* is pollinated by a beetle which enters the flower, attracted by its fragrance, and is captured overnight. The following day, when the flower has been pollinated, its petals turn from white into a pink-purple colour. The beetle is then released, covered with pollen, and flies away to find another white *Victoria amazonica*. It avoids the pink-purple coloured flowers and therefore does not waste the pollen on pollinated plants.

There are hundreds of species of fig and each has its own species of pollinating wasp. A mature female wasp enters the immature fig fruit (synconium) through a small opening and deposits her eggs in the cavity, also depositing the pollen she picked up from the fig in which she was born. The life cycle of these wasps is very complicated and closely intertwined with that of the fig species it inhabits. There is a strong co-speciation between figs and wasps.

In 1859 Darwin already wrote: "Thus I can understand how a flower and a bee may slowly become, either simultaneously, or one after the other, modified and adopted in the most perfect manner to each other."

2 February 2016

Dr. Pat. Morris

The Edible Dormouse - a protected pest coming your way !

Dr Pat Morris was formerly a senior lecturer in zoology at Royal Holloway, University of London, and specialised in mammal ecology, particularly hedgehogs and dormice.

Dormice are rodents belonging to the family Gliridae, distinguished by their long periods of hibernation. There are about 30 species of dormouse, which occur in Europe, Asia and Africa, but there are only two species in Britain, the native Hazel Dormouse, *Muscardinus avellanarius*, and the non-native Edible Dormouse, *Glis glis*. The latter species was accidentally introduced in the Chilterns in 1902 by escaping from Lionel Walter Rothschild's collection. Its natural distribution is in middle Europe, from eastern and southern Germany and eastern France in the west, to Italy in the south and from Poland to the Balkan Peninsula in the east.

Most species of dormouse are nocturnal and live in trees. They are omnivorous, feeding on fruits, flowers, nuts and insects. They have long sensitive whiskers and mobile and sensitive ears. The Edible Dormouse is the size of a small squirrel. It also has a bushy tail, but unlike the tail hairs of squirrels, which have white tips and give the tail a white haze, the tail hairs of the dormouse are uniformly dark grey.

The number of Edible Dormice in the Chiltern has gradually increased over the years and there are now an estimated 30,000 individuals, which have spread some 30 miles from the location of release. Their preferred habitat is beech forests with some conifers, so the Chilterns are an ideal habitat, but they have started coming into houses, where they can become a real pest. They gnaw through wires, live in the loft or food cupboard and leave their droppings everywhere. They can also severely damage forest trees, but not much can be done about it. Dormice are protected species in Europe and Britain and are not allowed to be killed or trapped, which does not mean that it does not happen. In Slovenia dormouse trapping has been an ethnic tradition for hundreds of years and some 25,000 are trapped each year with special traps. The captured dormice are used for food and fur, and the fat is used medicinally.

Dr Morris could not get research grants to study the Edible Dormouse from Research Councils and the former Nature Conservancy, because it is neither a native species nor a national problem, but finally he got some money from the BBC because they planned to make a film about the animal. A research assistant could then be appointed to study the dormouse's behaviour. Nest boxes were constructed with a 35 mm diameter round hole, hoping that the animals would use them as nests. They did, but they enlarged the hole to 55 mm. The tops of some of the boxes were used by them as communal latrines. Later, much cheaper plastic nesting tubes were used while waiting for some more wooden boxes to be made and these proved to be ideal for the project as it was easier to check them regularly. The individual dormice were marked, so that more information could be obtained. The results of this study showed that the numbers of Edible Dormice fluctuate from year to year. The nests are empty until late May and again from November onwards, when they hibernate elsewhere. From August until October the largest number of individuals are counted; in June there are more males than females (males come out of hibernation earlier to find a mate), whereas in September and October there are more females, because they alone raise the offspring.

Hibernation occurs from late October until late May or early June, for some seven months, hence the German name Siebenschläfer for the dormouse, which means 'seven-sleeper'. In order to be able to sleep that long, they have to store lots of fat and they were therefore a delicacy to the Romans. They used clay pots (gliraria) in which they would fatten up the edible dormice and then kept the pots cool by pouring cold water over them, so they could eat the dormice on special occasions.

Edible Dormice hibernate underground; they have been found under lawns, sometimes in a commune of related animals (mothers and their offspring). They have also been found in old badger setts. A study revealed that they do not hibernate continuously, but come out of hibernation a few times. In February and March, their continuous hibernation lasted longest. They are dependent on beech mast to fatten up sufficiently before hibernation. Therefore they do not breed

in years when there will be little or no beech mast (e.g. when the beech flowers or young fruits are caught by frost). This increases the adults' chance of survival, when no offspring would be likely to survive. Newly-born dormice weigh only 1 gram, which will have increased to 60 grams by the time they leave their mother. Then the young animal has to increase its weight to 120 grams by the end of October. Unlike other mammals, dormouse mothers supplement their milk with other foods to get them growing as fast as possible. There is only one litter a year and litter size is on average 4 to 5. When there are larger litters, the number of offspring goes down during development, presumably by cannibalism, where the bigger and stronger young animals eat the weaker and smaller siblings, just like in owl families, as there will not be enough food for all the young to get fat enough for hibernation.

Radio-tracking showed that the dormice use a quarter hectare per night for finding their food, mainly fruits and nuts. By marking the animals, the research group found that quite a few individuals were not found in their usual nest boxes in some years, to reappear the next year or year after. In the years that few dormice were found, there was a failure of beech mast production. Therefore, in non-masting years they seem to have gone back into hibernation. Perhaps they also go into houses in years when there is little food available. On average, Edible Dormice live for about 4 to 5 years, but some animals live up to 10-11 years. This is long for a small mammal, but this is balanced by their slow breeding.

16 February 2016

Tom Hart (works at the Ocean Research and Conservation Group, Dept. of Zoology, University of Oxford, and likes to call himself a 'penguinologist')

21st century techniques to monitor Antarctica your way!

All penguins live in the cooler waters of the Southern Hemisphere and six species breed on Antarctica and South Georgia plus surrounding islands: the Adélie, Chinstrap, Emperor, Gentoo, King and Macaroni penguins. These have been studied for many years from the twenty or so stations on the coast of Antarctica, which are manned in the summer only. This means that there are massive data gaps in the knowledge of what happens to the penguin colonies in the winter and also to the colonies in other parts of Antarctica where there are no bases, as it is a huge area, twice the size of Europe. We also know little of penguin ecology and how the birds are responding to climate change and increasing fisheries. Therefore, Dr Hart and collaborators are trying out the newest techniques for monitoring penguin colonies.

First of all, in the last six years a network of 80 cameras has been installed at additional locations along the coast of Antarctica to monitor penguin colonies automatically and all year long, usually taking photographs at fixed time intervals. (The cameras are battery-operated and the batteries need changing only once a year). It is not easy to get to places of interest to set up the cameras in such a harsh environment, but it was possible to hitch lifts from amongst others the RAF and tourist cruise ships. The pictures from these cameras can now tell us when the penguins arrive at their breeding grounds and choose the location of their nest, data that were missing previously. A major problem is now that too many images are being obtained, more than a million photos so far, and it is a challenge to get useful data out of them. One way is to count them automatically using software that can recognise penguins on photos. This has proved to be 90% accurate and is getting better. Another way is getting the public involved, and for that purpose 'Penguin Watch' has started in September 2014, where people count the penguins, chicks and eggs on photos on the computer as a kind of 'shooting' game. Already 2 million 'hits' have been obtained of adult penguins, but fewer of chicks and eggs. The 'citizen scientists' can see afterwards how their data have been used.

Satellites can help to locate new penguin colonies. For example, Adélie colonies show up as red

areas from space because of the red poo from these birds. With this tool it was found that the Adélie is declining on the peninsula in the west of Antarctica, but is increasing in the south. Drones are used for counting penguins and producing 3-D maps. The plan is to get as much data as possible, e.g. how climate change and krill fisheries affect penguin colonies, so that policy makers do not have the excuse any longer that the effects of these factors are negligible.

Krill are small shrimps that are the base of the food chain in the Antarctic. All birds and fish there are ultimately dependent on krill, either as their own staple food or as food eaten by their prey. In turn, sea ice is important for krill, as they breed under the ice, which acts as a kind of greenhouse. The waters around the Antarctic Peninsula in the west are getting warmer, so that more ice is melting in the summer, which negatively affects the krill. Fishing for krill is becoming a big issue. Krill oil has become a fashionable dietary supplement, as it is an 'unpolluted' source of omega-3 fatty acids, marine phospholipids and the carotenoid astaxanthin. The krill industry claims that only 1% of available krill is taken by the fisheries, but they forget that many penguins feed in the very areas where they fish and that much more than 1% of the krill is removed in these areas. It is thought that especially the Emperor and Macaroni penguins are declining for this reason.

On the other hand, Gentoos are doing well and 1.25 million pairs have been counted. The reasons that they are doing better than the other species may be that they not only feed on krill but also on fish, and that they show a higher genetic differentiation. The Emperor has a much lower genetic differentiation, which indicates that there has not been much interbreeding among the different Emperor populations. The Adéliés show an even lower genetic variation among the birds. The genetics of the penguins has been studied by means of the DNA of their feathers. This DNA research is now also used to study the history over thousands of years of the penguin species, because the feathers and other tissues from the past have been well preserved under the ice. The results tell us how big the populations have been over time. For example, the Emperors did well until recently, but not so well now. However, they do better now than many centuries ago. Museum collections of eggs, e.g. collected during the Shackleton expedition, are also important sources of DNA information. All the records show that Adélie and Chinstrap penguins are also declining.

Successes in penguin conservation so far have included the establishment of the first penguin reserve in South Georgia in 2009. However, 60 nations are in charge of Antarctica and it will not be easy to persuade the fisheries of all these countries, especially Russia, China and Norway, to stop the unsustainable extraction of 50 million metric tons of krill each year from Antarctic waters. Hopefully, the newly obtained data will provide a tool to reduce these fisheries.

1 March 2016

Erika Degani and Samuel Leigh (postgraduate research students at Reading University)

Liberation: Maintaining crop yields while reducing inputs and benefiting ecological systems

Erika and Samuel are taking part in a large E.U.-funded research project called LIBERATION (Linking farmland Biodiversity to Ecosystem services for effective ecological intensification <http://www.fp7liberation.eu/>). Seven countries are involved in the project. The main objective is to find ways to maintain crop yields while both reducing inputs (principally chemical fertilizers) and benefiting the ecological system. 'Ecosystem services' is an umbrella term for all the benefits that people receive, including the more obvious: food, energy, pest control but also cultural services such as recreational and spiritual experiences. It is a holistic way of viewing the whole ecological system.

Erika began by explaining that in the U.K. crop yields are close to optimal but this is not the case

elsewhere in Europe, so some of the strategies may improve yields there but not in the U.K. For the project to succeed farmers need to be convinced that the changes will not damage their profitability. Study areas included pollination; natural pest control; water and nutrients; yields; biodiversity and climate regulation.

The widespread use of pesticides since World War II has led to considerable resistance among pests. Farmers also face problems with black grass and fungicide resistance. Formaldehyde used in slug pellets is getting into some water supplies from which it is very hard to separate. Waiting ten years for new chemical agents to become available will not solve these issues. The high costs involved in bringing products to market make R&D viable for only widely applicable situations.

Samuel then described the detail of the research they are undertaking. They are looking at the effects of diversity on regions that typically grow the same crop year after year. Diversity can be introduced by growing different crops sometimes in combination and also introducing different crops into the rotation. Continued monoculture leads to fewer predators, pollinators and a poor soil structure.

It was important to quantify the effects of different schemes accurately. Crop yield is only one measure; but crop quality can be just as important. The number and type of predators can be measured as well as the pollinators and parasitizing insects on crop pests. The soil can be given a complete chemical analysis for carbon, nitrogen content amongst others.

Samuel described the two sites they had studied at Sonning Farm. The first site had used a four year rotation of three years winter wheat and one year winter oilseed rape. One of these wheat years was replaced with winter beans. A more diverse rotation was clover with wheat for two years; brassicas with cover crop of spring beans for one year and one year of oilseed rape. It is thought brassicas help suppress weeds and also control pests and diseases.

Their study split up an area into small blocks with different treatments so that the variability brought about by weather can be filtered out. Some blocks received 100% fertilizer; some 50%; some 100% fungicide; some 50%. In some blocks plants were netted to keep out insect pollinators, in others 100% pollination was achieved by doing it by hand. Other blocks were deliberately infested with aphids and natural predators excluded.

In processing results they looked at simple, moderately diverse, and diverse crop rotations. It seems that in most cases even a moderately diverse crop rotation increases yields and improves soil structure. Further work is needed to determine if more diversity gives resilience to water stress.

On the second site whole fields have been followed since 2008 following a rotation of wheat; rape; wheat; beans; barley; wheat; rape and wheat again. This is a reasonably diverse crop rotation. Some areas received 50% of chemical fertilizer (100kg per hectare). The results so far show no real improvement in yield with using a mixed legume under the crop but they did help suppress weeds. Using 100% chemical fertilizer suppressed weeds because the wheat grew quickly (11 tonne per hectare compared to 9.5 tonnes for 50% fertilizer). To introduce more nitrogen into the soil the crop needs more diversity than just a legume bi-crop.

All this work will become more important when the E.U. introduces changes in the next few years; for instance the C.A.P. fund will soon give only a full subsidy to farmers that grow more than two crops in rotation in each field.

Samuel and Erika finished their presentation with a time lapse video of the growth of crops, and many weeds, at one of their experimental sites.

15 March 2016

AGM and Members' Evening

Members Talks:

A visit to Biebrza

Last May Alan Parfitt and Tony Rayner visited the marshes which Marek Borkowski had described to us when he gave a talk in November 2014. The group stayed at Marek's house and saw a considerable range of wildlife without going any further than his garden: White Storks, Nuthatches, Great Spotted Woodpeckers and Hawfinches. The nearby wetlands had a wider range of wildlife: Scarlet Rosefinch, Black-headed Yellow Wagtail, Citrine Wagtail, Tree Sparrow, Hoopoes and Serin. They also managed to see the rarer Great Snipe, Spotted Redshank, Bluethroat, Penduline Tit and Aquatic Warbler. Apart from birds they also saw many dragonflies including the Ruby Whiteface and Four-spotted Chaser; for butterflies they saw Map, Camberwell Beauty, Chequered Skipper and Swallowtail. Biebrza is a very special place for wildlife.

A peck of March Dust is worth a King's Ransom.

Colin Dibb presented a talk illustrating the background to this little known proverb. He explained that the term 'peck' was an old unit of volume, with four pecks equalling one bushel, it represents about eight litres or two gallons.

He then described how arduous ploughing used to be. A team of eight oxen in two teams of four could only plough an acre a day which required them to travel 12 miles in total. It became ten times quicker when tractors became available in the 1930s and a tractor could plough into the night with headlights. In the old days ploughing waited until the spring and so wildlife had a source of food over the winter. Nowadays most crops are planted in autumn but originally the ploughing was done mainly in March, after the winter frosts. It was important that the land should be dry enough to plough and sow a crop. Waiting until April would reduce yields substantially. The proverb, which gives the title of the talk, came from the desire for a dry March which would allow the ploughing to be done in good time and so hopefully lead to a bumper harvest.

Monitoring the White-letter Hairstreak

Peter Cuss (guest speaker) is running a conservation project for the White-letter Hairstreak butterfly. Unfortunately the butterfly's food plant is the elm tree and so when Dutch elm disease took hold in 1976 numbers plummeted by 86%. He is undertaking surveys of mature elm trees (English and Wych) and the project also involves planting disease resistant elms as they had done at Maidenhead Thicket. The butterflies are on the wing June-July and lay eggs at the end of twigs. The eggs hatch in Spring and start by eating the elm flowers and then the seeds before moving on to the leaves. The butterflies like to feed on honeydew up in the trees but will fly down to the ground when insufficient food is found. The males have a characteristic spiral flight.

Peter would like to hear from members who know of the location of mature elms and with any sightings of the butterflies.

If you would like to help please refer to the web page:

http://upperthames-butterflies.org.uk/Reports/WhiteLetterHairstreak_Project_2016_PCuss.htm

6 October 2016

Presidential Address:

Jan Haseler

The ghost of field trips past [Please see the Presidential Address, page 41]

20 October 2016

Dr. Martin Bidartondo (Imperial College and Royal Botanic Gardens, Kew)

Heathlands underground

Martin's talk described the unseen world underground in heathland; he started by quoting the evocative description of Egdon Heath from Thomas Hardy's 'Return of the Native'. He explained that although plants are the primary producers of food taking light and nutrients, they have a disadvantage when it comes to root structures. Plant root hairs are 10-20µm thick, unbranched and limited to 1.5cms, fungal roots are much finer, >2 µm thick, unlimited in length and form interconnected networks. For just 1g of soil there can be a 35m total length of fungal roots. Fungal root systems are therefore much better at tapping into the tiny pores between soil particles to extract water and nutrients. This makes an association between a fungus and a plant mutually beneficial, the fungi can give the plant access to more water and nutrients while the fungus can feed on the plant's photosynthesized carbohydrates. All woody plants need mycorrhizal fungi to bring them nutrients symbiotically. Only a small range of other plants do not - including the brassicas and the annuals.

There are two main groups of mycorrhizal fungi, Arbuscular mycorrhizas that account for 80% of plant families and are efficient in scavenging phosphorous and Ectomycorrhizas which account for only 3% of plant families (mainly trees), but are important and efficient in scavenging nitrogen. Ectomycorrhiza mycelia cover the surface of roots while in endomycorrhiza the fungal filaments go inside the host plant's root cells. There are also Ericoid (heathland) and Orchid mycorrhiza groups.

Martin described studies of how plants and fungi interact in heathland. The lowland heaths of UK are a priority habitat because unlike other habitats they are rare elsewhere - the UK has 20% of the world's lowland heaths. There has been a 50% decline in heaths since the 1800s - 20% in just the last 50 years. Heathland is being destroyed by ploughing, forestry, mineral extraction, building and recreation. Pollution, particularly of nitrogen from rainfall allows other plants and trees to invade the heath. Management of heaths usually involves light grazing, controlled burning and cutting. The heathland soil structure has a thin, top litter layer which covers partly decomposed litter and lower layers of sand often covering an impervious 'iron pan'. Plant root hairs are poor at exploiting this soil structure compared to fungal root systems.

Eight trial sites were studied to find out how trees invade heathland. The pioneer trees are usually Scots Pine (*Pinus sylvestris*); Silver Birch (*Betula pendula*) and Downy Birch (*Betula pubescens*). When no fungi are present the seedlings stall in their growth, while those with fungi grow rapidly. It is therefore crucial for invasion by trees for fungal spores to be present in the heathland soil. Mature woodland has the most diverse range of fungi while heaths have the least, normally just four: *Laccaria proxima*; *Rhizopogon luteolus*; *Suillus bovinus* and *Suillus variegatus*.

Nitrogen pollution is causing contamination of the heathland, areas of high rainfall are receiving 17kg per ha per year; previously this was less than 1kg per ha per year. The extra nitrogen permits tree saplings to survive without fungi where previously they could not.

Other agents in heaths are the non-vascular plants (Bryophytes). There are small leafy liverworts that colonise very wet areas with rhizoids rather than roots but it has been found that they too use fungi to take up water and nutrients. Martin has taken part in a study to investigate whether these mycorrhiza help heather to become established. A comparison of heather plants treated and untreated with fungi that are associated with liverworts showed that they made a dramatic difference - helping the plants to cope with drought.

Mycorrhiza fungi are therefore key to both the establishment of heathland but also its invasion by woodland, and deserve a much higher profile in heathland management schemes.

Martin then answered a wide range of questions from an engaged and interested audience.

1 November 2016

Professor Alex Rodgers (Oxford University)

Wonders, old threats and new dangers in the Oceans

Alex began by putting the oceans in context. They are the world's largest eco-system with an average depth of 4.2kms but only about 0.001% has so far been explored. Species are not distributed uniformly over the whole depth, there is a steep decline at 1km and another at 4.5km. The exploitation of the deep oceans began in the mid-1960s with fishing and there are plans for deep ocean mining, CO₂ storage and even tourism. To work out policies to limit the impacts of these activities requires much more study of the oceans; they are not uniform and have hot spots of high species richness. Alex included rare and amazing video footage of deep ocean life in his talk.

The best examples of rich ecosystems are the mid-Ocean ridges; here hot magma is welling up to make new ocean floor on either side of the ridge. Above the magma chambers are hydro-thermal vents carrying super-heated water at 386°C rich in metallic ions. The water seeps down through fractures before erupting in these chimneys made of metallic sulphides at a depth of 2.5km. As there is no sunlight or oxygen in these waters, life needs to use chemo-synthesis rather than photo-synthesis to build up carbohydrates. The fact that these vents teem with life suggests there may well be other niches for life within our Solar System and beyond that are not driven by solar energy. Specially adapted bacteria convert the chemical energy into organic matter and then a wide variety of organisms feed on them. Around the vents 712 species from 373 genera and 185 families have so far been recorded. The tough conditions of temperature and toxicity mean 71% of them are endemic to the mid-Ocean ridges. Many of the creatures have fur or hairs on which bacteria are grown and collected. The vent areas are localized along the ridges and the animals form distinct communities in the different oceans. For example the Atlantic has mussels and shrimps while the East Pacific has tube worms and crabs.

Alex had taken part in a survey of a vent system in the far Southern Atlantic near the South Sandwich Islands to see whether the faunal communities are spread by deep Antarctic currents that circulate around the continent. They expected to find a mixture of the Atlantic and Pacific faunal provinces but instead found a new fauna which included Yeti crabs and trochoid gastropods. The communities also have predators: octopuses, sea anemones and carnivorous sponges. It seems that instead of currents allowing free circulation of eggs and larvae, the currents isolate the Antarctic vent communities.

Photographic Competition 2016
Winning Photographs (for article, see pages 40 - 41)



Overall Winner

Three drake Pintails

6th January 2016

Slimbridge

© **Ken White**



Banded Demoiselle

Winner: **Small is Beautiful** © - Fiona Brown



Chalkhill Blues

Winner: **Nature in Action** © - Ian Esland



Pied Avocets

Winner: **Three of a Kind** © - Ken White



Poppy

Winner: **Pattern Perfect** © - Fiona Brown

Photographic Competition 2016: Winning photographs continued and photographs from outings



Peacock

Winner: **Colour Prejudice** © - Ian Esland



Sir Peter Scott and Woodpigeon

Winner: **Something to make you smile** © - Laurie



Lilac-breasted Roller

Winner: **Any Fauna (UK or Overseas)** © - Jenny Greenham

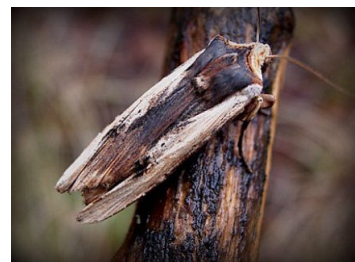


Phallus indusiatus

Winner: **Any Flora (UK or Overseas)** © - David Owens



Red Swordgrass moth & caterpillar *Xylena vetusa*; first confirmed breeding at Thursley NNR
Caterpillar: 25th June 2016 © Ken White



Adult moth © Keith Dover

Photographs from articles and excursions



Silene vulgaris Aston Upton 15 June 2016
Photo © Ken White



Hypericum elodes Thursley NNR 25 June 2016
Photo © Ken White



Slow Worm Chinnor 7 August 2016
Photo © Rob Stallard



Silver-washed Fritillary Chinnor 7 August 2016
Photo © Rob Stallard



Painted Lady Crookham Common 17 August 2016
Photo © Laurie Haseler



Scleroderma citrinum Crookham 17 August 2016
Photo © Rob Stallard



Peltigera membranacea California Country Park
Photo © Rob Stallard



Sneezewort California Country Park 20 August 2016
Photo © Rob Stallard



Chiltern Gentian Watlington Hill 3 September 2016
Photo © Rob Stallard



Edible Dormouse in the hand Hockeridge Wood
4 September 2016 Photo © Laurie Haseler



Beefsteak Fungus Whitchurch Hill 21 September 2016
Photo © Laurie Haseler



Pseudoboletus parasiticus Simon's Wood
15 October 2016 Photo © Laurie Haseler

Because of the high metallic content of the vent chimneys (10% copper and some gold and silver) they form a valuable resource and so China, India and South Korea have acquired mining rights for vast areas of the deep ocean floor. Destruction of the vents by mining is likely to wipe out the communities of animals surrounding them. Genetic studies have shown that the communities in the south-western Indian and Antarctic Oceans are separate and so damaged areas are unlikely to be quickly re-colonised.

Alex then described the life that surrounds the more than 30,000 sea mounts that are scattered throughout all the oceans. Even though they can be 450m deep, cold water coral reefs can be found. The reef animals feed on plankton carried to them by currents over the mounts. Seamounts are good for whales and there is speculation as to why they are attracted to them. Perhaps upwelling water currents may bring nutrients for plankton on which the fish feed. Another possibility is that when shrimps and fish dive downwards at night time, they are naturally concentrated on top of seamounts because they are unable to reach deeper waters. The abundance of fish has made seamounts attractive for commercial fishing of the deep waters. Alex described the fate of the Orange Roughy, a fish which can live to 150 years and is only mature at the age of 30-40 years; with such a slow turnover it is easy to fish it to extinction. Experience to the west of Ireland in the 1990s showed that only two years of extensive fishing caused the population of Roughies to collapse. Deep sea trawling also destroys the delicate coral reefs, some of which are 4,500 years old.

Alex had used remote operating vehicles to explore the seamounts. He found that coral reefs continued to flourish quite close to fishing areas; however lobster pots gave evidence for some illegal fishing. Worryingly, analysis of samples over several distinct oceans shows that they were all contaminated by a variety of micro-plastics. One area he had explored was near Bermuda, and surprisingly this area is little explored and has a good range of corals and other animals.

The oceans are still so little known that Alex is hoping to gather funding for a five year trip to visit all 14 bioregions. There are many more wonders down there yet to be found. An enthusiastic audience then had an opportunity to ask questions about many aspects of Alex's work.

15 November 2016

Irene Teixidor-Toneu (Reading University)

Who took the roots away? Medicinal plant tales from the High Atlas

Irene is studying for her doctorate at Reading University; her research area is medicinal plants and she has recently spent eight months in Morocco aided by funding from the Global Diversity Foundation. Her studies included interviews with local people to find out which plants are used and how they are used. She also took samples of the plants that were being used in herbal remedies so they could be analysed and identified. Two main study areas were investigated: Imegdale to the southwest of the Atlas and Ait M'hamed further east with different ethnic people and plant habitats. She is also helping to train local people in plant conservation.

Of most concern were plants where the roots are used in medicine as then the whole plant is lost and it cannot re-grow. An example of this is *Anaclycus pyrethrum* (L.) (Pellitory or Atlas daisy) where the roots give a local anaesthetic effect. There is a local trade to the markets at Marrakech and from there often exported - mainly to India. It only grows in Spain and Morocco and is vulnerable. If no measures are taken it may be lost within seven years. Although the locals do grow some from root cuttings it is becoming hard to find in the open areas where it was once common.

Another plant is *Rubia peregrina* (L.) (Wild madder) which is valued for its roots that give a red

pigment to teas from infusions, it is sold as 'tarubi'. The red 'blood' colour is supposed by the doctrine of 'similia similibus curantur' (similarity of features) to be useful in treating anaemia.

The local habitat has for thousands of years been influenced by human activities. The areas of crop cultivation have created good biodiversity at its edges. An herb grown for its leaves is *Mentha suaveolens* subsp. *timija* (Coss. ex Briq.) (Apple mint) while *Armeria alliacea* (Cav.) (Portuguese sea thrift) produces a red tea from an infusion of its roots sold as 'awghdmi'. Some plants are now hard to find as there is no management of 'common' land and they are over-harvested and over-grazed. Moves are being made to create local co-operatives to grow the herbs in nurseries. In time these may produce the plants in a sustainable way. This is an example of the Rio 1982 eco-system approach to integrating local people into the system without capitalist exploitation.

Another plant *Mentha gattefossesi* (Persian mint) is used to produce a rich aromatic tea 'tafleyout' that only grows in the Atlas Mountains. It tends to grow around sea sand ponds and snow melt ponds. Climate and cultivation changes are causing this habitat to disappear. Propagation from cuttings in gardens and nurseries is now producing a sustainable supply of the herb.

Irene then demonstrated the problems of identification. Although local people are adept at correctly identifying plants, traders were not. Herbal Medicines have been bought and analysed and in the case of Tiguendizt DNA profiling showed that only 5% was the true Moroccan herb *Anaclycus pyrethrum*, similar looking and cheaper herbs had been substituted to adulterate the medicine. Indeed some of the contaminants were toxic.

Looking at the whole Mediterranean area there over 25,000 plant species and of these 50% are endemic with scattered areas of high biodiversity often on high ground. Morocco is a priority case with its many steppes and scrubland. Endangered wildflowers include bellflowers (*Campanula mairei*), violas (*Viola dyris*) and gentians (*Gentiana atlantica*). The biodiversity is to some extent helped by the traditional method of cultivation. Agdals are valleys with the village and agricultural land at the bottom with forest on the valley sides and pasture lands higher up. Over the centuries informal rules have been adopted by communities to sustainably manage each habitat for mutual benefit.

Irene spent time in Morocco collecting the herbal lore from the older generation and then publishing the findings in a book so that children could learn about the plants now that the oral tradition of communicating knowledge is in decline.

An interested audience then asked a diverse range of questions on Irene's studies.

6 December 2016

Prof Mark Fellowes (Reading University)

By accident and by design: how our decisions affect our garden birds

Mark Fellowes is professor of Ecology and Head of the School of Biological Sciences, Reading University. He read zoology at Imperial College where he obtained his BSc in 1995 and PhD in 1998.

Three areas of urban ecology studied by his research group at Reading were highlighted in his talk: 1) Feeding wild birds; 2) The increase of the Red Kite in urban areas and 3) The effects of domestic cats on wildlife.

One of the reasons people feed wild animals, especially birds, is because of their desire to be

closer to nature. This complementary feeding not only affects the survival and reproduction of the urban wildlife that takes advantage of the food, but also on the wider ecology of the urban environment. Feeding garden birds has become an international phenomenon. In the USA 3.4 billion US Dollars were spent on complementary feeding in 2006 and £200 million in the UK in 2010. An area larger than London is needed to grow all these seeds for the UK. As a consequence of the feeding, the populations of many species of garden birds have increased, especially those of Blue and Great Tits, Goldfinches and Blackcaps, but the numbers of Greenfinches have plummeted because of disease transmission associated with the feeders. However, apparently German Blackcaps now come to Britain in the winter and survive because of all the food that is available for them here.

A survey in Reading revealed that 33% of people fed birds all year round. The most common supplements were mixed seeds and bread or food scraps. Apples (wind fall), sunflower seeds with or without husks, Niger seeds, suet and dried meal worms were also popular. However, feeding all year round appeared to be associated with a decrease in the number of insects in the area of the feeder and an increase of nest predation, especially by grey squirrels and magpies. In experiments, unguarded feeders attracted more squirrels than small birds, whereas guarded feeders (with bars) were visited frequently by small birds and hardly by squirrels. Therefore, it is better not to feed birds at all than use an unguarded feeder, as this results in more squirrels and even more nest predation. But even using a guarded feeder, the survival rate of nests close to the feeder was only 50%, which went down to 10% for nests close to unguarded feeders. So the negative points about supplementary feeding are the increased risk of predation and the possibility of increased disease transmission. The positive points are, however, a huge engagement of people with nature and helping birds to survive the winter period.

In mediaeval towns in Britain, Red Kites were a common sight and they were welcomed as scavengers, but their numbers went right down in the 1930s. After breeding programmes they were reintroduced in the Chilterns, which turned out to be the most successful reintroduction programme of wild birds ever in the UK. In the last ten years they have become a common sight in Reading, but why? To investigate this, the birds were counted for a period at different locations in Reading from dawn till dusk. They appeared to come from the North in the morning and return there in the evening. Every day 250-450 birds were counted and the total number was estimated to be around 2500. There was a strong association with residential areas and not with woods, fields or the urban centre. There would be natural food (road kills) for only twenty birds at most, so some years ago questionnaires were sent to 1% of Reading households to ask whether people were feeding those birds. The answers revealed that 4.5% of households fed Red Kites, which has now increased to 10%. They are fed with raw chicken, beef, pork, kitchen scraps, processed meat, etc. Enough food is provided by people in Reading to feed 350 Red Kites daily. When people feed them in their garden, on average twenty Red Kites fly to this area, but people have seen as many as fifty at the same time flying over houses. The proportion of human food versus natural food was analysed in the feathers of Red Kite populations in different areas in Britain by means of Stable Isotope Analysis (SIA). In Aberdeen (Scotland), the birds ate 100% wild food, but in Reading 40-50% of the calories came from food provided by people. That is a startlingly high proportion!

Domestic cats are the main predators of wild birds and they kill a huge number of prey, not only birds, but also reptiles, amphibians and small mammals. Moreover, they are responsible for at least 14% of global bird, mammal and reptile extinctions. The density of natural predators is determined by prey availability, but this is not the case with domestic cats. Even when they are fed, they still hunt and kill without needing to eat their prey. Experiments have shown that cats do not take home all their prey, only 30%. So they kill much more than their owners realise. A survey in Reading revealed that 23-26% of households own a cat and on average they have 1.54 cats per household and 463 cats per square kilometre. In Sheffield this is even higher; 1580 cats / sq km. The effects on their prey are difficult to determine, but it is likely to be a very negative effect, especially on vulnerable species. Not so much on wood mice, however, because they have so many offspring. It was shown that especially male wood mice were caught as they wander around more than the females, which are busy with their nests. So depleting the number of males does not seem to affect the mouse population very much. However, when male blackbirds are caught by cats, their nest will fail, as the young depend on being fed by both male and female parents. Reducing the predation by domestic cats depends mainly on their owners. The damage caused by

cats could be reduced by banning ownership and imposing curfews, but it would be difficult to implement such measures.

20 December 2016

Christmas Party

The Christmas party was held on 20th December. Members were served with mulled wine kindly made by Michael and José Keith-Lucas. There were two quizzes set by Lesley Hawker on Lepidoptera and on local landmarks. Jan Haseler set a tricky quiz of identifying plant species by seed or fruits. Grahame Hawker was the winner in the 'botanist' category and Fiona Brown 'non botanist'.

After the food was consumed Rob Stallard gave an illustrated wildlife survey of 2016 based on the walks he had done during the year. The competition answers and winners were then announced. Finally Laurie Haseler, who organised the photographic competition this year, revealed the category winners and presented the prizes. See below for the results and pages 33 – 34 for the photos.

.20 December 2016

Christmas Party Photographic Competition

The annual Photographic Competition at the 2016 Christmas Party attracted 67 entries, a decrease on the previous year. As in 2015, most of the categories were restricted to photos taken in the UK, but that year's single 'overseas' category was expanded to two and generalised to "UK or overseas". The standard of entries was again high, so voting presented a difficult choice for members: 28 of the photos got three or more votes for best in category, and fifteen got one or more votes for overall best picture. In two categories there was a tie for the highest number of votes, but fortuitously this was between the same pair of photographers, so honours were divided without the need for presidential arbitration.

Six different photographers appeared in the overall list of category winners. For a second year running the overall best photo competition was won by Ken White, who submitted two remarkable photos for "Three of a Kind", with a flight of avocets narrowly winning the category while a trio of Pintail drakes was voted best "Overall Photo".

Category	Entries	Winner	Comment	Subject
1. Small is beautiful(UK)	7	Fiona Brown		Banded Demoiselle
2. Three of a kind (UK)	2	Ken White		Pied Avocets
3. Nature in Action (UK)	9	Ian Esland		Chalk-hill Blues
4. Colour Prejudice (UK)	10	Ian Esland	Laurie Haseler, joint winner	Peacock
5. Pattern Perfect (UK)	8	Fiona Brown		Poppy
6. Something to make you smile (UK)	8	Laurie Haseler	Ian Esland, joint winner	Sir Peter Scott & Woodpigeon
7. Any Flora or Fungus (UK)	12	David Owens		Phallus indusiatus
8. Any Fauna (UK + Overseas)	11	Jenny Greenham		Lilac-breasted Roller
BEST OVERALL		Ken White		Drake Pintails

Presidential Address:

The Ghost of Field Trips Past

Jan Haseler

The Society's archives contain a wealth of information, chronicling past changes to the countryside around Reading. This talk looks at some of the wildlife reports from the years between 1880 and the end of the 1950s and compares them with recent field trip sightings and site records. Our first picture of a field trip was taken in August 1880, just before the founding of Reading and District Natural History Society in April 1881. The gentleman members, armed with butterfly nets, are visiting Pamber Forest. We have no record of what they saw on that occasion, but the first edition of the Reading Naturalist, published in 1949, has a series of articles about the history, geology and wildlife of Pamber Forest, near Silchester in North Hampshire. There are references to the Forest of Pamber and Eversley in 13th century documents. It is ancient woodland with heath and wood pasture, overlying sands and clays of the Bagshot Beds. Two streams carve valleys through the forest, cutting down to the underlying London Clay. The forest is predominantly oak *Quercus*, with areas of Hazel *Corylus avellana* and Sweet Chestnut *Castanea sativa* coppice, plantations of Scots Pine *Pinus sylvestris* and Douglas Fir *Pseudotsuga menziesii*, and wide rides with flowery margins. The drier sandy areas have heather, Bilberry *Vaccinium myrtillus* and birch *Betula*, while in the wetter stream valleys are willows *Salix* and Alder *Alnus glutinosa*. Wild Service-tree *Sorbus torminalis* and Crab Apple *Malus sylvestris* are two of the many ancient woodland indicator species in the forest. When the ride edges are cut back, some of the smaller flowering trees, such as Rowan *Sorbus aucuparia*, Crab Apple and Wild Service-tree are left uncut. Dense thickets of Alder Buckthorn *Frangula alnus* grow back along the cleared ride edges. Both Pedunculate *Quercus robur* and Sessile Oaks *Q. petraea* are found in the Forest, with the Sessile Oaks in the most acid locations. The Aspen *Populus tremula* is the caterpillar foodplant of the nationally scarce Light Orange Underwing *Archiearis notha* moth and of the spectacular big Blue Underwing *Catocala fraxini*, which is being recorded with increasing frequency at Pamber.

In late March and early April, drifts of Wild Daffodils *Narcissus pseudonarcissus* can be found in Mariner's Copse in the south-west corner of the Forest. Spring flowers in a typical Pamber Copse include Wood Anemones *Anemone nemorosa*, Common *Viola riviniana* and Early Dog-violets *V. reichenbachiana*, Wood-sorrel *Oxalis acetosella* and Wood Spurge *Euphorbia amygdaloides*. What are missing, apart from round the outer edge of the Forest, are Bluebells *Hyacinthoides non-scripta*. They are intolerant of grazing and their absence probably reflects past use of the Forest.

According to the historic Englefield Estate papers, within the Forest were 15 separate copses and "in time out of mind", areas of coppice were protected with fences which had holes that let the pigs pass through. A few years before the coppice was cut, gates were left open for the commoners' cattle. In her article in Reading Naturalist No 1 about the plants of the Pamber area, the Botanical Recorder writes that Lily-of-the-Valley *Convallaria majalis* can be found just inside the wood which borders Silchester Common. She states that it is well established, but seldom produces many blooms. It is still there today, with plentiful leaves, but rarely with any flowers. Marsh Violets *Viola palustris* grow in the adjoining mire. There are occasional recent records of Greater Butterfly-orchid *Platanthera chlorantha* from copses within the Forest. Wood Horsetail *Equisetum sylvaticum*, on the Hampshire Rare Plants register, is another local rarity. One of the delights of Pamber in summer is its ride-side flowers with their attendant insects. Betony *Stachys officinalis* is abundant in July and Sneezewort *Achillea ptarmica* can be found in the damper places. Common Cow-wheat *Melampyrum arvense* is the caterpillar food-plant of the nationally scarce Lead-coloured Pug moth *Eupithecia plumbeolata*. Bitter-vetch *Lathyrus linifolius* and Tutsan *Hypericum androsaemum* are ancient woodland indicator species of more acid soils. In late summer, Devil's-bit Scabious *Succisa pratensis* is a magnet for bees and butterflies.

The eastern section of the forest has been fenced and dense encroaching birch has been cut back. It is grazed by cattle and is reverting to wood pasture. The warm, sheltered site with a supply of cattle dung is ideal for invertebrates and reptiles, including Adders *Vipera berus* and Common Lizards *Lacerta vivipara*. Tubular Water-dropwort *Oenanthe fistulosa*, also in the Hampshire Rare Plants Register, can be found in the wetter ditches of the small damp meadow which adjoins the forest on the east side. All the rarer plants which were listed in Reading Naturalist No 1 can still be found there today. The 1949 article on the birds of Pamber Forest reported that all 3 British woodpeckers were resident. Lesser Spotted Woodpecker *Dendrocopos minor* can still be found, particularly around the stream valley in the south-east of the forest.

What brought the naturalists of 1880 to Pamber was almost certainly the Purple Emperor *Apatura iris*. It is a large and scarce woodland butterfly and Pamber has always been one of the best places to see it. On the wing at the same time are White Admirals *Limenitis camilla* and numerous Silver-washed Fritillaries *Argynnis paphia* and both were seen on the Society's 125th anniversary visit to Pamber in July 2006. The 1949 article on the insects of Pamber Forest does not mention the High Brown *A. adippe*, Pearl-bordered *Boloria euphrosyne* or Small Pearl-bordered Fritillary *B. selene* butterflies. In the 1940s, they were abundant in coppiced woodlands, using Common Dog-violet as the caterpillar foodplant. They suffered a massive decline in the second half of the 20th century, as woodland management declined, coppicing ceased, conifer plantations grew up and woods became dark and unsuitable. According to 'The Butterflies of Hampshire', the High Brown Fritillary survived at Pamber until at least 1968. The Pearl-bordered Fritillary liked the early stages of coppice succession, typically being found in the first one or two years after cutting. It had disappeared by the mid 1980s. The Small Pearl-bordered Fritillary tended to use slightly older coppice regrowth and was found in damper locations with more grass. It was last recorded on Silchester Common in 2007.

In 1933, the Society published 'Questiones Naturales', a booklet with sections on different aspects of the wildlife of the area. Red Squirrels *Sciurus vulgaris* were becoming quite rare but Stoats *Mustela erminea* and Weasels *M. nivalis* were common, with Weasels frequently being seen in gardens in the outskirts of Reading. Badgers *Meles meles* were not found in the immediate neighbourhood of Reading, with the nearest being near Newbury. Adders were abundant to the south of Reading. Corncrakes *Crex crex* frequented the low-lying water-meadows of the Kennet. Birds of prey were not numerous, due to culling by gamekeepers, but the Little Owl *Athene noctua* had increased rapidly, threatening the existence of many small birds. The Large Tortoiseshell *Nymphalis polychloros* was described as a once-common butterfly which was now extremely rare. Its gregarious caterpillars fed on Elm *Ulmus* and were particularly vulnerable to parasites. It was reported from Pamber in 1948, but probably died out in our area soon after this. The Comma *Polygona c-album*, on the other hand, was enjoying a period of range expansion.

According to Volume 1 of the Reading Naturalist, an issue that was worrying members of the Society in 1948 was the cutting down of broad-leaved woodland. In the decades after the Second World War, Britain destroyed more than a third of its broad-leaved woodland. In the botany report

for 1948, 2 woods were mentioned – the Snowdrop Wood near the Loddon at Arborfield and Ashridge Wood near Hampstead Norreys. The Society visited Ashridge Wood in June 2009 on a field trip led by Malcolm Storey. In her report, the Botanical Recorder mentioned five rare plants that were of particular concern. On our field trip, we saw two of them – Narrow-leaved Everlasting-pea *Lathyrus sylvestris* and the Nationally Scarce Spiked Star-of-Bethlehem *Ornithogalum pyrenaicum*. The latter is an impressive plant, growing up to 1 metre tall when it flowers in June. The unopened flower spikes were formerly sold for eating as Bath Asparagus. Two of the other rare plants, Greater Burnet-saxifrage *Pimpinella major* and Wood Vetch *Vicia sylvatica*, are extinct at Ashridge Wood, but according to 'The Flora of Berkshire', Meadow Saffron *Colchicum autumnale* can still be found there. On our field trip, we also saw some interesting arable weeds in the field margins, including Small Toadflax *Chaenorhinum minus* and Dwarf Spurge *Euphorbia exigua*.

According to the Recorder for Entomology, Winter Moths *Operophtera brumata* and Mottled Umbers *Erannis defoliaria* were in plague proportions in 1948. They were so numerous that in many orchards, hardly a leaf could be seen and the hedgerow and woodland trees suffered similarly. These are an interesting pair of moths, because the males are on the wing in the dead of winter and the females are flightless. From about 1948 onwards, Gadwall *Anas strepera* was reported more regularly. The first local record had been in January 1915, when a pair were shot at Maiden Erleigh.

A recurring theme in the early 50s was the ploughing of the chalk and the loss of its orchids. Following wartime rationing, there was a great push to increase Britain's food production, and more powerful tractors opened up previously impossible terrain. Reading Naturalist No 5, with records from 1952, reports on the loss of the Musk Orchid *Herminium monorchis* from the Freedom Paddock at what became the Warburg Reserve of the Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust (BBOWT) at Bix Bottom. Reading Naturalist No 7 describes how on the Society's excursion to Collin's End and Hardwick Slopes in September 1954, members were shocked to find that the south slope overlooking the Thames had been ploughed. The Man Orchids *Aceras anthropophorum* at Ipsden were more fortunate. Reading Naturalist No 11 states that they were in great danger of extermination by pigs. But they have survived on a private site which is monitored by our South Oxfordshire botanists. Reading Naturalist No 3, with records from 1950, contains an account of the ploughing of the Monkey Orchid *Orchis simia* slope at Hartslock, a BBOWT reserve on the steep south-facing hillside above the Thames near Goring. When Mr Smallcombe, Vice-President of the Society and the Director of Reading Museum, visited the site to survey the damage, he found that a large piece of turf, turned up by the plough and containing 2 plants, had been hidden in an adjacent hedge. This was sent to Kew, in the hope that the scientists there could preserve the Monkey Orchid. According to warden Chris Raper, it was the bottom field at Hartslock which was ploughed. The resulting crops did so badly that the field soon reverted to grass. The Monkey Orchids have continued to come up there in very low numbers. Where we see them now in good numbers is the top field. Legend has it, that locals saved the colony by moving plants from the bottom to the top field. Chris is sceptical about this tale, and thinks that they were already growing in the top field.

Chris Raper and Malcolm Storey led a field trip to Hartslock on 26 May 2012, when the Monkey Orchids were in full flower. Two Lady Orchids *O. purpurea* were still in flower, but a little past their best. They were first recorded on the reserve in about 1997 and DNA analysis shows that they probably originated from Provence. The hybrid offspring of the Monkey and Lady Orchids *O. x angusticruris*, first seen in 2002, are going from strength to strength. They are considerably taller than either of their parents and share characteristics from both. A small patch of Downy-fruited Sedge *Carex filiformis*, which is on the Oxfordshire Rare Plants Register, was seen near the bottom of the slope. Another sighting was the metallic blue Down Shieldbug *Canthophorus impressus*, whose host plant, the semi-parasitic Bastard-toadflax *Thesium humifusum*, is also on the Oxfordshire Rare Plants Register. The Society had another visit to Hartslock on a hot and sultry night in July 2014, when Norman Hall organised the annual moth-trapping night there. Highlight of the 180 species recorded was a Splendid Brocade *Lacanobia splendens*, a new moth for Oxfordshire. It was first recorded in Britain in 2003 on the south coast and is spreading inland.

Reading Naturalist No 6 reports that the highlight of 1953 was the rediscovery by member Vera

Paul of the Ghost Orchid *Epipogium aphyllum* in the Oxfordshire wood where she had originally found it as a schoolgirl. On 30th June 1931, she and her father had been looking for Fly *Ophrys insectifera* and Butterfly Orchids when she saw an orchid which she did not recognise growing out of the middle of an old Beech *Fagus sylvatica* stump. She picked it and took it to Reading Museum, where it was photographed and preserved. It was the tenth specimen to be found in the British Isles and its photograph was used by Summerhayes to illustrate the species account in his book 'Wild Orchids of Britain' in the Collins New Naturalist series. The Ghost Orchid hit the limelight nationally in 1953 when a new colony of 13 plants was found in Buckinghamshire. Vera then found another tiny specimen, just 2½ inches high, in her wood and careful removal of beech leaves revealed two new non-flowering plants several feet away. After the publication of the latest discovery in the Daily Express, Vera appeared in the television programme 'Guess my Story' at the Radio Exhibition in Earl's Court. Ten years later, in September 1963, Vera found five more Ghost Orchid flower spikes near the original beech stump.

The Ghost Orchid has no leaves or chlorophyll. It was first found in Herefordshire in 1854, with three more specimens being found near the Welsh border in the years to 1910. According to Summerhayes, in June 1923, 2 specimens of the Ghost Orchid were found by a local girl in an Oxfordshire beech wood not far from Henley-on-Thames and prominent botanist Dr George Claridge Druce discovered a further one there in July. 'The Flora of Oxfordshire' however states: 'First record in a wood near Henley 1924, Druce saw two, or possibly 3 plants in all.' It also mentions Vera's finds and another colony in a wood near Rotherfield Greys. Finally, it mentions Miss Holly in 1926 and 1950 for a location near Henley. The 'local girl' was Eileen Holly, who was President of the Society for the years 1986-7. Although Vera was given credit for her discovery, the credit for Eileen's discovery was ascribed to others.

Reading Naturalist No 6 reports that in 1953, Wrynecks *Jynx torquilla* reared 9 young from 2 nests in a Caversham garden. According to 'The Birds of Berkshire', the last known breeding record of Wryneck in Berkshire was in 1956. Part of the decline was attributed to the loss of large old orchards to building development and the occupation of remaining suitable nest holes by other birds. Reading Naturalist No 8 reports that in 1955, 2 pairs of Red-backed Shrikes *Lanius collurio* reared young at Norcot sand-pit in Tilehurst. The last known breeding record of Red-backed Shrike in Berkshire was at Shinfield in 1957. First recorded in the 1930s, Canada Geese *Branta canadensis* were increasing and Reading Naturalist No 9 reports that they were breeding at Aldermaston, Sonning and Longmoor.

Reading Naturalist No 10 reports that on the visit to Hazeley Heath in August 1957, Round-leaved *Drosera rotundifolia* and Oblong-leaved Sundew *D. intermedia* and Marsh Clubmoss *Lycopodiella inundata* were seen, with the sundews plentiful and the Marsh Clubmoss scarce. Hazeley Heath, near Hartley Wintney in north Hampshire, is a 175ha SSSI of partially wooded heathland within the Thames Basin Heaths Special Protection Area. It lies on a ridge of Bracklesham Sands which is capped by Plateau Gravel, while below a spring line on the eastern slopes are interesting wet heath and mire plant communities. It was formerly part of the historic forest of Pamber and Eversley. The Society returned there in July 2015 on a field trip led by Julia Cooper and Ian Duddle. The two sundews are still present and the best places to find them are on scrapes where dense tufts of Purple Moor-grass *Molinia caerulea* have been cleared away, exposing bare peat. Marsh Clubmoss, which is on the Hampshire Rare Plant Register, has not been recorded at Hazeley Heath in recent times. Swarms of Heath Spotted-orchids *Dactylorhiza maculata* have colonised some of the older scrapes, together with plants such as Meadow Thistle *Cirsium dissectum* and Bog Asphodel *Narthecium ossifragum*. On our 2015 field trip, Common Lizards were basking on the boardwalk and a large female Adder was curled up in the vegetation nearby. The northern section, bought by the RSPB in 2013, is predominantly drier heathland. Wide curving pathways have been carved through the densest blocks of Gorse *Ulex europaeus* and vigorous young growth attracts birds such as Dartford Warbler *Sylvia undata* and Stonechat *Saxicola torquata*. Tree Pipits *Anthus trivialis*, with their distinctive parachuting display flight, are summer visitors to the heath and Woodlark *Lullula arborea* and Nightjar *Caprimulgus europaeus* have also been recorded. Silver-studded Blue *Plebejus argus* butterflies favour the sheltered mown pathways through the Gorse and Grayling *Hipparchia semele* is another specialist heathland butterfly which we saw on our field trip.

Reading Naturalist No 10 reports that Himalayan Balsam *Impatiens glandulifera* was recorded on an island in the Thames above Tilehurst Station and on the north bank of the Thames near Reading. It had first been recorded at Hambleden in 1946 and appeared to be spreading. In Reading Naturalist No 11, the Recorder for Ornithology describes how he watched adult Cirl Buntings *Emberiza cirlus* feeding fully grown young birds on the lawn of his garden at Cleeve, near Goring. According to 'The Birds of Berkshire', the last sighting of Cirl Bunting was a singing male at Upper Woolhampton in March 1981.

This review of the Society's archives has reached the end of the 1950s, a time of great change in the countryside around Reading. It has been a story of new and lost species, but with the gains outweighed by the losses. I have been left with a great admiration for our predecessors at Reading and District Natural History Society, with their extensive knowledge of the local countryside and their witness to the changes that were happening there.

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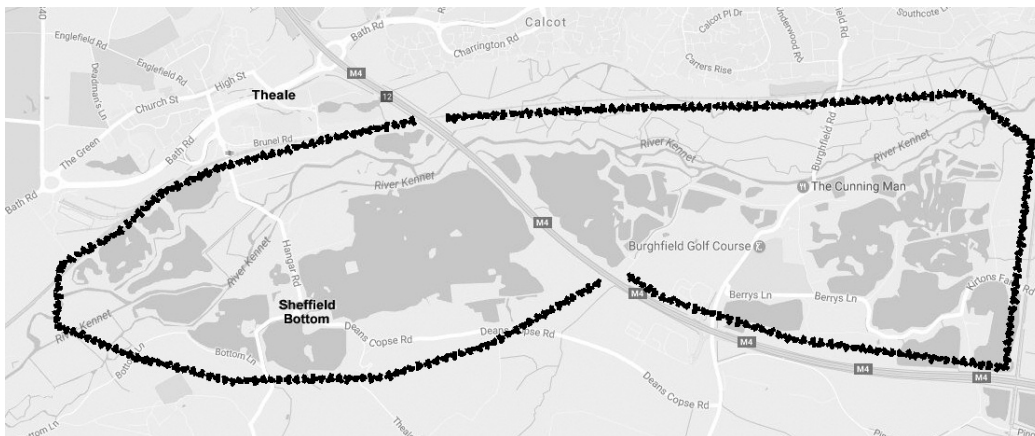
Theale Area Nightingale & Warbler Survey 2016

Richard Crawford, (TABCG)

I have been birding in the Theale & Burghfield gravel pits area for 35 years, and during that time I have seen the habitat change from bare gravel extraction pits to reed-fringed lakes, scrub and young woodland. Of course, the species of birds found at these sites has also changed; where once open, muddy pools attracted a variety of waders such as Redshank, Dunlin, Ruff and Greenshank, the scrub-covered margins are now home to an array of warblers and perhaps most importantly, Nightingales.

It became evident some years ago that this area was becoming a haven for a number of passerines, so in 1998 it was decided that a detailed survey was required to ascertain the population of each species of warbler, together with some other species whose dwindling numbers in this country were causing concern, these being Song Thrush, Nightingale, Reed Bunting and Bullfinch. As I had previous experience in this type of survey work (farmland birds on Englefield Estate), the job of organising the survey fell on my lap.

The survey area extended from Wigmore Lane, Theale in the west to the Reading – Basingstoke rail line in the east, with the northern boundary more or less following the Reading – Newbury rail line and the southern boundary taking in Pingewood, Hosehill Lake and Bottom Lane, Theale. I enlisted a team of volunteers from within the **Theale Area Bird Conservation Group** and each was allocated a site within the core area to record on maps every target species, whether it be sighting, call or song. At least four early morning visits were to be made between mid-April and mid-May. At the end of the survey the maps were given to me to plot every position on a separate species map, thus enabling me to calculate the number of singing males or territories for each species.



Map of the Theale & Burghfield gravel pit complex Nightingale & warbler survey area

Follow-up surveys were carried out in 2005 and 2012, and because of the threat of proposed development on a large part of the area another survey was carried out in 2016. The table below shows the results.

	<u>Number of singing males/territories</u>			
	<u>1998</u>	<u>2005</u>	<u>2012</u>	<u>2016</u>
Cetti's Warbler	0	7	19	23
Grasshopper Warbler	3	0	0	0
Sedge Warbler	179	120	76	70
Reed Warbler	67	73	75	50
Lesser Whitethroat	9	5	12	16
Common Whitethroat	84	87	76	78
Garden Warbler	77	111	141	148
Blackcap	193	201	406	352
Chiffchaff	118	104	212	138
Willow Warbler	99	78	52	31
Nightingale	59	57	109	86
Song Thrush	40	54	111	121
Bullfinch	-	16	5	7
Reed Bunting	69	81	58	23
Total annual No. of territories	<u>997</u>	<u>994</u>	<u>1352</u>	<u>1143</u>

As you can see from the table, some species are doing very well whilst others are struggling. Some of the increases and declines are due to habitat change; as reed beds turn to willow scrub species such as Sedge Warbler, Reed Warbler and Reed Bunting no longer find this habitat attractive, but species such as Cetti's Warbler do. Common Whitethroat numbers have remained more or less constant whilst Lesser Whitethroat numbers vary from year to year. Grasshopper Warbler has always been a scarce passage migrant and occasional breeder, and although none were located on survey visits in 2016 several were heard in spring. Blackcaps and Chiffchaffs have always been numerous but the survey shows significant increases over the years. Garden Warbler is also

surprisingly abundant, but all three of the last mentioned species require similar habitat, and the gravel pits provide plenty of it. The Willow Warbler population in southern Britain has been on a downward slide for some years now and this is reflected perfectly in our survey results. In fact, the peak number of 31 singing males in 2016 may be misleading as many of these were thought to be passage migrants passing through, few being heard during the summer. Song Thrush and Bullfinch were also surveyed because of concern regarding their diminishing numbers, and whilst the Song Thrush population locally has made a full recovery Bullfinch numbers are still very low.

Finally we come to Nightingale, one of the most enigmatic birds of the country, and one whose population has nationally declined considerably since the latter half of the 20th century. The good news is that the Theale & Burghfield gravel pits has actually seen a large increase in what was already a healthy population, and is one of the best places in the country to see and hear them. The bad news is that much of their favoured habitat is under constant threat from development, so the future is uncertain for Nightingales and other species that call the Theale & Burghfield gravel pits home.

Saving our Swifts

Colin Wilson, Trustee, Blackwater Valley Countryside Trust

Numbers of breeding Swift *Apus apus* are estimated to have fallen by almost 50% over the last 20 years. Two likely factors are [1] the loss of nesting places as we seal up our buildings or build them without suitable holes and [2] the reduction in invertebrates in our environment. What can be done?

The widespread use of pesticides has undoubtedly caused a loss of invertebrates but a small improvement could be made by planting insect loving plants in our gardens, leaving spaces to go wild and to help reduce the constant sanitisation of our environment. Bramble, nettles and teasels amongst so many others, are vital to the insects. Wild and weeds are good! The other thing to do is to change the design our houses and house improvements. It doesn't need a big change. There are many 'bricks' available now to insert into old and new properties specially designed for Swifts to breed in. They cost just a few pounds and need no special building skills or conditions to fit. Alternatively there is a full range of Swift boxes available suitable for fitting under eaves and on walls in the right places.

In the Blackwater Valley , which forms the border of the three counties of Hampshire, Surrey and Berkshire, the **Blackwater Valley Countryside Trust** are starting a project to help swifts. The first stage is to find the current breeding populations. This just needs birdwatchers to switch their focus to towns on summer evenings and locate the screaming parties of swifts and follow them to their nesting sites. If you are in our valley (eg Sandhurst, Yateley, Finchampstead, Eversley or Swallowfield) this summer please enter your Swift records here <http://www.bvct.org.uk/swift-project>

Once the populations have been located, the Trust plans to survey the local buildings for suitable nest sites and speak to the owners about installing nest boxes. Many owners will be sufficiently interested to purchase their own boxes. In other cases the Trust has funds set aside to pay for the nest boxes. Another aim of the project is to engage local planning authorities. They are able to add conditions to planning applications including the provision of nest sites, for example, by way of the building bricks previously mentioned. They might also ask for a Swift Tower to be installed on a suitable new larger development.

Look up www.swift-conservation.org or the Maidenhead, Cookham and Marlow Swift Group www.helpourswifts.org.uk for inspiration and advice. It's time Reading had it's own Swift project so how about starting one of our own in this area ?

www.bvct.org.uk

colin.wilson@bvct.org.uk

RECORDER'S REPORT FOR BOTANY 2016

Renée Grayer

This year the Botany Report is different from that of previous years. Traditionally, the plant species recorded by the members of the Society were arranged according to their class and family, which were in the same sequence as those in the New Flora of the British Isles by C.A. Stace. However, in the 3rd edition of this Flora (2010), the sequence of the families changed drastically to reflect the newest insights into the relationships among plant families based on DNA research. Many species are even allocated to different families in this edition of the Flora. In contrast, most popular Floras still follow the old conventions of family sequences and names, so that it has become difficult for people to find the species that interest them in the family-based list according to Stace's 3rd edition. Therefore I have now arranged the plant species according to the alphabetical sequence of the scientific names. This will make the list also more compatible with current plant databases such as those of the Botanical Society of Britain and Ireland (BSBI) and the Thames Valley Environmental Records Centre (TVERC). Below, the 3rd edition of C.A. Stace's New Flora of the British Isles (2010) is still followed for the scientific and British names of the plant species and their families (given in brackets). Nearly all species belong to the class of the Flowering Plants (Angiospermae), but one species belongs to the Conifers (Gymnospermae) and a couple to the Ferns and Allies (Pteridophyta). Only in the latter two cases the name of the class is given in addition to the family name.

- Anacamptis pyramidalis - Pyramidal Orchid (Orchidaceae) (RDNHS walk). SU521639 (RS)
19 June 16. Crowsley Park, about 20 plants. SU730797 (JW)
31 June 16. Field near Kent's Hill, Sonning Common, 3 plants. SU725808 (JW)
- Arabis hirsuta - Hairy Rock-cress (Brassicaceae)
21 May 16. The Holies, Streatley, about 20 plants. SU592798 (JH)
27 May 16. The Holies, Streatley. SU590800 (JH)
- Atropa belladonna - Deadly Nightshade (Solanaceae)
7 Aug 16. Chinnor Nature Reserve (RDNHS trip). SP76640054 (MT)
- Berberis darwinii - Darwin's Barberry (Berberidaceae)
16 Apr 16. Tidmarsh, alongside road. SU634748 (JL)
- Berberis thunbergii - Thunberg's Barberry (Berberidaceae)
20 Jun 16. Tilehurst, Cornwell Copse. SU654745 (JL)
- Berberis vulgaris - Barberry (Berberidaceae)
20 Jun 16. Sulham, a dozen mature bushes in two hedgerows. SU643743 (JL)
- Bidens tripartita - Trifid Bur-marigold (Asteraceae)
17 Aug 16. Mill Green, River Enborne
- Buxus sempervirens - Box (Buxaceae)
24 Apr 16. Boxgrove Wood. SU65117266 (RS & RG)
- Calystegia pulchra - Hairy Bindweed (Convolvulaceae)
20 Jul 16. Greywell Pumping Station (RDNHS trip). SU722513 (SKW)
- Campanula glomerata - Clustered Bellflower (Campanulaceae)
21 Sep 16. Hartslock BBOWT Reserve (RDNHS walk). SU615795 (IE)
7 Aug 16. Chinnor Nature Reserve (RDNHS trip). SP7651400679 (MT)
- Campanula trachelium - Nettle-leaved Bellflower (Campanulaceae)
30 Jul 16. Watts Bank. SU331767 (JL)
- Cardamine amara - Large Bitter-cress (Brassicaceae)
6 May 16. Simm's Copse, Mortimer West End. SU645637 (JH)
- Carex echinata - Star Sedge (Cyperaceae)
28 May 16. Silchester Common (RDNHS trip). SU622622 (GS)
- Centaurium pulchellum - Lesser Centaury (Gentianaceae)
25 Aug 16. Paices Wood. SU58436371 (JL)
- Cephalanthera damasonium - White

- Helleborine (Orchidaceae)
21 May 16. The Holies, Streatley, 2 flower spikes. SU593800 (JH)
23 May 16. Lambourn Woodlands, Cleeve Hill, private land. SU333766 (JL)
13 Jul 16. Near chalk pit, Great Bottom Wood. SU704825 (JW)
13 Jul 16. Oveys Wood, by wood bank. SU704827 (JW)
7 Aug 16. Chinnor Nature Reserve (RDNHS trip). SP76760073 (MT)
- Cirsium dissectum - Meadow Thistle (Asteraceae)
20 Jun 16. Hazeley Heath. SU764580 (JH)
- Convallaria majalis - Lily-of-the-valley (Asparagaceae)
25 May 16. Silchester Common. SU619621 (JH)
- Dactylorhiza maculata - Heath Spotted-orchid (Orchidaceae)
20 Jun 16. Hazeley Heath, in good numbers. SU764580 (JH)
- Dactylorhiza praetermissa - Southern Marsh-orchid (Orchidaceae)
20 Jul 16. Greywell Pumping Station (RDNHS trip). SU723514 (SKW)
- Daphne laureola - Spurge-laurel (Thymelaeaceae)
16 Mar 16. Hardwick Woods (RDNHS walk). SU656780 (IE)
- Dipsacus pilosus - Small Teasel (Dipsacaceae)
17 Aug 16. Mill Green, River Enborne (RDNHS walk). SU522639 (RS)
- Drosera intermedia - Oblong-leaved Sundew (Droseraceae)
14 Jul 16. Hazeley Heath. SU764576 (JH)
- Drosera rotundifolia - Round-leaved Sundew (Droseraceae)
14 Jul 16. Hazeley Heath. SU764576 (JH)
- Epipactis helleborine - Broad-leaved Helleborine (Orchidaceae)
6 Jul 16. Wishmoor, one tall flowering stem. SU874622 (JL)
6 Jul 16. Wildmoor Heath. SU846628 (JL)
13 Aug 16. California Country Park. One specimen, picked a week later. SU784651 (RG)
- Epipactis leptochila - Narrow-lipped Helleborine (Orchidaceae)
18 Jul 16. Sulham Woods. SU649757 (RS)
22 Aug 16. High Tree Drive, Earley, Reading, several specimens. SU747725 (RG & AB)
- Epipactis palustris - Marsh Helleborine (Orchidaceae)
20 Jul 16. Greywell Pumping Station (RDNHS trip). SU723514 (SKW)
- Epipactis phyllanthes - Green-flowered Helleborine (Orchidaceae)
13 Jul 16. Great Bottom Wood, near chalk pit (RDNHS walk). SU704825 (JW)
- Epipactis purpurata - Violet Helleborine (Orchidaceae)
13 Jul 16. Great Bottom Wood, edge of chalk pit (RDNHS walk). SU703828 (JW)
7 Aug 16. Chinnor Nature Reserve (RDNHS trip). SP766002, SP766003, SP767003 (MT)
- Filipendula vulgaris - Dropwort (Rosaceae)
15 June 16. Aston Upthorpe Downs (RDNHS walk). SU546839 (JH)
- Galium uliginosum - Fen Bedstraw (Rubiaceae)
20 Jul 16. Greywell Pumping Station (RDNHS trip). SU722514 (SKW)
- Gentianella amarella - Autumn Gentian (Gentianaceae)
7 Aug 16. Chinnor Nature Reserve (RDNHS trip), many specimens in bud. SP766005 (MT)
- Gentianella anglica - Early Gentian (Gentianaceae)
27 May 16. The Holies, Streatley, one flower each at SU590800 and SU594799 (JH)
- Gymnadenia densiflora - Marsh Fragrant-orchid (Orchidaceae)
20 Jul 16. Greywell Pumping Station (RDNHS trip). SU723514 (SKW)
- Helleborus foetidus - Stinking Hellebore (Ranunculaceae)
15 Apr 16. White Shute, Lambourn Woodlands. SU331764 (JL)
- Hesperis matronalis - Dame's-violet (Brassicaceae)
7 Jun 16. Furze Hill (Pinewood), Hermitage, about 30 along bank. SU512741 (JL)
17 Aug 16. RDNHS walk to Crookham. SU522639 (RS)
- Hippuris vulgaris - Mare's-tail (Hippuridaceae)

20 Jul 16. Basingstoke Canal (RDNHS trip).
SU720514 (SKW)

Hypericum androsaemum - Tutsan
(Hypericaceae)

21 Jul 16. Pamber Forest. SU617617 (JH)

Hypericum elodes - Marsh St John's-wort
(Hypericaceae)

28 May 16. Silchester Common (RDNHS
trip). SU622622 (GS)

Hypopitys monotropa - Yellow Bird's-nest
(Ericaceae)

13 Jul 16. Great Bottom Wood, one plant
only near chalk pit. SU704825 (JW)

14 Jul 16. Sulham Woods, 8 flower spikes.
SU6493575782 (RS)

24 Jul 16. Road by Rumerhedge Wood.
SU678817 (JW)

11 Aug 16. Near Crocker End. SU709863
(JW)

Iberis amara - Wild Candytuft (Brassicaceae)
15 June 16. Aston Upthorpe Downs (RDNHS
walk). SU546839 (JH)

Juniperus communis - Juniper
(Gymnospermae / Cupressaceae)

7 Aug 16. Chinnor Nature Reserve (RDNHS
trip). SP767006, SP765007

Kickxia spuria - Round-leaved Fluellen
(Veronicaceae)

1 Sep 16. Between Eastbury and East
Garston. SU3511476323 (RS)

Lathyrus latifolius - Broad-leaved Everlasting-
pea (Fabaceae)

11 Sep 16. Fobney Island south shore.
SU698710 (JL)

Lathyrus linifolius - Bitter-vetch (Fabaceae)
8 Jun 16. Pamber Forest. SU612607 (JH)

Lathyrus nissolia - Grass Vetchling
(Fabaceae)

5 Jun 16. St Marys Woodlands. SU326748
(JL)

6 Jun 16. Fobney Island, strong patch by
viewing screen. SU701700 (JL)

7 Jun 16. Furze Hill (Pinewood), Hermitage.
SU512741 (JL)

25 Jun 16. Woolhampton Gravel Pits, in
quantity. SU569660 (RF)

Leucojum aestivum - Summer Snowflake
(Amaryllidaceae)

3 Apr 16. Dinton Pastures. SU766721 (DO)

Lythrum portula - Water-purslane
(Lythraceae)

25 Jul 16. Pond north of Stoke Row.
SU681841 (JW)

Mentha pulegium - Pennyroyal (Lamiaceae)

4 Jul 16. California Country Park, many
specimens near lake. SU78476514 (RG >)

Mentha x villosa - Apple Mint (Lamiaceae)

5 Aug 16. Lambourn, patches. SU335795
(JL)

Narcissus pseudonarcissus - Wild Daffodil
(Amaryllidaceae)

27 Mar 16. Pamber Forest, in flower.
SU611601 (JH)

20 Apr 16. Beenham churchyard, past their
best (RDNHS walk). SU590684 (RS)

Neottia nidus-avis - Bird's-nest Orchid
(Orchidaceae)

13 Jul 16. Great Bottom Wood, near chalk pit
(RDNHS walk). SU704825 (JW)

Neottia ovata - Common Twayblade
(Orchidaceae)

23 May 16. Lambourn Woodlands, Cleeve
Hill, private land. SU333766 (JL)

20 Jul 16. Greywell Pumping Station
(RDNHS trip). SU723514 (KSW)

Oenanthe fistulosa - Tubular Water-dropwort
(Apiaceae)

3 Jul 16. Pamber Forest. SU620614 (JH)

Ophioglossum vulgatum - Adder's-tongue
(Pteridophyta / Ophioglossaceae)

15 Jun 16. Kings Barn Farm, Medmenham
(RDNHS trip). SU81248490 (SR & AP)

Ophrys apifera - Bee Orchid (Orchidaceae)

8 Jun 16. Clayfield Copse. SU726772 (JL)

31 June 16. Field near Kent's Hill, Sonning
Common, more than 20. SU725808 (JW)

Orchis mascula - Early-purple Orchid
(Orchidaceae)

20 Apr 16. Beenham Churchyard, at least 11
specimens (RDNHS walk). SU589683 (RS)

24 Apr 16. Boxgrove Wood. SU64997312
and SU65207259 (RS & RG)

8 Jun 16. Clayfield Copse, 3 plants, no sign
of earlier flowering. SU725774 (JL)

Ornithogalum umbellatum - Star-of-Bethlehem
(Asparagaceae)

17 May 16. Bramshill. SU75866197 (NH)

Orobanche hederæ - Ivy Broomrape
(Orobanchaceae)
18 Jul 16. Harris Garden, University of
Reading. SU73707144 (RG)

Osmunda regalis - Royal Fern (Pteridophyta /
Osmundaceae)
14 Jul 16. Hazeley Heath. SU750584 (JH)

Papaver argemone - Prickly Poppy
(Papaveraceae)
15 Jun 16. Lowbury Hill (RDNHS walk).
SU539823 (JH)

Papaver dubium - Long-headed Poppy
(Papaveraceae)
15 Jun 16. Lowbury Hill (RDNHS walk).
SU539823 (JH)

Picris hieracioides - Hawkweed Oxtongue
(Asteraceae)
21 Sep 16. Hartslock BBOWT Reserve
(RDNHS walk). SU615795 (IE)

Pilosella aurantiaca - Fox-and-cubs
(Asteraceae)
8 Jun 16. Clayfield Copse, two patches.
SU726772 (JL)

Potamogeton polygonifolius - Bog Pondweed
(Potamogetonaceae)
28 May 16. Silchester Common (RDNHS
trip). SU622622 (GS)

Potentilla anglica - Trailing Tormentil
(Rosaceae)
19 Jun 16. Crowsley Park. SU732796 (JW)

Ruscus aculeatus - Butcher's-broom
(Asparagaceae)
17 Mar 16. Cornwell Copse, Tilehurst.
SU657742 (JL)
24 Apr 16. Boxgrove Wood. SU65127328
(RS & RG)
26 May 16. Sulham Wood, one clump, 2 m
square. SU64767476 (JL)
21 Sep 16. Hartslock Woods (RDNHS walk).
SU616794 (IE)
28 Oct 16. Sulham . SU643742 (JL)

Saxifraga granulata - Meadow Saxifrage
(Saxifragaceae)
16 Apr 16. Winter Hill, in bud (RDNHS trip).
SU883866 (MK)
20 Apr 16. Upper Woolhampton churchyard
(RDNHS walk). SU577676 (RS)

Senecio sylvaticus - Heath Groundsel
(Asteraceae)
23 Nov 16. Holdens Firs, Mortimer (RDNHS
walk). SU645653 (JH)

Solanum vernei - Purple Potato (Solanaceae)
25 Jul 16. In rose bed in Whiteknights. Later
in the year weeded. SU73407164 (RG)

Sorbus torminalis - Wild Service-tree
(Rosaceae)
17 Mar 16. Cornwell Copse, Tilehurst.
SU657741 (JL)
28 May 16. Pamber Heath (RDNHS trip).
SU61676201 (GS)
19 Oct 16. Bradfield, Rushall Farm.
SU580726 (JL)
19 Oct 16. Hosehill LNR, SU65186963,
SU64896946 and SU64916951 (JL)
6 Nov 16. Clayfield Copse, 2 mature and 4
young trees. SU723770 (JL)

Stachys x ambigua - Hybrid Woundwort (*S.*
sylvatica x *S. palustris*) (Lamiaceae)
3 Jun 16. East Garston, 10 m stretch in
hedgerow. SU367772 (JL)
20 Jul 16. RDNHS trip to Greywell.
SU717506 (SKW)

Symphytum grandiflorum - Creeping Comfrey
(Boraginaceae)
19 Apr 16. Paices Wood, large patch across
banks. SU58876353 (LJ)

Symphytum orientale - White Comfrey
(Boraginaceae)
19 Apr 16. Paices Wood, one plant, pure
white flowers. SU58876353 (JL)

Urtica dioica ssp. *galeopsifolia* - Fen Nettle
(Urticaceae)
4 Jul 16. Nashgrove Lane, Wokingham, near
stream. SU79436659 (GT & RG)

Verbascum blattaria - Moth Mullein
(Scrophulariaceae)
19 Oct 16. Near Lavell's Lake, three
specimens (RDNHS walk). SU78177297
(SW)

Verbascum thapsus - Great Mullein
(Scrophulariaceae)
22 Sep 16. Earley Station, 3 plants in flower
and 2 leaf rosettes. SU752719 (RG)

Viola palustris - Marsh Violet (Violaceae)
25 Jun 16. Silchester Common, 5 plants in
flower. SU619621 (JH)

CONTRIBUTORS

Thanks are due to the following members and friends for their submissions:

(**AB**) Anne Booth, (**AP**) Alan Parfitt, (**DO**) David Owens, (**GT**) Geoff Toone, (**IE**) Ian Esland, (**JC**) Julia Cooper, (**JH**) Jan Haseler, (**JL**) John Lerpiniere, (**JW**) Janet and Jerry Welsh, (**MK**) Michael Keith-Lucas, (**MT**) Mike Turton, (**NH**) Norman Hall, (**RF**) Roger Frankum, (**RG**) Renée Grayer, (**RS**) Rob Stallard, (**SR**) Sally Rankin, (**SKW**) Sarah and Ken White, (**SW**) Sue White

RECORDER'S REPORT FOR LEPIDOPTERA 2016

Norman Hall

2016 was an interesting year for Lepidoptera, and there were reasonable numbers of species and individuals about – at least by 21st century standards. The year started with some interesting earlier-than-usual records as a consequence of the extremely warm winter of 2015/2016 – and it ended with some later-than-usual records as a consequence of a long spell of cold nights in October/November which did not tempt moths to emerge at their usual times - or even tempt moth trappers to put out their traps unless to prove that there was little about. But in spring and summer, when most moth species are flying, conditions were fairly normal.

A highlight of the year was the RDNHS mothing night at Chalkhills, Whitchurch-on-Thames, on 30-31 July at the invitation of the owner Sandra Parkinson, who helped us greatly on the Saturday night and the Sunday morning. Unusually there were five of us with moth traps, four of whom stayed overnight or left their traps running overnight. With so many traps available, we were able to stretch out up the whole of the chalk valley above where the Boze Down vineyard used to be, and I was able trap high up the valley in an area to be newly designated as a nature reserve, where no traps had been run before. The additional trappers were a great help to me as leader. On the Sunday morning they had got examples of almost all of the macromoth species seen into 1" glass tubes (without being asked) enabling me to finish my duties as recorder only minutes before we were due to show what we had caught to RDNHS members and some invited locals, and I was due to give a talk and answer questions. Thanks are due to many for the success of the event.

Another highlight of the year for me was the appearance of Dewick's *Plusia* in my garden trap, new to Berkshire and the first I'd seen in the UK. I rarely see any new species these days, except among the micro-moths. A highlights for others may have been the Clifden Nonpareils (also known as Blue Underwings) seen at Snelsmore Common. Our member Paul Black seems to have developed a knack of finding them and showing them to others.

A systematic list of records of selected species follows, all from within our area 'within 20 miles of Reading',. The species are listed in the order of the numbers assigned by Agassiz, D.J.L.; Beavan, S.D.; Heckford, R.J., (2013). Records are attributed, in square brackets, to the identifier, who is usually the recorder, and not necessarily the person who trapped the moth. A further attribution in round brackets may be to a group or a trapper or to a group that includes the trapper.

I start compiling my reports by listing all butterfly records, and all records for moth species that are not nationally common. However some uncommon moth species are eventually excluded for want of space or because they are common locally), and a few common moth species are included if a comment can be made likely to be of interest. As in my previous reports, all butterfly species seen in our area, common or not, are included, and I have given the date range for Red Cow cottage, Cholsey, because the site is very large and is surveyed regularly. In general, there is not enough space for every individual record of every species, and the earliest and latest dates are the rule rather than the exception.

MICROPTERIGIDAE

01.005 *Micropterix calthella*, (0005) Common
17/5/16, many on buttercups, Moor copse
SU634740; 24/5/16, 4, Bradfield, Owlpit Copse
field SU586731 [JL] This is a small dark
micromoth commonly found feeding by day in
the flowers of buttercups in May, but as there
are usually outnumbered by equally small dark
beetles feeding there as well, few people
notice them [NMH]

ADELIDAE Longhorn moths

07.002 *Nemophora metallica*, (0147)
Nationally Scarce B
30/7/16, 1, Watts Bank SU331771, on
Scabious; 3/8/16, 12, The Holies SU592798
[JL]; 5/8/16, 1, Hungerford, Little Hidden Farm
SU3471 [JL]. Scabious is the foodplant, and
the moth used be called *N. scabiosella*. The
female has an extremely long terminal
segment of the abdomen which makes it easy
to recognise [NMH]

TINEIDAE, Fungus moths and Clothes moths

12.010 *Morophaga choragella*, (0196) Local
30/7/16, 1, Chalkhills / Boze Down SU640780
[NMH(RDNHS)]

12.012 *Triaxomera parasitella*, (0224) Local
5/6/16, 1, Tilehurst, Westwood Road
SU666742 [JH]

12.021 *Nemapogon clematella*, (0220) Local
22/8/16, 1, Earley, Harcourt Drive SU735709
[NMH]

ROESLERSTAMMIIDAE

13.002 *Roeslerstammia erxlebelli*, (0447)
Local
28/7/16, 3, Crookham Common SU5264
[NMH(LLP)]
This is a small 'metallic' micromoth, usually
recognised by its antennae which are dark at
the base but white at the tips [NMH]

GRACILLARIIDAE, moths whose early instar
larvae are flattened and feed in the surface
layers of leaves (though later instars may
move into the middle of a leaf to form 'pinch
mines')

15.016 *Euspilapteryx auroguttella*, (0297)
Common
30/7/16, 1, Chalkhills / Boze Down SU6477;
18/8/16, Warburg Reserve, Bix Bottom
SU720878 [NMH(LLP)]. Said to be nationally
common but I have seen it very infrequently

[NMH]

15.089 *Cameraria ohridella*, (0366A) Common
13/8/16, 2, Tilehurst, Westwood Road
SU666742, first adult record for garden. [JH]
This is the moth whose larvae devastate
leaves of Horse Chestnut by eating them from
the inside. Though they can swarm in
thousands on tree trunks when they emerge,
they are far less easy to identify when
occurring in small numbers in moth traps.
Without a strong lens they can easily be
mistaken for *Argyresthia trifasciata* whose
larvae feed on garden cypresses. [NMH]

YPONOMEUTIDAE

16.007 *Yponomeuta plumbella*, (0430) Local
30/7/16, 1, Chalkhills / Boze Down SU6477
[NMH(RDNHS)]

Yponomeuta species are often called 'Small
Ermine' moths. Their larvae mostly live and
feed communally within webs which they
extend as required, sometimes covering yards
of hedgerows.

All the adult moths are essentially white with
rows of black spots, so the different species
are often difficult to distinguish. *Y. plumbella*
is one of the more easily recognisable. The
larvae feed on Spindle, but it is not the species
that most commonly forms extensive webs on
Spindle, which is *Y. cagnagella* [NMH]

YPSOLOPHIDAE

17.009 *Ypsolopha sylvella*, (0459) Local
25/10/16, 1, Waltham Place SU856771 [IES]
PLUTELLIDAE

18.001 *Plutella xylostella*, Diamond-back Moth
(0464) Migrant

This moth invaded the country in large
numbers this year, which spawned large
numbers of newspaper reports suggesting that
all the cabbages in the country were in peril
(and perhaps the Nasturtiums as well).
However, it is a tiny moth and I have yet to
hear any reports of devastation. I became
aware of the invasion when 20 turned up in my
garden trap in Earley on 1/6/16, 35 on 2/6, 65
on 4/6 and then 150 on 5/6 (the same day as
JH had her maximum of 53 in her Tilehurst
trap). After then, numbers were generally in
single figures, higher than usual but in no way
threatening.

Earliest: 9/5/16, 1, Red Cow SU592868 [AR]
Latest: 9/12/16, 1, Earley, Harcourt Drive
SU735709 [NMH]

ARGYRESTHIIDAE

20.005 *Argyresthia trifasciata*, (0409A) Local
5/6/16, 1, Earley, Harcourt Drive SU735709 [NMH]

20.024 *Argyresthia semitestacella*, (0423) Local
30/7/16, 1, Chalkhills / Boze Down SU6477 [NMH(RDNHS)]

OECOPHORIDAE

28.024 *Tachystola acroxantha*, (0656) Local
11 dates, max 4 [NMH]
From 9/5/16 to 12/12/16 (very late) Earley, Harcourt Drive SU735709 [NMH]

This moth is of Australian origin and is increasing in numbers, though few people seem to be aware of it.

28.025 *Pleurota bicostella*, (0654) Local
9/6/16, 4, Broadmoor Bottom SU856629 [JL]

DEPRESSARIIDAE

32.008 *Agonopterix liturosa*, (0709) Local
18/8/16, 1, Warburg Reserve, Bix Bottom SU720880 [NMH(LLP)]

ETHMIIDAE

33.001 *Ethmia dodeceea*, (0718) Local
25/6/16, 2, Whitchurch-on-Thames, The Old Farmhouse SU642776 [NMH]; 29/6/16, 1, Whitchurch Hill SU636788 [IES]. The moth is superficially similar to 'Small Ermine' moths. (See 16.007)

GELECHIIDAE

35.022 *Dichomeris marginella*, Juniper Webber (0862) Local
3/7/16, 1, Tilehurst, Westwood Road SU666742, 2nd record for garden, previous record 2008 [JH]

35.161 *Parachronistis albiceps*, (0756) Local
30/7/16, 1, Chalkhills / Boze Down SU6477 [NMH(RDNHS)]

COLEOPHORIDAE

37.027 *Coleophora potentillae*, (0513) Local
Leaf mines, 16/2/16 & 21/2/16, Furze Hill SU5174 & 20/3/16, Paices Wood SU585640 [JL]

PTEROPHORIDAE Plume moths

45.021 *Stenoptilia zophodactylus*, Dowdy Plume (1507) Local

9/12/16, 1, Red Cow SU592868 [AR]
45.033 *Merrifieldia leucodactyla*, Thyme Plume (1510) Local
25/6/16, 1, Whitchurch-on-Thames, The Old Farmhouse SU642776 [NMH]

TORTRICIDAE

49.014 *Archips crataegana*, Brown Oak Tortrix (0979) Local
1/7/16, 1, Upper Basildon, Ashampstead Road SU592763 [NMH]

49.044 *Tortricodes alternella*, (1025) Common
Earliest: 23/1/16, 1, Earley, Harcourt Drive SU735709 [NMH]

Latest: 19/2/16, 1, Whitchurch Hill SU636788 [IES]

49.087 *Acleris literana*, (1061) Local
1/4/16, 1, Whitchurch Hill SU636788 [IES]

49.092 *Phtheochroa inopiana*, (0921) Local
7/7/16, 1, Brimpton, Wasing Quarry SU570657 [NMH(LLP)]

LIMACODIDAE comprising only 2 'honorary' macromoths (i.e. technically micromoths, but traditionally targeted by collectors)

53.001 *Apoda limacodes*, Festoon (0173) Notable B
9/7/16, Snelsmore Common SU463710 [PBL];
21/7/16, 1, Snelsmore Common SU460710 [NMH]

ZYGAENIDAE Burnet moths

54.010 *Zygaena trifolii*, Five-spot Burnet (0170) Local
27/6/16, 1, Sheepdrove Farm SU361819 [JL]

HESPERIIDAE Skipper butterflies

57.001 *Erynnis tages*, Dingy Skipper (1532)
18 records received in all, but max only 2. A poor season [JH]

Earliest: 4/5/16, 1, Paices Wood SU585636 [JL] & 1, Aldermaston, Easter Park SU614638 [JH]

Latest: 27/5/16, 1, The Holies, Streatley SU594798 [JH]

57.002 *Pyrgus malvae*, Grizzled Skipper (1534)

11 records received in all, but a max of 10 at one site. A poor season [JH]

Earliest: 4/5/16, 1, Ufton Nervet, restored gravel pit SU638666 [JH]

High Count: 24/5/16, 10, Ufton Nervet, restored gravel pit SU638666 [JH]

Latest: 6/6/16, 2, Paices Wood SU5863 [JL]

57.005 *Thymelicus lineola*, Essex Skipper

(1527)
Earliest: 27/6/16, 1, Broadmoor Bottom SU8562 [JL]
Latest: 16/8/16, 1, Peasmore SU4577 [JL]
Red Cow: from 7/7/16 to 2/8/16 [AR]
57.006 *Thymelicus sylvestris*, Small Skipper (1526)
A poor season [JH]
Earliest: 27/6/16, 3, Broadmoor Bottom SU8562 [JL]
Latest: 17/8/16, 4, Headley SU526635 [JH(RDNHS, Rob Stallard)]
Red Cow: from 11/7/16 to 26/7/16 [AR]
57.009 *Ochlodes sylvanus*, Large Skipper (1531)
A poor season [JH]
Earliest: 15/6/16, Red Cow SU592868 [AR]
Latest: 3/8/16, 1, Bradfield Southend, Lambden's Wood SU607699 [JH]
Red Cow: from 15/6/16 to 11/7/16 [AR]

PIERIDAE 'White' butterflies

58.003 *Anthocharis cardamines*, Orange-tip (1553)
Earliest: 12/4/16, 1, Stratfield Mortimer SU667638 [JH]
Latest: 7/6/16, 1, Ashampstead Green SU553772 [JL]
Red Cow: from 14/4/16 to 28/5/16 [AR]
58.006 *Pieris brassicae*, Large White (1549)
Earliest: 13/4/16, 1, Hosehill LNR SU650694 [JL]
Latest: 9/10/16, 1, Tilehurst, Westwood Road SU666742 [JH]
58.007 *Pieris rapae*, Small White (1550)
Earliest: 23/4/16, 1, Caversham Court SU709749 [JH]
Latest: 2/10/16, 1, Tyle Mill SU624694 [JL]
58.008 *Pieris napi*, Green-veined White (1551)
Earliest: 6/5/16, 1, Mortimer West End, Simms Copse SU645636 [JH]
Latest: 25/9/16, 1, Furze Hill, Hermitage SU5174 [JL]
58.010 *Colias croceus*, Clouded Yellow (1545)
15/8/16, 1, Streatley SU5979 [JL]; 18/8/16, 1, Red Cow SU592868 [AR]; 29/8/16, 1, Lardon Chase, Streatley SU588809 [JH]; 22/9/16, 1, Red Cow SU592868 [AR]
58.013 *Gonepteryx rhamni*, Brimstone (1546)
Earliest: 16/3/16, Red Cow SU592868 [AR]
Latest: 28/10/16, 3, Basildon Park SU605773 [JH]
Red Cow: from 16/3/16 to 26/8/16 [AR]

NYMPHALIDAE 'Brown' butterflies

59.003 *Pararge aegeria*, Speckled Wood (1614)

Earliest: 1/5/16, 1, Tilehurst, Westwood Road SU666742 [JH]
Latest: 2/10/16, 1, Decoy Heath SU613638 [JH]
Red Cow: Just singles on 4 dates from 8/5/16 to 29/8/16 [AR]
59.005 *Coenonympha pamphilus*, Small Heath (1627)
Earliest: 22/5/16, 3, Lowbury Hill SU537822 [JH]
Latest: 23/9/16, 1, Aston Upton Downs SU544837 [JH]
Also seen at Sheepdrove Farm [JL], Crog Hill [JL], Seven Barrows [JL], Wishmoor [JL], The Holies [JL] & Fognam Chalk Pit [JL]
59.009 *Aphantopus hyperantus*, Ringlet (1629)
Earliest: 24/6/16, 1, Wokefield Common SU652662 [JL] & 1, Tilehurst, Westwood Road SU666742 [JH]
Latest: 13/8/16, 4, Mortimer, Hundred Acre Piece SU639651 [JH]
Red Cow: from 27/6/16 to 25/7/16 [AR]
59.010 *Maniola jurtina*, Meadow Brown (1626)
Earliest: 10/6/16, 1, Lardon Chase, Streatley SU588809 [JH]
Latest: 23/9/16, 1, Aston Upton Downs SU544837 [JH]
Red Cow: from 15/6/16 to 20/9/16 Max of 30 on 4/8/16 [AR]
59.011 *Pyronia tithonus*, Gatekeeper (1625)
Earliest: 27/6/16, 3, Broadmoor Bottom SU8562 [JL]
Latest: 26/8/16, Red Cow SU592868 [AR]
Red Cow: from 3/7/16 to 26/8/16. Max of 16 on 4/8/16 [AR]
59.012 *Melanargia galathea*, Marbled White (1620)
A poor season [JH]
Earliest: 24/6/16, Red Cow SU592868 [AR]
Latest: 3/8/16, 2, The Holies, Streatley SU5979 [JL]
Red Cow: from 24/6/16 to 26/7/16 [AR]
59.013 *Hipparchia semele*, Grayling (1621)
14/7/16, 1, Hazeley Heath N SU751584 [JH]; 13/8/16, 28, Mortimer, Hundred Acre Piece SU639651 & 1, Mortimer, Holden's Firs SU639652 [JH]
59.017 *Argynnis paphia*, Silver-washed Fritillary (1608)
Didn't seem as common as in recent years [JH]. All records:
6/7/16, 2, Wishmoor SU8763 [JL]; 17/7/16, 1, Mortimer, Hundred Acre Piece SU639651 [JH]; 28/7/16, 1, Upper Bucklebury [RWF]; 30/7/16, 4, Fence Wood SU5171 [JL(UTBC)]; 5/8/16, 7, Mortimer, Starvale Woods SU655656 [JH]; 12/8/16, 2, Moor Copse SU6473 [JL]; 14/8/16, 1, Ashampstead Common SU5675 [JL]
59.021 *Limenitis camilla*, White Admiral (1584)

A struggle to find White Admirals [JH]. All records:

5/7/16, 1, Padworth Common SU618648 [JH];
11/7/16, 1, Paices Wood SU582637 [JL];
21/7/16, 1, Pamber Forest SU613607 [JH];
29/7/16, 1, Basildon Park SU606781 [JH];
30/7/16, 1, Fence Wood SU5171 [JL(UTBC)]
59.023 *Vanessa atalanta*, Red Admiral (1590)
lots [JH]

Earliest: 20/4/16, 1, Beenham, Old Copse
SU589683 [JH(RDNHS)]

Latest: 28/11/16, Red Cow SU592868 [AR]

Red Cow: from 13/7/16 to 28/11/16 Max of 10
on 24/9/16 [AR]

59.024 *Vanessa cardui*, Painted Lady (1591)
20 records received in all, max count 3. [NMH]

Earliest: 5/6/16, 1, Burghfield Common
SU6367 [JL] & 1, Seven Barrows SU3282 [JL]

Latest: 24/9/16, Red Cow SU592868 [AR]

Red Cow: 4 dates from 4/8/16 to 24/9/16 Max
of 3 on 22/9/16 [AR]

59.026 *Aglais io*, Peacock (1597)

Earliest: 21/3/16, Red Cow SU592868 [AR]

Latest: 26/8/16, 2, Fognam Chalk Pit [JL]

Red Cow: from 21/3/16 to 4/8/16 [AR]

59.027 *Aglais urticae*, Small Tortoiseshell
(1593)

Earliest: 16/3/16, Red Cow SU592868 [AR]

Latest: 24/9/16, Red Cow SU592868 [AR]

High Count: 26/8/16, 14, Lambourn
SU329791, on Buddleia. [JL]

Red Cow: from 16/3/16 to 24/9/16. Max of 6 on
1/9/16 [AR]

59.031 *Polygonia c-album*, Comma (1598)

Earliest: 25/3/16, 2, Padworth Common [JL]

Latest: 5/10/16, Red Cow SU592868 [AR]

High Count: 3/8/16, 5, Bradfield Southend,
Lambden's Wood SU607699 [JH]

Red Cow: from 21/4/16 to 5/10/16 [AR]

RIODINIDAE Duke of Burgundy

60.001 *Hamearis lucina*, Duke of Burgundy
Fritillary (1582)

23/5/16, 4, Cleeve Hill SU333766 [JL]

LYCAENIDAE 'Blue' butterflies

61.001 *Lycaena phlaeas*, Small Copper (1561)
Earliest & Latest: Red Cow SU592868 [AR]
from 12/5/16 to 3/10/16 [AR]

One seen at Tilehurst, Westwood Road was
the first JH had seen her garden since 2013.
[NMH]

61.004 *Favonius quercus*, Purple Hairstreak
(1557)

All records: 11/7/16, 1, Paices Wood
SU583638 [JL]; 30/7/16, 1, Fence Wood
SU5171 [JL(UTBC)]; 12/8/16, 1, Moor Copse

SU6473 [JL]

61.005 *Callophrys rubi*, Green Hairstreak
(1555)

Only 7 records received [NMH]

Earliest: 6/5/16, 1, Burghfield M4 Services
SU6669 [JL]

12/5/16, 1, Paices Wood SU584635 [JL]

Latest: 23/5/16, 2, Sheepdrove Farm
SU358819 [JL] & 1, Watts Bank SU331770
[JL]

61.010 *Cupido minimus*, Small Blue (1569)

Earliest: 23/5/16, 1, Lambourn Woodlands
SU330764 [JL]

Latest: 27/6/16, 4, Sheepdrove Farm
SU358821 [JL]

Peak: A total of 49 individuals were seen on
5/6/16 at Crog Hill, Severn Barrows and sites
in the Lambourne Woodlands [JL]; also seen
at Lardon Chase [JH] and Lowbury Hill
[JH(RDNHS)]

61.012 *Celastrina argiolus*, Holly Blue (1580)

Earliest: 14/4/16, 1, Tilehurst, Westwood Road
SU666742 [JH]

Latest: 13/9/16, Red Cow SU592868 [AR]

Red Cow: from 4/5/16 to 13/9/16 with 10 on
12/5/16 [AR]

61.014 *Plebejus argus*, Silver-studded Blue
(1571)

26/6/16, 3 & 13/7/16, 5, Broadmoor Bottom
SU856629 [JL]; 14/7/16, 6, Hazeley Heath N
SU751584 [JH] & 30/7/16, 8 at Broadmoor
Bottom [JL]

61.015 *Aricia agestis*, Brown Argus (1572)

Only 7 records received. All singles [NMH]

Earliest: 16/5/16, 1, Pingewood, Reading Lake
Hotelpit SU693696 [JH]

Latest: 11/9/16, Red Cow SU592868 [AR]

Red Cow: from 15/6/16 to 11/9/16 [AR]

61.018 *Polyommatus icarus*, Common Blue
(1574)

Earliest: 21/5/16, 2, The Holies SU594798 [JH]

Latest: 23/9/16, Red Cow SU592868 [AR]

Red Cow: from 23/5/16 to 23/9/16 max of 20
on 14/8/16 [AR]

61.019 *Polyommatus bellargus*, Adonis Blue
(1576)

Reasonable numbers. Horseshoe Vetch good
at The Holies. [JH]

only 2 records received: 21/5/16, 1, The
Holies, Streatley SU594798 [JH]; 27/5/16, 40,
Lardon Chase, Streatley SU588809 [JH]

61.020 *Polyommatus coridon*, Chalk Hill Blue
(1575)

JH did not see many. All records: 15/7/16, 9,
Lardon Chase, Streatley SU588809 [JH];
17/7/16, 1, Seven Barrows [RWF]; 30/7/16, 2,
Watts Bank SU332767 [JL]; 3/8/16, 3, The
Holies, Streatley SU5979 [JL]

PYRALIDAE A large family sometimes considered as neither macros nor micros but a group in its own right. It contains many pest species of economic importance

62.005 *Achroia grisella*, Lesser Wax Moth (1426) Local

17/8/16, 1, Earley, Harcourt Drive SU735709 [NMH]

Unlike *Galleria mellonella*, the 'usual' Wax Moth and *Aphomia sociella*, the Bee Moth, this 'pest' species is reported infrequently [NMH]

62.007 *Cryptoblabes bistriga*, (1433) Local
21/7/16, 1, Snelsmore Common SU460710 [NMH]; 15 & 17/8/16, 1, Earley, Harcourt Drive SU735709 [NMH]

62.010 *Elegia similella*, (1449) Nationally Scarce B

16/7/16, 1, Tilehurst, Westwood Road SU666742, new for garden. [JH]

62.015 *Delplanqueia dilutella*, (1462) Local
30/7/16, 1, Chalkhills / Boze Down SU6477 [NMH(RDNHS)]

62.021 *Oncocera semirubella*, (1441) Nationally Scarce B

Earliest: 7/7/16, Brimpton, Wasing Quarry SU570657 [NMH(LLP)]

Latest: 3/8/16, 4, The Holies SU592798 [JL]

Abundance: This moth was considered a rarity in 2009 when L.J.Finch found it on Greenham Common. From that time however we have seen it rapidly increase in numbers and spread in our area. Nonetheless, it was a great surprise to see so many when the RDNHS went to Chalkhills / Boze Down for its mothing night on 30/7/16. 83 *semirubella* were recorded, 49 of which were in two traps at the top of the valley. Never had more than 10 been reported to me from anywhere else in our area before. [NMH(RDNHS)]

62.022 *Pempelia genistella*, (1443) Nationally Scarce B

28/7/16, 1, Crookham Common SU522643 [NMH(LLP)]

62.024 *Rhodophaea formosa*, (1445) Local
30/7/16, 1, Chalkhills / Boze Down SU640780 [NMH(RDNHS)]

62.038 *Acrobasis consociella*, (1437) Local
21/7/16, 3, Snelsmore Common SU460710 [NMH]; 28/7/16, 2, Crookham Common SU52643 [NMH(LLP)]; 30/7/16, 1, Chalkhills / Boze Down SU640780 [NMH(RDNHS)]

CRAMBIDAE Grass moths etc

63.016 *Anania fuscalis*, (1386) Local

Earliest: 23/5/16, 1, Lambourn Woodlands, Thornhill Bank SU332768 [JL]

Latest: 9/6/16, 1, Sheepdrove Farm

SU358819 [JL]

63.018 *Anania coronata*, (1378) Common
Early Record: 9/6/16, 1, Tilehurst, Westwood Road SU666742, previous earliest 26/6. [JH]

63.031 *Udea ferrugalis*, Rusty-dot Pearl (1395) Migrant

Singles at Earley, Harcourt Drive SU735709 on 30/6/16, 22/8/16, 9 & 12 & 13/9/16 & 15/11/16 (very late!) [NMH]; at Crookham Common SU521643 on 28/7/16 [NMH(LLP)]; at Tilehurst, Westwood Road SU666742 on 7/9/16 [JH]

63.039 *Mecyna flavalis*, (1396) Red Data Book3

30/7/16, 4, Chalkhills / Boze Down SU640780 [NMH(RDNHS)]

63.052 *Nomophila noctuella*, Rush Veneer (1398) Migrant

9 dates: Earliest: 3/7/16, 1, Watts Bank SU330771 [JL]

Latest: 25/10/16, 1, Waltham Place SU856771 [IES]

63.063 *Scoparia basistrigalis*, (1334A) Local

7 dates: Earliest: 22/6/16, 1, Earley, Harcourt Drive SU735709 [NMH]

Latest: 7/7/16, 1, Brimpton, Wasing Quarry SU570657 [NMH(LLP)]

63.075 *Eudonia pallida*, (1336) Local

5 dates: Earliest: 7/7/16, 1, Brimpton, Wasing Quarry SU570657 [NMH(LLP)]

Latest: 31/8/16, 1, Whitchurch Hill SU636788 [IES]

63.092 *Agriphila selasella*, (1303) Local

11/8/16, 1, Red Cow SU592868 [AR]; 17 & 22/8/16, 1, Earley, Harcourt Drive SU735709 [NMH]

63.118 *Nymphula nitidulata*, Beautiful China-mark (1350) Local

31/7/16, 1, Fobney SU710710 [JL]

DREPANIDAE Hook-tips, Lutestrings etc

65.011 *Tethea or*, Poplar Lutestring (1655) Local

30/5/16 & 25/8/16, Snelsmore Common SU463710 [PBL]

65.015 *Polyploca ridens*, Frosted Green (1660) Local

Earliest: 11/4/16, Snelsmore Common SU463710 [PBL]

Latest: 9/5/16, Snelsmore Common SU463710 [PBL]

SPHINGIDAE Hawk-moths

69.006 *Sphinx ligustri*, Privet Hawk-moth (1976) Common

Early Record: 29/5/16, 1, Tilehurst, Westwood Road SU666742 [JH]

Latest: 12/7/16, Snelsmore Common SU463710 [PBL]
 69.007 *Sphinx pinastri*, Pine Hawk-moth (1978) Local
 Earliest: 9/6/16, 1, Tilehurst, Westwood Road SU666742 [JH]
 Latest: 6/8/16, Snelsmore Common SU463710 [PBL]
 69.010 *Macroglossum stellatarum*, Hummingbird Hawk-moth (1984) Immigrant
 5/7/16, 1, Tilehurst, garden SU664742 [JL]; 22/7/16, 1, Tilehurst SU664742, on Lavender at 7.30 AM. [JL]
 69.017 *Deilephila porcellus*, Small Elephant Hawk-moth (1992) Local
 All records: 9/6/16, 1, Tilehurst, Westwood Road SU666742 [JH]; 10/6/16, Woolley Firs SU851800 [PBL]; 22/6/16, 1, Earley, Harcourt Drive SU735709 [NMH]; 7/7/16, Brimpton, Wasing Quarry SU570657 [NMH(LLP)]; 14/7/16, 1, Red Cow SU592868 [AR]
 GEOMETRIDAE One of the two largest families. Their caterpillars are 'loopers' (three pairs of jointed legs at the head end, two pairs of claspers at the tail end)

70.002 *Idea muricata*, Purple-bordered Gold (1698) Notable B
 6/7/16, 1, Wishmoor Bottom SU8763 [JL]; 18/7/16, 1, Broadmoor Bottom SU856628 [JL]
 70.004 *Idea rusticata*, Least Carpet (1699) Local
 11 dates: Earliest: 3/7/16, 1, Earley, Harcourt Drive SU735709 [NMH]
 Latest: 18/8/16, Warburg Reserve, Bix Bottom SU720878 [NMH(LLP)]
 70.006 *Idea fuscovenosa*, Dwarf Cream Wave (1705) Local
 5 dates: Earliest: 27/6/16, 1, Earley, Harcourt Drive SU735709 [NMH]
 Latest: 17/7/16, Snelsmore Common SU463710 [PBL]
 70.012 *Idea trigeminata*, Treble Brown Spot (1711) Local
 14 dates. Earliest: 5/6/16, Donnington, nr Fox & Hounds SU470705 [PBL]
 Penultimate: 17/7/16, Snelsmore Common SU463710 [PBL]
 Extra Generation?: 14/9/16, 1, Tilehurst, Westwood Road SU666742, very small [JH]
 70.015 *Idea emarginata*, Small Scallop (1712) Local
 17/7/16, 1, Red Cow SU592868 [AR]; 30/7/16, 3, Chalkhills / Boze Down [NMH(RDNHS)]
 70.018 *Idea straminata*, Plain Wave (1715) Local
 3 dates: 9,12 & 21/7/16, max 2, Snelsmore Common [PBL]
 70.025 *Scopula immutata*, Lesser Cream

Wave (1692) Local
 All records: 4/7/16, Bagnor Marsh SU452697 [PBL]; 7/7/16, Brimpton, Wasing Quarry SU570657 [NMH(LLP)]; 18/7/16, 1, Moor Copse, Corner Field SU639734 [JL]; 3/8/16, 1, Tilehurst, garden SU665742 [JL]; 14/8/16, Bagnor Marsh SU452697 [PBL]
 70.027 *Scopula floslactata*, Cream Wave (1693) Local
 10/6/16, Woolley Firs SU851800 [PBL]
 70.031 *Cyclophora annularia*, Mocha (1676) Notable B
 30/7/16, 1, Chalkhills / Boze Down SU640780 [NMH(RDNHS)]; 18/8/16, 3, Warburg Reserve, Bix Bottom SU720879 [NMH(LLP)]
 70.032 *Cyclophora albipunctata*, Birch Mocha (1677) Local
 4 dates: Earliest: 8/5/16, Snelsmore Common SU463710 [PBL] 21/7/16, 4, Snelsmore Common SU460710 [NMH]
 Latest: 7/9/16, Snelsmore Common SU463710 [PBL]
 70.037 *Cyclophora linearia*, Clay Triple-lines (1681) Local
 4 dates. All records from VC23 (Oxfordshire)
 Earliest: 15/5/16, Medmenham, King's Barn Farm SU813850 [PBL(RDNHS)]
 Latest: 18/8/16, 1, Warburg Reserve, Bix Bottom SU720879 [NMH(LLP)]
 70.038 *Rhodometra sacraria*, Vestal (1716) Immigrant
 25/8/16, Snelsmore Common SU463710 [PBL]
 70.043 *Scotopteryx bipunctaria*, Chalk Carpet (1731) Notable B
 27/7/16, 1, Whitchurch Hill SU636788 [IES]; 30/7/16, 79 Chalkhills / Boze Down/ The Old Farmhouse [NMH(RDNHS)]. Known to be a stronghold for this British Action Plan species [NMH]
 70.047 *Nycterosea obstipata*, Gem (1720) Immigrant
 1/10/16, 1, Red Cow SU592868, first for the site [AR]; 6/10/16, Bomb site, Greenham Common SU506653 [PBL]
 70.055 *Xanthorhoe quadrifasiata*, Large Twin-spot Carpet (1726) Local
 8/7/16, Horris Hill, Newbury SU460629 [PBL]; 30/7/16, 1, Chalkhills / Boze Down SU643777 [NMH(RDNHS)]
 70.061 *Epirrhoe alternata*, Common Carpet (1738) Common
 Late record: 14/9/16, 1, Tilehurst, Westwood Road SU666742, latest record at site, previous latest 1/9 [JH]
 70.064 *Euphyia biangulata*, Cloaked Carpet (1793) Notable B
 8/7/16, Horris Hill, Newbury SU460629 [PBL]
 70.065 *Euphyia unangulata*, Sharp-angled

Carpet (1794) Local
7/7/16, Brimpton, Wasing Quarry SU570657 [NMH(LLP)]
70.083 *Thera cupressata*, Cypress Carpet (1771A) Uncommon
6 dates: 1/6/16, Maiden Erlegh SU750709 [PBL]; 17/6/16, Dinton Pastures SU784717 [PBL]; 22/6/16, 1, Earley, Harcourt Drive SU735709 [NMH]; 14 & 15/11/16, Earley, Harcourt Drive SU735709 [NMH]; 9/12/16, 1, Earley, Harcourt Drive SU735709 [NMH]. Increasing in our area [NMH]
70.084 *Plemyria rubiginata*, Blue-bordered Carpet (1766) Local
4 dates: 1/7/16, Waltham Place SU855773 [PBL]; 7/7/16, 1, Brimpton, Wasing Quarry SU570657 [NMH(LLP)]; 16/7/16, 1, Red Cow SU592868 [AR]; 17/7/16, Snelsmore Common SU463710 [PBL]
70.104 *Lampropteryx otregiata*, Devon Carpet (1751) Notable B
8/6/16, Snelsmore Common SU463710 [PBL]
70.112 *Euchoeca nebulata*, Dingy Shell (1874) Local
17/7/16, Snelsmore Common SU463710 [PBL]; 28/7/16, 1, Crookham Common SU521643 [NMH(LLP)]; 12/8/16, 1, Moor Copse, Horsemoor Copse SU641734 [JL]
70.117 *Minoa murinata*, Drab Looper (1878) Notable B
4/5/16, 1, Paices Wood SU583638 [JL]; 25/5/16, at least 2, Moor Copse [JL]; 25/5/16, at least 1, Moor Copse Park Wood south coupe SU637739 [JL]; 26/5/16, 3, Beenham, Greyfield Wood SU579690 & , SU580688, new sites for this Notable B species [JL]
70.118 *Philereme vetulata*, Brown Scallop (1791) Local
16/7/16, Hill Green, Leckhampstead SU452767 [PBL]
70.119 *Philereme transversata*, Dark Umber (1792) Local
5 dates from 7/7/16, 1, Brimpton, Wasing Quarry SU570657 [NMH(LLP)] to 18/8/16, 1, Warburg Reserve, Bix Bottom SU720880 [NMH(LLP)]
70.121 *Hydria undulata*, Scallop Shell (1789) Local
21/6/16, 1, Wildmoor Heath SU840630 [PBL]; 29/6/16, Snelsmore Common SU463710 [PBL]
70.134 *Perizoma bifaciata*, Barred Rivulet (1804) Local
6/8/16, Snelsmore Common SU463710 [PBL]
70.137 *Perizoma albulata*, Grass Rivulet (1807) Local
6 records: 23/5/16, 1, Cleeve Hill SU333766 & 1, Lambourn Woodlands SU331768 & 3, Watts Bank SU331771 [JL]; 5/6/16, 1, Crog Hill SU3283 & 1, Watts Bank SU331771 (both [JL])
& 1, Tilehurst, Westwood Road SU666742 [JH]
70.145 *Pasiphila debiliata*, Bilberry Pug (1861) Notable B
21/6/16, 1, Wildmoor Heath SU840630 [PBL]
70.146 *Eupithecia haworthiata*, Haworth's Pug (1813) Local
30/7/16, 1, Chalkhills / Boze Down SU644778 [NMH(RDNHS)]
70.148 *Eupithecia inturbata*, Maple Pug (1812) Local
3 dates: 30/7/16, 2, Whitchurch-on-Thames, The Old Farmhouse SU642776 [NMH(RDNHS)]; 4/8/16, Thatcham Reedbeds SU502667 [PBL]; 18/8/16, 1, Warburg Reserve, Bix Bottom SU720879 [NMH(LLP)]
70.159 *Eupithecia phoeniceata*, Cypress Pug (1855) Uncommon
Recorded on 7 dates 16/8/16 to 26/9/16, max 4 on 17/8, 3 on 22/8, Earley, Harcourt Drive SU735709, a sudden increase in the numbers occurring in my garden [NMH].
70.160 *Eupithecia tripunctaria*, White-spotted Pug (1835) Local
4 dates 3/6/16, 1, Whitchurch Hill SU636788 [IES] to 30/7/16, Chalkhills, Boze Down & The Old Farmhouse [PBL(RDNHS)]
70.174 *Eupithecia insigniata*, Pinion-spotted Pug (1820) Notable B
8/5/16, 1, Red Cow SU592868, new to site [AR]
Unmistakable from photograph submitted [NMH]
70.189 *Eupithecia subumbrata*, Shaded Pug (1840) Local
4/8/16, Thatcham Reedbeds SU502667 [PBL]
70.198 *Lobophora halterata*, Seraphim (1879) Local
8/5/16, Snelsmore Common SU463710 [PBL]; 19/5/16, 2, Thatcham Reedbeds SU503667 [NMH(LLP)]; 11/6/16, Maiden Erlegh (meadow) SU748709 [PBL]
70.199 *Pterapherapteryx sexalata*, Small Seraphim (1882) Local
11/6/16, Maiden Erlegh (meadow) SU748709 [PBL]; 7/7/16, 1, Brimpton, Wasing Quarry SU570657 [NMH(LLP)]; 18/7/16, Snelsmore Common SU463710 [PBL]
70.200 *Acasis viretata*, Yellow-barred Brindle (1883) Local
12 dates: Earliest: 8/5/16, Snelsmore Common SU463710 [PBL]
Latest: 14/9/16, 1, Earley, Harcourt Drive SU735709 [NMH]
70.208 *Ligdia adustata*, Scorched Carpet (1888) Local
7 dates: Earliest: 19/5/16, 1, Whitchurch Hill SU636788 [IES]
Latest: 21/8/16, Snelsmore Common SU463710 [PBL]

70.211 *Macaria notata*, Peacock Moth (1889)
Local
4 dates: Earliest: 16/5/16, Snelsmore Common SU463710 [PBL]
Latest: 4/9/16, Snelsmore Common SU463710 [PBL]

70.212 *Macaria alternata*, Sharp-angled Peacock (1890) Local
4/8/16, Thatcham Reedbeds SU502667 [PBL]

70.224 *Plagodis dolabraria*, Scorched Wing (1904) Local
3 dates: Earliest: 16/5/16, Snelsmore Common SU463710 [PBL]
Latest: 7/7/16, 1, Red Cow SU592868 [AR]

70.231 *Apeira syringaria*, Lilac Beauty (1910) Local
26/6/16, Snelsmore Common SU463710 [PBL]; 3/7/16, 1, Tilehurst, Westwood Road SU666742, new to garden [JH]

70.233 *Ennomos quercinaria*, August Thorn (1912) Local
3 dates only. All sites in VC23 (Oxfordshire)
28/7/16, 12, Chalkhills / Boze Down [NMH(RDNHS)]; 10/8/16, 1, Whitchurch Hill SU636788 [IES];
18/8/16, 4, Warburg Reserve, Bix Bottom SU720879 [NMH(LLP)]

70.267 *Hypomecis roboraria*, Great Oak Beauty (1943) Notable B
21/6/16, 2, Wildmoor Heath SU840630 [PBL]

70.270 *Ectropis crepuscularia*, Engrailed (1947) Common
16 dates: Earliest: 21/3/16, 1, Whitchurch Hill SU636788 [IES]
Latest: 28/7/16, 4, Crookham Common SU521643 [NMH(LLP)]
1/4/16, 1, Tilehurst, Westwood Road SU666742 was a new record for the garden [JH]

70.273 *Parectropis similaria*, Brindled White-spot (1950) Local
21/6/16, 3, Wildmoor Heath SU840630 [PBL]

70.295 *Perconia strigillaria*, Grass Wave (1970) Local
9/6/16, 4, Broadmoor Bottom SU856629 [JL];
26/7/16, 1, Broadmoor Bottom SU856628 [JL]

70.300 *Comibaena bajularia*, Blotched Emerald (1667) Local
16/6/16, Greenham Common, Estovers SU499652, 21/6/16, 3, Wildmoor Heath SU840630, 8/7/16, Horris Hill, Newbury SU460629 [all PBL]

70.302 *Hemistola chrysoprasaria*, Small Emerald (1673) Local
16/7/16, 1, Tilehurst, Westwood Road SU666742 [JH]; 16/7/16, Hill Green, Leckhampstead SU452767 [PBL]

NOTODONTIDAE Prominents

71.016 *Peridea anceps*, Great Prominent (2005) Local
3 & 16/5/16, Snelsmore Common SU463710 [PBL]

71.022 *Ptilodon cucullina*, Maple Prominent (2009) Local
6/7/16, Hill Green, Leckhampstead SU452767 [PBL]; 16/7/16, 1, Tilehurst, Westwood Road SU666742 [JH]; 30/7/16, 1, Chalkhills / Boze Down SU644777 [NMH(RDNHS)]; 18/8/16, Warburg Reserve, Bix Bottom SU720878 [NMH(LLP)]; 22/8/16, 1, Earley, Harcourt Drive SU735709 [NMH]

71.027 *Clostera curtula*, Chocolate-tip (2019) Local
6 & 12 & 13/5/16, singles, Red Cow SU592868 [AR]; 6/8/16, Snelsmore Common SU463710 [PBL]

EREBIDAE Snouts, Tiger moths, Tussock moths, 'Underwings'

72.004 *Hypena rostralis*, Buttoned Snout (2480) Notable B
10/6/16, Woolley Firs SU851800 [PBL]

72.007 *Hypena crassalis*, Beautiful Snout (2476) Local
21/6/16, 10, Wildmoor Heath SU840630 [PBL]

72.009 *Leucoma salicis*, White Satin Moth (2031) Local
11/7/16, Snelsmore Common SU463710 [PBL]

72.010 *Lymantria monacha*, Black Arches (2033) Local
Earliest: 17/7/16, Snelsmore Common SU463710 [PBL]
Latest: 21/8/16, Snelsmore Common SU463710 [PBL]

72.023 *Diacrisia sannio*, Clouded Buff (2059) Local
26/6/16, 1, Broadmoor Bottom SU854628 [JL]

72.029 *Callimorpha dominula*, Scarlet Tiger (2068) Local
Reported from Tilehurst [JL], Whitchurch Hill [IES], Upper Bucklebury [RWF], Snelsmore Common [PBL] and Fobney [JL]

72.035 *Mitochrista miniata*, Rosy Footman (2037) Local
Earliest: 1/7/16, Waltham Place SU855773 [PBL]; Latest: 6/8/16, Snelsmore Common SU463710 [PBL]

72.037 *Thumatha senex*, Round-winged Muslin (2035) Local
27/6/16, Snelsmore Common SU463710 [PBL]; 7/7/16, 1, Brimpton, Wasing Quarry SU570657 [NMH(LLP)]; 14/8/16, Bagnor Marsh SU452697 [PBL]

72.038 *Cybosia mesomella*, Four-dotted Footman (2040) Local

7/7/16, Brimpton, Wasing Quarry SU570657 [NMH(LLP)]; 11/7/16, Snelsmore Common SU463710 [PBL]
 72.043 *Eilema depressa*, Buff Footman (2049) Local
 7 dates: Earliest: 4/7/16, 2, Earley, Harcourt Drive SU735709 [NMH]
 Latest: 6/8/16, Snelsmore Common SU463710 [PBL]
 72.049 *Eilema sororcula*, Orange Footman (2043) Local
 Earliest: 8/5/16, Snelsmore Common SU463710 [PBL]
 Latest: 7/7/16, 1, Brimpton, Wasing Quarry SU570657 [NMH(LLP)]
 72.052 *Macrochilo cribrumalis*, Dotted Fan-foot (2493) Notable B
 19/7/16, Bagnor Marsh SU452697 [PBL]
 72.061 *Schrankia costaestrigalis*, Pinion-streaked Snout (2484) Local
 28/7/16, 3, Crookham Common SU522643 [NMH(LLP)]; 7/9/16, Bagnor Marsh SU452697 [PBL]
 72.063 *Lygephila pastinum*, Blackneck (2466) Local
 7/7/16, 1, Brimpton, Wasing Quarry SU570657 [NMH(LLP)]; 14/7/16, 1, Moor Copse, Corner Field SU638734 [JL]
 72.066 *Parascotia fuliginaria*, Waved Black (2475) Notable B
 7/7/16, 1, Brimpton, Wasing Quarry SU570657 [NMH(LLP)]; 16/7/16, 1, Red Cow SU592868 [AR]; 21/7/16, 2, Snelsmore Common SU460710 [NMH]; 26/7/16, Snelsmore Common SU463710 [PBL]; 28/7/16, Crookham Common SU522643 [NMH(LLP)]
 72.076 *Catocala fraxini*, Clifden Nonpareil (2451) Immigrant
 4/9/16, Snelsmore Common SU463710 [PBL]; 20/10/16, Greenham Common, Estovers SU499652 [PBL]

NOCTUIDAE One of the two largest families. Their caterpillars are not 'loopers'. They have three pairs of jointed legs at the head end, one pair of claspers at the tail end and four pairs of claspers centrally (or in one subfamily including Silver Y only three pairs)

73.010 *Macdunnoughia confusa*, Dewick's Plusia (2436) Immigrant
 26/9/16, 1, Earley, Harcourt Drive SU735709 [NMH]
 New to Berkshire (M.Harvey)
 73.036 *Acronictaalni*, Alder Moth (2281) Local
 13/5/16, Woolley Firs SU851800 [PBL]
 73.039 *Acronicta aceris*, Sycamore (2279) Local
 3/6/16, 1, Earley, Harcourt Drive SU735709

[NMH]
 73.048 *Panemeria tenebrata*, Small Yellow Underwing (2397) Local
 7/6/16, 4, Furze Hill SU511742 [JL]
 73.070 *Pyrrhia umbra*, Bordered Sallow (2399) Local
 7/7/16, 1, Brimpton, Wasing Quarry SU570657 [NMH(LLP)]; 14/7/16, 1, Red Cow SU592868 [AR]
 73.091 *Elaphria venustula*, Rosy Marbled (2396) Notable B
 21/6/16, 3, Wildmoor Heath SU840630 [PBL]
 73.100 *Chilodes maritima*, Silky Wainscot (2391) Local
 7/7/16, 2, Brimpton, Wasing Quarry SU570657 [NMH(LLP)]
 73.105 *Dypterygia scabriuscula*, Bird's Wing (2301) Local
 29/6/16, 1, & 3/7/16, 1, Earley, Harcourt Drive SU735709 [NMH]; 21/7/16, 1, Snelsmore Common SU460710 [NMH]
 73.107 *Mormo maura*, Old Lady (2300) Local
 8 dates: Earliest: 10/8/16, 1, Whitchurch Hill SU636788 [IES]
 Latest: 15/9/16, 1, Earley, Harcourt Drive SU735709 [NMH]
 73.113 *Phlogophora meticulosa*, Angle-shades (2306) Common
 Very Late: 8/12/16, 1, Tilehurst, Westwood Road SU666742 [JH]; 25/12/16, 1, Red Cow SU592868 [AR]
 73.119 *Helotropha leucostigma*, Crescent (2368) Local
 4/8/16, Thatcham Reedbeds SU502667 [PBL]
 73.137 *Arenostola phragmitidis*, Fen Wainscot (2377) Local
 4/8/16, Thatcham Reedbeds SU502667 [PBL]; 6/8/16, Snelsmore Common SU463710 [PBL] [PBL]
 73.141 *Archanara dissoluta*, Brown-veined Wainscot (2371) Local
 30/7/16, Chalkhills / Boze Down SU644777, an unusual habitat to find it. [PBL(RDNHS)]; 6/8/16, Snelsmore Common SU463710 [PBL]
 73.142 *Coenobia rufa*, Small Rufous (2379) Local
 6/8/16, Snelsmore Common SU463710 [PBL]
 73.157 *Apamea anceps*, Large Nutmeg (2333) Local
 5 dates: Earliest: 2/6/16, 1, Whitchurch Hill SU636788 [IES]
 Latest: 29/6/16, 1, Earley, Harcourt Drive SU735709 [NMH]
 73.164 *Apamea sublustris*, Reddish Light Arches (2323) Local
 25/6/16, 1, Whitchurch-on-Thames, The Old Farmhouse SU642776 [NMH]; 5/7/16, 1, Earley, Harcourt Drive SU735709 [NMH]
 73.197 *Conistra rubiginea*, Dotted Chestnut

(2260) Notable B
 3/4/16, Snelsmore Common SU463710 [PBL];
 5/4/16, 1, Earley, Harcourt Drive SU735709
 [NMH]; 13/4/16, Snelsmore Common
 SU463710 [PBL]
 73.206 *Lithophane leautieri*, Blair's Shoulder-
 knot (2240) Common
 29 & 30/9/16 & 7/12/16, Earley, Harcourt Drive
 SU735709 [NMH]
 The record on 7/12/16 is extremely late [NMH].
 73.212 *Ipimorpha retusa*, Double Kidney
 (2311) Local
 4/8/16, Thatcham Reedbeds SU502667 [PBL]
 73.213 *Ipimorpha subtusa*, Olive (2312) Local
 6/8/16, Snelsmore Common SU463710 [PBL]
 73.217 *Cosmia pyralina*, Lunar-spotted Pinion
 (2319) Local
 7/7/16, Brimpton, Wasing Quarry SU570657
 [NMH(LLP)]; 16/7/16 & 24/8/16, Hill Green,
 Leckhampstead SU452767 [PBL]; 21/9/16, 1,
 & 28/9/16, 2, Whitchurch Hill SU636788 [IES]
 73.221 *Parastichtis suspecta*, Suspected
 (2268) Local
 11 & 12/7/16, Snelsmore Common SU463710
 [PBL]; 21/7/16, 2, Snelsmore Common
 SU460710 [NMH]; 28/7/16, 1, Crookham
 Common SU522643 [NMH(LLP)]
 73.222 *Apterogenum ypsilon*, Dingy Shears
 (2314) Local
 4 records: Earliest: 7/7/16, 9, Brimpton,
 Wasing Quarry SU570657 [NMH(LLP)]
 Latest: 16/7/16, 1, Red Cow SU592868 [AR]
 73.224 *Griposia aprilina*, Merveille du Jour
 (2247) Common
 High Count: 25/10/16, 5, Tilehurst, Westwood
 Road SU666742, highest count previously 2.
 [JH]
 73.237 *Polymixis flavicincta*, Large
Ranunculus (2252) Local
 Earliest: 26/9/16, 1, Earley, Harcourt Drive
 SU735709 [NMH]
 High Count: 28/9/16, 12, Tilehurst, Westwood
 Road SU666742, highest count previously 7.
 [JH]
 Penultimate: 30/9/16, 1, Earley, Harcourt Drive
 SU735709 [NMH]
 Very Late: 9/12/16, 1, Earley, Harcourt Drive
 SU735709 [NMH]
 73.244 *Orthosia cerasi*, Common Quaker
 (2187) Common
 Earliest: 24/1/16, 1, Tilehurst, Westwood Road
 SU666742, earliest ever garden record,
 previous earliest 8/2 [JH]; 24/1/16, 2, Earley,
 Harcourt Drive SU735709 [NMH]
 The main emergence of Common Quakers
 often coincides with the appearance of *Salix*
caprea (Sallow = 'Pussy Willow') catkins,
 because the adult moths feed on the nectar,
 and this occurs earlier following a warm

autumn and early winter as in 2015/16. I have
 even recorded Common Quakers in autumn
 well before the catkins have developed. For
 2016, I received 4 records for January (6
 individuals) and 6 for February (16
 individuals), all of which I consider very early
 [NMH]
 73.263 *Lacanobia w-latinum*, Light Brocade
 (2157) Local
 3/6/16, Wokingham, St Paul's Churchyard
 SU805689 [PBL]; 5/6/16, 1, Earley, Harcourt
 Drive SU735709 [NMH]; 25/6/16, 1,
 Whitchurch-on-Thames, The Old Farmhouse
 SU642776 [NMH]
 73.267 *Lacanobia oleracea*, Bright-line Brown-
 eye (2160) Common
 Late generation: 7/9/16, 2, Tilehurst,
 Westwood Road SU666742 [JH] 73.280
Hecatera dysodea, Small *Ranunculus* (2165)
 Red Data Book (but whether RDB1, RDB2,
 RDB3 undecided)
 17/8/16, 1, Earley, Harcourt Drive SU735709
 [NMH]
 73.289 *Mythimna pudorina*, Striped Wainscot
 (2196) Local
 9 & 11/7/16, Snelsmore Common SU463710
 [PBL]
 73.294 *Mythimna straminea*, Southern
 Wainscot (2197) Local
 4/8/16, Thatcham Reedbeds SU502667 [PBL]
 73.297 *Mythimna albipuncta*, White-point
 (2194) Immigrant, recent colonist
 10 dates: Earliest: 5/6/16, 1, Earley, Harcourt
 Drive SU735709 [NMH]
 Latest: 20/9/16, Red Cow SU592868 [AR]
 73.302 *Leucania obsoleta*, Obscure Wainscot
 (2204) Local
 3/6/16, 1, Whitchurch Hill SU636788 [IES]
 73.327 *Agrotis ipsilon*, Dark Sword-grass
 (2091) Immigrant
 6/5/16, 1, Tilehurst, Westwood Road
 SU666742, first spring record for garden. [JH]
 73.337 *Cerastis leucographa*, White-marked
 (2140) Local
 12/4/16, Snelsmore Common SU463710
 [PBL]; 5/5/16, Bomb site, Greenham Common
 SU506653 [PBL]
 73.354 *Xestia stigmatica*, Square-spotted
 Clay (2131) Notable B
 30/7/16, 1, Chalkhills / Boze Down SU642778
 [NMH(RDNHS)]; 18/8/16, Warburg Reserve,
 Bix Bottom SU720878 [NMH(LLP)]
 73.355 *Xestia castanea*, Neglected Rustic
 (2132) Local
 28/8/16 & 15/9/16, Snelsmore Common
 SU463710 [PBL]

NOLIDAE

74.002 Meganola albula, Kent Black Arches (2076) Notable B

5 dates: 7/7/16, 1, Brimpton, Wasing Quarry SU570657 [NMH(LLP)]; 21/7/16, 2, Snelsmore Common SU460710 [NMH]; 26/7/16, Snelsmore Common SU463710 [PBL]; 30/7/16, 1, Whitchurch-on-Thames, The Old Farmhouse SU642776 [NMH(RDNHS)]; 31/7/16, 1, Whitchurch Hill SU636788 [IES]

74.004 Nola confusalis, Least Black Arches (2078) Local

9 dates: Earliest: 5/5/16, Bomb site, Greenham Common SU506653 [PBL]

Latest: 22/6/16, 1, Earley, Harcourt Drive SU735709 [NMH]

74.007 Bena bicolorana, Scarce Silver-lines (2421) Local

4 dates: Earliest: 6/7/16, 1, Earley, Harcourt Drive SU735709 [NMH]

Latest: 30/7/16, 1, Chalkhills / Boze Down SU644778 [NMH(RDNHS)]

74.009 Nycteola revayana, Oak Nycteoline (2423) Local

5 dates: Earliest: 3/4/16, 1, Earley, Harcourt Drive SU735709 [NMH]

Latest: 15/11/16, Hill Green, Leckhampstead SU452767 [PBL]

CONTRIBUTORS

Thanks are due to the following members for their submissions:

Tony Rayner (**AR**), Ian Esland (**IES**), Roger Frankum (**RWF**), Jan Haseler (**JH**), John Lerpiniere (**JL**) & Paul Black (**PBL**). (**RDNHS**) denotes Reading & District Natural History Society field meetings, (**UTBC**) denotes Upper Thames Butterfly Conservation walks and (**LLP**) denotes Living Landscape Project mothing nights in the Thatcham /Greenham area, in which traps are run by Roger Stace (**RST**), Roy Dobson (**RDO**), Paul Black (**PBL**) and myself (**NMH**).

RECORDER'S REPORT FOR VERTEBRATES 2016

Tony Rayner

My grateful thanks to those who have contributed to this report. Once again special thanks are due to Rod D'Ayala, John Lerpiniere, Gordon Crutchfield, Jan Haseler, Alan Parfitt and John Sumpter for their invaluable input. Where especially high numbers are recorded these are highlighted in bold. Where Cholsey grid references are not stated, the records relate to SU592868 (Red Cow Cottage.)

NB the worrying decline in Berkshire's Adder population indicated by these records. In 2013 a total of 134 sightings were reported, this year just 11 sightings. This suggests that a management review is urgently needed if we are to retain this species.

BIRDS

1. Exceptional local records

Luscinia megarhynchos Nightingale
16/5/16 One at Reading Lake Hotel SU691701 (JH)

Lanius excubitor Great Grey Shrike
3/12/16 One on Ridgeway above Churn SU527824 (JH)

2. Seen/heard on local RDNHS field trips or in members' gardens)

Muscicapa striata Spotted Flycatcher
20/7/16 One at Greywell Fen SU716504 (KW & SW)

Lymnocyptes minimus Jack Snipe
11/10/16 One photographed in a Cholsey garden – a first for the site (TR)
(chance sightings of this bird are apparently rare)

Scolopax rusticola Woodcock
28/5/16 Two at Silchester Common SU619621 (GS)

Caprimulgus europaeus Nightjar
28/5/16 One at Silchester Common SU619621 (GS)

FISH

No records received

AMPHIBIANS

Bufo bufo Common Toad
26/1/16 to 7/4/16 4,928 Adults collected and carried

across the road at Oaken Wood, Hambledon.

The maximum count on a single night was 1,080.

Use of the new ponds was again disappointing,

demonstrating their extreme site fidelity (JS/AP)

25/2/16 Adult at Hosehill LNR SU652697 (JL)
4/2/16 to 22/3/16 One found in Cholsey meadow under

a reptile sheet (TR)

18/3/16 Adult at Brookfield School SU663754 (JL)

29/3/16 Minimum of 12 adults at Greenmoor SU645812 (Rd'A)

4/5/16 Large number of tadpoles at Mill Meadows, Henley SU767820 (Rd'A)

21/5/16 Adult at Furze Hill Hermitage SU512742 (JL)

2/6/16 Adult at Bowdown Wood SU507652 (JL)

16/6/16 Adult at Moor Copse SU638739 (JL)

18/6/16 Adult at Audreys Meadow SU486658 (JL)

19/7/16 Adult female beside Cholsey cottage (TR)

11/8/16 Adult at Peppard Common SU706816 (Rd'A)

14/9/16 Juvenile at Wokefield Common SU652662 (JL)

4/10/16 Adult at Nettlebed Common SU703869 (Rd'A)

12/10/16 Adult & 4 juvs at Paices Wood SU5863 (JL)

5/11/16 One at Hosehill LNR SU646696 (JL)

Triturus vulgaris Smooth Newt

Feb/Mar 67 adults carried across road at Hambledon (JS/AP)

1/3/16 & 13/3/16 One under refuge in Cholsey meadow (TR)

31/3/16 Three in Westwood Road garden SU666742 (JH)

18/4/16 small numbers at Little Wittenham NR SU566933 (Rd'A)

28/4/16 An adult seen at Mill Meadows, Henley SU767820 (HWG)

29/4/16 to 20/9/16 Total of 122 sightings in a Didcot garden SU521895 (Rd'A)

14/5/16 Two adults at Nettlebed Common SU703869 (Rd'A)

10/6/16 Four under concrete slab at Woodcote Primary School SU646819 (Rd'A)

Triturus helveticus Palmate Newt

29/4/16 to 25/8/16 Five sightings in Didcot garden SU521895 (Rd'A)

14/5/16 Adult male & female at Nettlebed Common SU7087 (Rd'A)

13/6/16 Four adults in Butchers Arms pond, Ditchfield SU804914 (Rd'A)

Triturus cristatus cristatus Great Crested Newt

One was carried across the road at Hambledon – the first record for the site (JS/AP)

29/4/16 to 25/8/16 A total of 14 sightings in Didcot garden SU521895 (Rd'A)

26/4/16 to 25/8/16 22 adults at Little Wittenham NR SU567934 (Rd'A)

4/5/16 185 adults in 7 ponds at Sutton Courtenay EEC SU501918 (Rd'A)

Rana temporaria Common Frog

Feb/Mar 413 adults carried across road at Hambledon, this was again more

than usual.

There was also a good amount of spawn in the

new ponds (JS/AP)

10/1/16 One at Moor Copse SU637739 (JH)

10/2/16 Adults hibernating in pond margin at Crays Pond SU637805

11/2/16 One in Westwood Rd Tilehurst garden SU666712 (JH)

11/2/16 Six adults in Greenmoor Upper Pond SU645813 (Rd'A)

23/2/16 First spawn in Westwood Rd garden, Tilehurst SU666712 (JH)

1/3/16 60+ frogs in Westwood Rd garden, Tilehurst SU666712 (JH)

12/3/16 Spawning began with a max of 50 clumps in Didcot

garden SU521895 (Rd/A)

12/3/16 spawn clumps, 40 by 17/3/16, at Crays Pond SU637805 (Rd'A)

16/3/16 10 spawn clumps, 20 by 25/3/16 at Nettlebed Common SU703869 (Rd'A)

18/3/16 Five plus spawn at Brookfield School SU663754 (JL)

20/3/16 Spawn at Rushall Farm SU583724 (JL)

29/3/16 35 spawn clumps in Sonning Common garden SU706803 (Rd/A)

23/4/16 Adult at Hosehill LNR SU651696 (JL)

10/6/16 Large amount of spawn at Woodcote Primary School SU646819 (Rd'A)

24/6/16 Juvenile at Wokefield Common SU652662 (JL)

18/7/16 Juvenile at Moor Copse SU634738 (JL)

8/8/16 Froglet in Cholsey garden (TR)

11/8/16 to 27/9/16 Six at Peppard Common SU705815 (Rd'A)

8/9/16 Froglet in Cholsey garden (TR)

12/9/16 Adult at Tilehurst SU665742 (JL)

25/9/16 Adult in Cholsey garden (TR)

6/10/16 Froglet in Cholsey garden (TR)

13/10/16 Two adults & 1 juv. At Tilehurst SU665742 (JL)

3/11/16 Adult at Kintbury Newt Ponds SU386664 (JL)

Rana ridibunda Marsh Frog No records received

REPTILES

Lacerta vivipara Common Lizard

11/3/16 to 8/10/16 A total of 54 sightings at Cholsey

with a max. of 8 on 8/10/16. Less recording

than in previous years. (TR)

5/4/16 Two adults at Wokefield Common SU6566 (JL)

8/4/16 Adult at Snelsmore Common SU462707 (JL)

20/4/16 One in Padworth Village Hall field SU615683 (JH)

2/5/16 Two adults at Decoy Heath SU6163 (JL)

7/5/16 Adult at Burnt Platt plantation SU691831 (Rd'A)

14/6/16 Three at Hazeley Heath SU764580 (JH)

21/6/16 Two adults at Paices Wood SU583636 (JL)

26/6/16 Adult at Broadmoor Bottom SU856628 (JL)

6/7/16 Adult at Wildmoor SU842627 (JL)

31/8/16 Juvenile at Padworth Common SU617646 (JL)

6/9/16 Adult at Decoy Heath SU611632 (JL)

11/8/16 to 11/9/16 Five at Peppard Common SU705815 (Rd'A & MW)

Anguis fragilis Slow-worm

2/3/16 to 8/10/16 A total of 1920 sightings with a

maximum count of 109 on

21/4/16

at Cholsey. (fewer counts this year) (TR)

7/3/16 to 1/10/16 total of 287 sightings in Didcot garden SU521895 (Rd/A)

15/3/16 Adult at Crookham Common SU522642 (Rd'A)

17/3/16 Adult male at Padworth Common SU618647 (JL)

1/4/16 Adult male at Tilehurst SU665742 (JL)

1/4/16 One in Westwood Road, Tilehurst garden SU666742 (JH)

2/4/16 to 29/10/16 Total of 142 records at Chalkhills,

Whitchurch SU640778 (Rd/A & MW)

5/4/16 Four at Wokefield Common SU6164 (JL)

19/4/16 Adult male in Tilehurst SU665742 (JL)

2/5/16 Five at Decoy Heath SU6163 (JL)

19/5/16 Adult & 3 juveniles at Paices Wood SU611633 (JL)

21/5/16 Two adults at Furze Hill Hermitage SU512742 (JL)

23/5/16 Four adults at Padworth Common SU6164 (JL)

6/6/16 Five adults at Paices Wood SU5863 (JL)

7/6/16 Adult female at Furze Hill Hermitage SU511741 (JL)

22/6/16 Adult female at Wildmoor SU845627 (JL)

24/6/16 Three adults & one juv. at Padworth Common SU618645 (JL)

9/7/16 Fourteen at Decoy Heath SU610633 (JL)
17/7/16 One at Pickling Yard plantation, Mortimer SU642647 (JH)
10/8/16 Four at Padworth Common SU618647 (JL)
18/8/16 One at Decoy Heath SU613639 (DO)
6/9/16 Ten at Decoy Heath SU6163 (JL)
7/9/16 Juvenile at Hosehill LNR SU648694 (JL)

Natrix natrix Grass Snake
25/3/16 Adult at Padworth Common SU618647 (JL)
29/3/16 to 8/10/16 A total of 212 sightings with a

record maximum of 22 on 21/4/16 at Cholsey site. (fewer counts than usual this year) (TR)

21/4/16 Adult at Decoy Heath SU612633 (JL)
30/4/16 & 28/5/16 Female at Chalkhills,Whitchurch SU640778 (Rd'A)
4/5/16 3 adults & 2 immatures at Paices Wood SU5863 (JL)
15/6/16 Four at Padworth Common SU615647 (JL)
24/6/16 Four at Padworth Common SU619647 (JL)
25/6/16 Two adults at Hosehill LNR SU6469 (JL)
1/7/16 Adult at Wildmoor SU874622 (JL)
11/7/16 Two adults at Paices Wood SU5863 (JL)
18/8/16 Adult at Sutton Park SU745746 (DO)
29/8/16 Juvenile at Chalkhills SU640778 (Rd'A)
19/9/16 Juvenile at Decoy Heath SU610634 (JL)
27/9/16 Adult at Englefield SU625719 (JL)
2/10/16 One at Decoy Heath SU611635 (JH)
13/10/16 Juvenile at Hosehill LNR SU652697 (JL)

Vipera berus Adder

15/3/16 Male at New Greenham Pk East SU506644 (Rd'A)
15/3/16 Male & female at Crookham Common SU522642 (Rd'A)
25/3/16 A juvenile at Wokefield Common SU651663 (JL)
5/4/16 A female & juvenile at Wokefield Common SU6566 (JL)
23/5/16 An adult at Padworth Common SU618647 (JL)
26/6/16 Two adult females at Broadmoor Bottom SU856629 (JL)
6/7/16 Adult female at Wildmoor SU847629

(JL)
11/7/16 Adult female at Wokefield Common SU650662 (JL)
10/8/16 A juvenile at Padworth Common SU618647 (JL)

BATS

Pipistrellus pipistrellus Common Pipistrelle
5/4/16 to 20/5/16 on 5 dates in Cholsey garden (TR)
14/5/16 Three at Nettlebed Common SU703870 (Rd'A)
28/5/16 At Silchester Common SU617622 (GS)
3/7/16 to 26/7/16 on 9 dates in Cholsey garden (TR)
16/8/16 Several on 16/8/16 in Cholsey garden (TR)
11/9/16 One in Didcot garden SU521895 (Rd'A)

Pipistrellus pygmaeus Soprano Pipistrelle
28/5/16 At Silchester Common SU617622 (GS)

Myotis daubentonii Daubenton's
No records received

Plecotus auritus Brown Long-eared Bat
No records received

Nyctalus noctula Noctule
8/7/16 to 19/7/16 several with a maximum of 7 on 13/7/16 over Cholsey meadow (TR)

INSECTIVORES

Erinaceus europaeus Hedgehog
25/1/16 & 11/2/16 One in Cholsey garden (PC)
26/3/16 An amorous pair after dark in a Cholsey garden (PC)
4/4/16 & 17/4/16 & 14/9/16 Adult in Earley garden SU745711 (DO)
12/5/16 Road kill at Aldermaston SU591641 (JL)
16/6/16 to 6/7/16 Up to four in a Cholsey garden (PC)
18/6/16 Road kill at East Hagbourne SU530890 (Rd'A)
1/7/16 Road kill at Crowthorne SU854658 (JL)
2/7/16 One at Ruscombe SU795764 (JL)
7/7/16 Road kill at Chalkhouse Green SU710779 (GC)
15/7/16 One in Reading SU694730 (GC)
15/8/16 Juvenile in Didcot garden SU521895 (Rd'A)

30/9/16 Road kill on Winterbrook bypass SU602881 (Rd'A)
13/10/16 to 16/11/16 One nearly every night – midnight to 4AM per camera SU745711 (DO)
23/10/16 & 9/12/16 One in Cholsey garden (PC)
Sorex araneus Common Shrew
4/2/16 to 19/5/16 Total of 31 sightings at Cholsey site (TR)
11/1/16 Two adults at Fobney SU703710 (JL)
15/3/16 Adult at Bowdown Heath SU506650 (Rd'A)
19/4/16 Three adults at Theale Lake SU651698 (JL)
30/4/16 to 15/10/16 Five sightings at Chalkhills, Whitchurch SU640778 (Rd'A)
4/6/16 Adult at Hosehill SU651696 (JL)
21/7/16 Adult at Ashampstead SU586749 (JL)

Sorex minutes Pygmy Shrew
11/1/16 One at Fobney SU703710 (JL)
10/2/16 One at Padworth SU616645 (JL)
12/3/16 Adult at Chalkhills Whitchurch SU640778 (Rd'A)
2/4/16 One at Hosehill LNR SU652696 (JL)

Neomys foedens Water Shrew
14/4/16; 19/4/16 & 4/5/16 One at Paices Wood SU583637 (JL)
21/8/16 Two foraging on Axmansford lawn during mowing SU5660 (ABo)

Talpa europaea Mole
5/2/16 Widespread hills at Welford SU4073 (JL)
5/2/16 Hills at Weston SU402735 (JL)
29/3/16 Hills at Greenmoor SU647810 (Rd'A)
22/7/16 Hills at Peppard Common SU708817 (Rd'A)
1/12/16 130 hills in one acre paddock at Cholsey SU595871 (TR)

CARNIVORES

Meles meles Badger
5/2/16 Road kill at Yattendon SU549738 (JL)
10/2/16 Road kill at Burghfield SU675695 (JL)
14/2/16 Recent dig under Cholsey meadow fence (TR)
23/2/16 Two adults at Wyfold Lane SU693816 (Rd'A)
20/3/16 Road kill at Aldermaston SU591644 (JL)
20/3/16 Road kill at Yattendon SU547739 (JL)
25/4/16 Road kill at Lower Basildon SU601793 (JL)
12/4/16 Road kill at Lambourn Woodlands SU316775 (JL)

7/5/16 Active sett at Burnt Platt plantation SU690830 (Rd'A)
2/6/16 Road kill at Sulham SU644745 (JL)
20/7/16 Latrine & active sett at Bowling Green Copse SU593812 (Rd'A)
21/7/16 Road kill at Yattendon SU538751 (JL)
24/8/16 One at Pingewood SU693707 (GC)
11/10/16 Sett at Rushall Farm, Bradfield (JL)

Mustela nivalis Weasel
5/6/16 One at Lambourn St Mary's SU321834 (JL)
8/7/16 One crossing road at Moulsoford SU584825 (Rd'A)
12/7/16 One in garden at Axmansford SU5660 (ABo)
22/8/16 One at Lollingdon, Cholsey (PC)
19/10/16 One at Rushall Farm SU576731 (JL)

Mustela erminea Stoat
7/5/16 One in garden at Axmansford SU5660 (ABo)
26/7/16 One at Tidmarsh SU632735 (JL)
20/10/16 Road kill nr. Golden Balls roundabout SU555971 (Rd'A)
25/10/16 One at Lollingdon, Cholsey (PC)
9/12/16 One near Lollingdon returning to rabbit kill (PC)

Mustela putorius sp. Polecat/Ferret
26/5/16 Road kill at Englefield SU623731 (JL)

Mustela vison American Mink No records received

Vulpes vulpes Fox
5/1/16 One at Purley SU660761 (JH)
8/1/16 One crossing road at Sonning Common SU701799 (Rd'A)
12/1/16 One at Shinfield Park SU731695 (JH)
16/1/16 Road kill at Tidmarsh SU637746 (JL)
25/1/16 Road kill at Moulsoford SU592828 (JL)
9/3/16 One at Pamber Forest SU612602 (JH)
31/3/16 One in Earley garden SU745711 (DO)
26/4/16 One at Hampstead SU529757 (JL)
30/4/16 One at Chalkhills SU640778 (MW)
5/5/16 Road kill at Shefford SU635734 (JL)
30/5/16 A dog fox by Wheatfield Road, Axmansford SU562605 (ABo)
24/6/16 Road kill at Sulham SU640742 (JL)
2/7/16 Road kill at Ashampstead SU588738 (JL)
21/7/16 One in Reading SU694725 (GC)
28/7/16 One in Reading SU683717 (GC)
3/8/16 One in Pingewood SU676700 (GC)
9/9/16 & 15/10/16 & 17/11/16 One in Earley garden SU745711 (DO)
21/9/16 Road kill at Chieveley SU471728 (JL)

Lutra lutra Otter
27/4/16 Immature crossing Church Meadow,
Little Wittenham SU566934 (JW)
11/10/16 & 21/10/16 One or two in The
Thames by Carmel
College SU607878 (Mr Sims a
night fisherman)

Rattus norvegicus Brown Rat
23/1/16 Three at Hosehill LNR SU647695 (JL)
21/3/16 One at Emmer Green SU713767 (GC)
24/4/16 One at Emmer Green SU714766 (GC)
25/5/16 Road kill at Padworth Common
SU617652 (JL)
30/5/16 to 6/6/16 One at Emmer Green
SU713767 (GC)
16/9/16 One crossing the road at Long
Wittenham SU562932 (Rd'A)
21/9/16 One at Tilehurst allotments SU670748
(JL)

DEER

Muntiacus reevesi Muntjac
18/1/16 One in Cholsey meadow (TR)
15/2/16 One at Emmer Green SU719767 (GC)
23/2/16 Three at Rummerhedge Wood
SU675813 (Rd'A)
7/3/16 One in Tilehurst garden in stand-off
with cat SU666742 (JH)
31/3/16 One at Witheridge Hill Common
SU694843 (Rd'A)
4/4/16 One at Fobney SU702709 (JL)
12/4/16 One in Tilehurst garden SU665742
(JL)
5/5/16 Three at Little Ham Farm, Axmansford
SU567607 (ABO)
17/5/16 One at Pingewood SU686698 (GC)
23/5/16 One at Lambourn SU333765 (JL)
24/5/16 One at Lollingdon, Cholsey (PC)
28/5/16 One at Tidmarsh Lane SU607749 (JL)
2/6/16 One at Bowdown SU511651 (JL)
19/7/16 One at Emmer Green SU714765 (GC)
26/7/16 One at Pingewood SU671699 (GC)
28/7/16 One at Emmer Green SU714768
(GC)
11/10/16 One at Lollingdon, Cholsey (PC)
24/11/16 One at Basildon Park SU604772 (JH)
15/11/16 One at Moor Copse SU633741 (JL)
Capreolus capreolus Roe Deer
5/1/16 Four at Shinfield SU737677 (JH)
22/2/16 Three at Paices Wood SU586639 (JL)
9/3/16 Four at Pamber Forest SU612602 (JH)
17/3/16 Two in Green Lane, Cholsey
SU595876 (TR)
2/4/16 Four at Tyle Mill SU624688 (JH)
5/4/16 Two in Grazeley churchyard SU699669

(JH)
13/4/16 Three at Fobney SU699709 (JL)
30/7/16 Two adults at Chalkhills SU644778
(Rd'A)
4/11/16 Two adult females in Cholsey
meadow (TR)
12/11/16 to 21/10/16 Seen through the year at
Lollingdon,
Cholsey, especially between these dates
SU571852 (PC)

Dama dama Fallow Deer
13/2/16 15 At Leckhampstead SU451754 (LD)
31/3/16 20 Witheridge Hill Common
SU694843 (Rd'A)
24/4/16 30 at Hazeley Heath SU748587 (JH)
7/5/16 Twelve at Axmansford, Tadley
SU565607 (ABO)
16/7/16 Large calf at Chalkhills, Whitchurch
SU640778 (Rd'A)

Cervus elaphus Red Deer
No records received

RABBITS & HARES

Lepus europaeus Brown Hare
13/2/16 Four at Leckhampstead SU451754
(LD)
30/3/16 & 8/4/16 Two in Cholsey field
SU594869 (TR)
25/4/16 Immature at Warren Bottom, Ewelme
SU665914 (Rd'A)
5/5/16 Three at Straight Solery SU333724
(JL)
6/5/16 Three at Lambourn Woodlands
(SU310763 (JL)
24/5/16 One at Lollingdon, Cholsey (PC)
6/8/16 Juvenile at Aston Upthorpe SU550854
(Rd'A)
19/10/16 One at Lollingdon, Cholsey (PC)
28/10/16 One at Lollingdon, Cholsey (PC)
Oryctolagus cuniculus Rabbit
26/4/16 Four at Hampstead SU534756 (JL)
11/5/16 Three at Bradfield SU580726 (JL)
28/5/16 Four at Eling SU535755 (JL)
5/8/16 Six at Lambourn SU309783 (JL)

RODENTS

Sciurus carolinensis Grey Squirrel
Up to 3 seen throughout the year in Cholsey
garden (TR/RR)
Seen regularly through the year in Didcot
garden SU521895 (Rd'A)
26/1/16 One at Bradfield SU582728 (JL)
17/3/16 Road kill at Sulham SU647745 (JL)
21/3/16 Road kill at Ashampstead SU568772

(JL)
7/5/16 One at Kingwood Common SU690830 (Rd'A)
30/9/16 Three at Prospect Park SU691727 (JL)
14/10/16 Two at Beenham SU590691 (JL)
14/10/16 Two at Stanford Dingley SU579710 (JL)
27/10/16 Two at Pierces Hill Tilehurst SU665742 (JL)
18/11/16 Two at Tilehurst SU703731 (JL)
18/11/16 Three at Prospect Park SU691729 (JL)

Apodemus sylvaticus Wood Mouse

No sightings beneath refuges at Cholsey – first blank year (TR)
15/3/16 One dead at Bowdown Heath SU5065 (Rd'A)
27/4/16 Signs of feeding at Moor Copse SU637739 (JL)
10/5/16 One in Cholsey garden (TR)
9/6/16 & 14/6/16 One at Pingewood SU691708 (GC)
5/11/16 One in Didcot garden SU521895 (Rd'A)

Apodemus flavicollis Yellow-necked Mouse No record received

Muscardinus avellanarius Hazel Dormouse
2/4/16 One female in nestbox at Moor Copse SU6473 (BMG)
22/8/16 One female & three young in box at Moor Copse SU6374 (BMG)

Micromys minutus Harvest Mouse

19/11/16 24 nests at Moor Copse SU638736 (AC)

Microtus agrestis Field Vole

11/1/16 Four at Fobney SU703710 (JL)
1/2/16 Two at Paices Wood SU586642 (JL)
16/1/16 Two at Hosehill LNR SU652696 (JL)
4/2/16 to 14/5/16 Total of 28 sightings beneath refuges at Cholsey (TR)

9/4/16 to 2/10/16 Nine sightings at Chalkhills, SU640778 (Rd'A)
2/10/16 Two at Furze Hill SU511741 (JL)
17/10/16 One at Hosehill SU652696 (JL)

Clethrionomys glareolus Bank Vole

2/1/16 2 juveniles at Hosehill SU652696 (JL)
6/1/16 to 20/1/16 One under Cholsey birdfeeders (RR/TR)
23/1/16 to 8/10/16 Total of 97 sightings beneath refuges at Cholsey (TR).
24/1/16 & 16/4/16 Adult under refuge at Chalkhills, Whitchurch SU640778 (Rd'A)
5/4/16 2 adults at Paices Wood SU585639 (JL)
12/5/16 Adult at Decoy Heath SU612633 (JL)
11/7/16 2 adults at Paices Wood SU585640 (JL)
31/7/16 Adult at Hermitage SU519737 (JL)
22/9/16 Adult & 3 juvs. at Bray Pit SU904787 (JL)
15/11/16 Adult at Furze Hill SU511741 (JL)
22/12/16 Adult attacked a Blackbird on the ground over a disputed apple in Cholsey garden (TR)

Arvicola terrestris Water Vole No records received

CONTRIBUTORS

Thanks are due to the following members for their submissions: –

ABo Andy Bolton; **GC** Gordon Crutchfield; **PC** Paul Chandler; **Rd/A** Rod d'Ayala; **LD** Lesley Dunlop; **JH** Jan Haseler; **JL** John Lerpiniere; **DO** David Owens; **AP** Alan Parfitt; **RR** Ro Rayner; **TR** Tony Rayner; **GS** Graham Saunders; **JS** John Sumpter; **JW** James Watkins; **KW** Ken White; **MW** Mike Waring; **SW** Sarah White; **TW** Tom Worthington; **BMG** Berks Mammal Group; **HWG** Henley Wildlife Group; Mr Sims

THE WEATHER IN READING DURING 2016

Roger Brugge

Department of Meteorology, University of Reading

Averages and anomalies mentioned in this report refer to the climatological period 1981-2010.

2016 was a slightly warmer than average year, being the coldest for three years. Like 2015, it was drier than normal with only 234 mm falling in a rather dry second half of the year (of which 92 mm fell in November). Summer got off to a wet and dull start – all other months from March to October were sunnier than June, helping to make the year slightly sunnier than normal overall. Only five days brought a fall of snow and outside of June there was little in the way of thunder – although thunderstorms on the 15th-16th September might be described as spectacular.

January

The first ten days continued the mild conditions of the preceding December; it was frequently unsettled, windy and wet – but the third week brought some sharp frosts before more warm days arrived in the final week. Overall January was mild and wet with just one day having any snowfall. It was the second wettest January (after 2014) in the past 20 years.

February

February was a sunny month and, after a mild winter, soil temperatures by the end of the month were unusually high. At a depth of 30 cm, the average February soil temperature was the highest since 2007 while at 100 cm the mean temperature was the highest for February since 2002. Parts of Berkshire, but not the University, recorded gale force winds on the 8th. On the 21st the temperature reached 14.2 °C, the highest February temperature for four years. Despite being almost 1 degC warmer than average, February was the coldest month of 2016 but no snow was seen falling.

March

17.4 mm of rain falling on the 27th made this the wettest March day since 2005 and the rain was accompanied by strong winds. After the mild winter, daytime temperatures were rather disappointing with the highest value recorded being below the highest noted in February. These relatively low temperatures were partially due to a large number of days with winds blowing from the north-east.

April

April was a cool and sunny month. Overall, along with 2013, this was the coldest April in Reading since 1989. The lowest temperature of the month did not occur until the 28th, when a reading of -1.2 °C was recorded, while the highest temperature for the month of 17 °C has been exceeded in every April since 1992 (when the highest recorded was also 17 °C). Snow fell as late as the 26th – the latest 'winter' snowfall since a fall in May 1997. However, 2016 continued a tendency towards sunny Aprils during the current millennium – despite a sunnier than average month there have been six sunnier Aprils since 2000.

May

After a cold start (there was an air frost on the 1st) the weather soon turned mild in May and by the 8th the temperature had reached 25.8 °C, which turned out to be the highest reading of the month. Overnight during the 10th-11th the temperature did not drop below 14.3 °C, the warmest May night for four years. But the warmth did not last and on the 31st the temperature failed to rise above 12.1 °C, making this an unusually cool end to May. However, overall May was slightly warmer than average – and it was a wet month too although all but about 10 mm of the month's total rainfall fell on just five days. The dominant wind directions were from the north and north-east.

June

Despite including the day with the most hours of daylight, June 2016 was remarkably dull in Reading. In fact, with just 116 hours of sunshine being recorded at the University's weather station, it was the third dullest June in a record dating back to 1958 – being only slightly sunnier than in June 1990 (109 hours) and June 1991 (when 110 hours of sunshine were recorded). The month's sunshine total represents just 61 per cent of the expected total for June, and was less than the University recorded this year in each of the months from March to May. June was also lacking in hot days. The highest temperature of the month (24.7 °C) was lower than the 25.8 °C recorded in May this year. However, overall June was slightly warmer than normal – the cloud that kept out the sunshine by day kept us warmer than average by night. Despite having five days with thunder and it being a wet month, the University's raingauge missed some of the heavier falls than affected some parts of Berkshire and surrounding counties. In parts of the Thames Valley over 100 mm of rain fell in total during June – the result of some very heavy downpours that led to local flooding and was even associated with the formation of a funnel cloud close to the town.

July

Temperatures were close to the July average overall, but after a relatively cool start to the month they rose to 31.9 °C on the 19th – the highest reading of 2016. This was followed by a night-time minimum temperature of 19.6 °C – the warmest night of the year and the warmest night since August 2003. July was a dry month – with barely one-third of the normal July rainfall it was the driest July since 1994. It was also the only month in 2016 with sunshine on every day of the month. Winds were dominated by south-westerlies.

August

Apart from a fall of 15 mm on 1st August, the 36 days beginning 14th July saw only 6 mm of rain falling. Indeed, August was a dry month (half the rain fell during the first 33 hours of the month) and the sunniest month of the year. It was also the warmest month of the year with 30.1 °C being recorded as late as the 24th. As in July there were many warm nights – with temperatures falling no lower than 15 °C on nine nights.

September

September was an unusually mild month – only 1929, 1949 and 2006 have been milder and in 2016 only July and August were warmer. As late as the 13th the air temperature reached 29.2 °C. Since the university's weather records began over 100 years ago, the highest temperature previously reached in the town later in the year than 12th September was one of 29.1 °C on 19th September 1926. But September was also a rather dull month – the dullest September for three years. The weather event of the month was the series of thunderstorms that affected the area late on the 15th and early on the 16th. Hail of about 1 cm in diameter fell in Reading (much larger hail fell not too far to the south of the University) and 29.6 mm of rain fell – the wettest day of the year; again some areas close by were wetter by some 20-40 mm.

October

October was sunnier than both June and September this year at the University. It was also the driest October since 1985 as winds blew much more frequently than usual from a north or north-easterly direction. Pressure remained quite high for the time of the year and wind speeds overall were quite low for this autumnal month.

November

November brought an early taste of cold winter weather as the temperature failed to rise above 5.9 °C on the 8th. This day was also rather wet – with 26.3 mm it was the second wettest day of the year. Another cold spell developed under high pressure towards the end of the month with the temperature falling to -5.4 °C on the 30th. Storm Angus on the 20th brought a rapid fall in pressure, followed by an even more rapid rise. Overall, November was 1.2 degC colder than normal.

December

December was mild, anticyclonic, dry and frequently foggy. In fact it was only marginally cooler than November (by 0.3 degC), helped by a mild period between the 7th and 16th. On the 27th air pressure rose above 1045 mb – the highest for a December day for at least 40 years. There were some frosty days early and late in the month while the dry nature of the month led to it being the driest December in the past 100 years, apart from in 1926, 1933, 1988 and 1991. The average pressure for the month has only been higher in 1926, 1931 and 1991 in the past century.

This report was compiled using the daily weather observations made at the University of Reading climatological station – almost all of these being made by our observer, Mike Stroud. The University also operates an automatic weather station that gathers weather information continuously. Details can be seen at <http://www.met.reading.ac.uk/weatherdata/> - there is even a mailing list that you can subscribe to in order to have daily weather reports sent direct to you inbox.

	Mean max temp	Mean max anomaly	Mean min temp	Mean min anomaly	Mean temp	Mean temp anomaly	Highest Max temp	Date	Lowest Max temp	Date	Highest Min temp	Date	Lowest Min temp	Date	Lowest grass Min temp	Date
	°C	°C	°C	°C	°C	°C	°C		°C		°C	°C	°C		°C	
J	9.1	1.4	2.3	0.4	5.7	0.9	13.5	24	5.0	16,17	9.2	27	-6.1	20	-11.5	20
F	8.7	0.7	2.4	0.7	5.6	0.8	14.2	21	4.3	13	9.5	21	-3.6	16	-10.0	25
M	10.0	-2.2	2.1	-1.4	6.1	-1.0	14.1	25	6.5	6	6.3	25	-3.0	8	-10.1	8
A	12.6	-0.9	3.8	-0.9	8.2	-0.9	17.0	13	8.5	16	8.1	15	-1.2	28	-8.0	28
M	18.0	1.0	8.4	0.7	13.2	0.8	25.8	8	12.1	31	14.3	11	-0.2	1	-6.9	1
J	19.5	-0.5	11.8	1.3	15.7	0.4	24.7	6	12.9	1	16.0	23	8.4	28	1.9	28
J	22.6	0.2	12.9	0.2	17.8	0.2	31.9	19	16.8	1	19.6	20	7.6	6	1.2	3
A	23.3	1.2	13.2	0.7	18.3	1.0	30.1	24	18.2	1	17.9	25	8.5	15	2.7	16
S	20.7	1.7	12.3	2.0	16.5	1.9	29.2	13	15.7	17	17.2	7	6.8	11	1.0	23
O	14.7	-0.2	7.0	-0.6	10.8	-0.4	18.6	4	11.3	30	10.6	29	1.4	11	-4.2	11
N	9.9	-0.8	2.8	-1.6	6.3	-1.2	15.5	15	5.9	8	11.0	16	-5.4	30	-10.6	30
D	9.6	1.7	2.4	0.2	6.0	1.0	14.5	9	4.3	30	11.5	9	-4.5	1	-9.0	1
2016	14.9	0.4	6.8	0.1	10.9	0.3	31.9	19 Jul	4.3	var	19.6	20 Jul	-6.1	20Jan	-11.5	20Jan

	Total precipitation	% of mean precipitation	No. days with 0.2mm or more	No. days with 1.0mm or more	Greatest fall in 24 hrs	Date	No. days with air frost	No days with ground frost	No. days with snow/sleet falling	No days with 50% ground snow cover	No days with thunder	No days with ice pellets/small hail	No days with hail over 5mm diameter	No days with fog at 0900 GMT
	mm	%	days	days	mm		days	days	days	days	days	days	days	days
J	97.5	161	23	16	15.3	10	8	22	1	1	1	0	0	2
F	41.9	102	13	8	12.0	17	9	19	0	0	0	0	1	0
M	61.3	138	11	9	17.4	27	7	20	3	0	1	3	2	4
A	54.3	113	18	15	14.9	15	5	15	1	0	1	2	2	0
M	64.7	140	12	8	15.8	10	1	10	0	0	0	0	0	0
J	57.3	128	18	12	20.0	22	0	0	0	0	5	0	0	0
J	17.3	38	8	5	8.8	12	0	0	0	0	0	0	0	0
A	27.4	52	9	4	15.3	1	0	0	0	0	1	0	0	0
S	57.9	115	13	8	29.6	15	0	0	0	0	2	0	1	0
O	26.8	37	13	6	7.8	15	0	8	0	0	0	0	0	3
N	91.9	139	14	9	26.3	8	4	18	0	0	0	0	0	1
D	13.3	21	13	4	5.7	10	9	21	0	0	0	0	0	7
2016	611.6	96	165	104	29.6	15 Sep	43	133	5	1	11	5	6	17

	Total sunshine	% of average sunshine	Greatest daily sunshine total	Date	Number of sunless days	Mean 10cm soil temperature	Mean 30cm soil temperature	Mean 100cm soil temperature
	hrs	%	h		days	°C	°C	°C
J	51.7	92	5.8	20	13	4.4	6.8	8.8
F	95.5	126	7.6	16	4	4.1	6.5	8.0
M	126.8	116	9.8	17	6	5.0	6.8	7.6
A	189.0	118	11.8	20	1	8.3	9.7	9.4
M	204.8	109	13.7	4,16	3	14.3	13.8	12.1
J	116.4	61	13.9	6	3	17.0	16.4	14.8
J	205.3	104	14.2	19	0	19.6	18.1	16.5
A	216.0	113	13.6	6	2	18.8	18.3	17.2
S	117.1	85	10.4	11	5	16.0	17.1	16.9
O	118.2	111	10.1	5	4	10.1	12.7	14.3
N	66.1	104	6.5	2	6	5.5	8.8	11.2
D	39.1	85	5.4	1	17	4.8	6.7	8.8
2016	1546.0	102	14.2	19 Jul	64	10.7	11.8	12.1

	No. days with gale	No. days with N'ly winds	No. days with NE'ly winds	No. days with E'ly winds	No. days with SE'ly winds	No. days with S'ly winds	No. days with SW'ly winds	No. days with W'ly winds	No. days with NW'ly winds	No. days with calm winds at 0900 GMT
	days	days	days	days	days	days	days	days	days	days
J	0	0	0	2	5	6	8	7	1	2
F	0	3	3	3	1	3	5	8	3	0
M	0	3	8	2	0	2	7	5	4	0
A	0	4	2	4	1	4	4	5	5	1
M	0	7	7	4	0	5	3	5	0	0
J	0	5	3	3	1	3	5	5	5	0
J	0	2	0	0	1	1	15	6	6	0
A	0	4	1	3	2	1	9	4	7	0
S	0	0	2	3	3	6	7	4	5	0
O	0	8	9	4	0	3	4	2	1	0
N	0	3	5	1	1	1	6	8	5	0
D	0	1	3	6	1	5	4	6	0	5
2016	0	40	43	35	16	40	77	65	42	8