ADASTRA 2005

An annual review of wildlife recording in Sussex

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Cover picture of variants of *Harmonia axyridis*, the Harlequin Ladybird. Courtesy of National Ladybird Recording Scheme, original artist unknown.

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This review and editions from earlier years are also available on-line from the Sussex Biodiversity Record Centre: http://www.sxbrc.org.uk/adastra

2005 AT THE SUSSEX BIODIVERSITY RECORD CENTRE

It is surprising how each year at the Sussex Biodiversity Record Centre (SxBRC) has a unique flavour. When I look back at 2005 it really has been a very progressive and positive year, as I hope the following illustrates. The long awaited SxBRC Development Plan (available at www.sxbrc.org.uk) was finally completed. The simple procedure of establishing a 'mission statement' for SxBRC actually sets the tone of the three years that the plan covers (2006-2009).

The Sussex Biodiversity Record Centre is the centre of reference for authoritative information relating to biodiversity in Sussex, working in partnership with both data users and data providers for public benefit.

If we are going to hold such a statement up then we have to ensure that we meet the expectations of all those individuals and organisations that are supporting us both in terms of data and funding. This increasingly complex task has led to the development of more formal agreements with some organisations and a far more structured approach to working with the multitude of data providers in Sussex.

One of the most significant steps in 2005 was the signing of our first data sharing agreements, one with the Sussex Ornithological Society and one with the Sussex Branch of Butterfly Conservation. Both these agreements see SxBRC entrusted with sensitive and important countywide data sets which will add immense value to any biodiversity reports carried out now by the Centre. As always it is the technology that has made it all possible. The amount of data held and the intricacy of our mapping and reporting is still developing at an astounding rate. In 2005 alone we doubled the size of our species database. In fact we needed to import so much data that we had to get a new database altogether, as it simply wouldn't fit in the old one!

What are we doing with all this information? 2005 has seen several significant organisations getting involved with the SxBRC, particularly District and Borough Councils in Sussex. The requirement for high quality biodiversity information in local planning is increasing and we are pleased that Local Planning Authorities in Sussex are looking to SxBRC to supply these needs. The recent addition of both bird and butterfly data means that we can now start to supply a reasonably comprehensive suite of data related tools for Local Development Framework (LDF) monitoring.

Hard work by Patrick Roper, with the support of many of our County Recorders, has meant that we are slowly but surely bringing the Sussex Rare Species Inventory back into the limelight. Many of the species that we report on now have a short statement associated with them regarding the status of that species in Sussex. This is of immense value in our reports, as simply knowing that a significant species is present at a site is not always enough to inspire action. Providing a bit of contextual information about the local and national status and life history of the species certainly helps draw attention to the potential issues in any land use change project.

I am pleased to say that we have managed to get out of the office a couple of times in 2005 on our first two 'ADASTRA Recording Days'. Designed to compliment the 'Recorders Seminar' the recording days are open to any biological recorder. Our first expedition was to Powdermill Woods in East Sussex and our second to Petworth Park. Both days revealed an huge assortment of remarkable species with lots of 'trans-taxa' discussions taking place. From Pseudo-scorpion panning to barbastelle bats we have been really spoilt in wildlife recording expertise and experiences. There will be more days planned for 2006 and we hope any recorders will attend.

The commitment of the SxBRC staff, contractees and volunteers to maintain standards over the last year is exceptional. For the quality and quantity of output in 2005 one would imagine far more people badgering away behind the scenes. They have set some bench marks for the Centre that we are really looking forward to meeting (and pushing forward) in 2006.

We do not claim to have complete and up to date species and habitat datasets for Sussex, but we are certainly getting closer to that Nirvana. We have all enjoyed working with you throughout the year and are continually grateful for your support.

Henri Brocklebank, Biodiversity Record Centre Manager

RECORD CENTRE SURVEY UNIT

Another year with a variety of interesting projects has kept the Survey Unit very busy since the last Recorders' Seminar. Chief among these projects has been the Knepp Castle Estate baseline survey. Until recently under intensive arable cultivation, this Estate is now the subject of an exciting near-natural grazing project master-minded by its owner, Charlie Burrell. Hopefully the baseline survey will guide future research. Other projects carried out this year include an ecological assessment of the Woods Mill Reserve and NVC surveys of other SWT reserves. The Survey Unit is also currently working on a draft monitoring strategy with the Reserves Department.

A bryophyte survey of Marline Reserve and a lichen survey of West Dean Woods reserve show all too clearly how external factors can have an adverse impact on sensitive species even in protected sites. In Marline, rare mosses and liverworts have suffered from water pollution arising further upstream. In West Dean Woods, the high lichen interest on trees identified by Francis Rose has also declined. In this instance, the exact reason is not clear, but atmospheric pollution coming from industries in the Southampton region may be a contributory factor.

Theresa Greenaway
Survey & Research Officer, Sussex Biodiversity Survey Unit

AN INTRODUCTION TO THE MARINE ALGAL FLORA OF SUSSEX

Ian Tittley of the Natural History Museum writes on the seaweeds of Sussex and their distribution.
Department of Botany, Natural History Museum, London SW7 5BD

Coastal overview: an algal perspective

The Sussex coast (Vice Counties 13 and 14) has a variety of marine habitats colonised by benthic macro marine algae (seaweeds). These plants mostly require a firm substrate for attachment and only drift (unattached) specimens are found on mobile mud, sand and shingle shores.

In the east of the county the sands at Camber and Winchelsea lack an alga flora and most growth occurs on man-made structures such as groynes, sea and harbour walls. The walls of Rye Harbour support one of the few populations in Sussex of the brown alga **channelled wrack** *Pelvetia canaliculata*. The Fairlight clays and other soft Wealden rocks outcrop from Fairlight to Hastings and west of Bexhill and are firm enough to support seaweed communities. As at Winchelsea and Camber, the sand and shingle of Pevensey Bay lacks algae and growth is restricted to man-made structures. The outcroppings of Upper Greensand and Chalk at Eastbourne create intertidal reefs and lagoons abundantly colonised by well-developed rocky shore algal communities that are often species rich. Chalk forms the coastline to Brighton where it is replaced by shingle deposits that extend more or less continuously to the county boundary with Hampshire.

The coast at Worthing and to the west is notorious for the large amounts of seaweed deposited on its shingle beaches. Some of this is of distant origin but most of it derives from offshore locally where the sea-bed is of consolidated cobble that provides suitable habitat for abundant growths of annual species such as the brown alga *Laminaria saccharina* (**sugar kelp**) and the green alga *Ulva lactuca* (**sea lettuce**). Several large estuaries (Rother, Cuckmere, Ouse, Adur, and Arun) dissect the Sussex coastline. At such sites there is often extensive saltmarsh with associated algal communities. Aside from Selsey, the coast west of Bognor Regis has the tidal inlets of Pagham and Chichester Harbours. Although they contain extensive saltmarsh, sporadic patches of consolidated cobble, gravel or shells create habitat for algal attachment and growth. They support interesting and unusual species such as the red algae *Grateloupia filicina* var. *luxurians, G. turuturu* and *Sarcodiotheca gaudichaudii.* Man-made structures subject to the action of the tides form additional habitats for algae; the new harbours at Brighton and Eastbourne (Brighton Marina,

Sovereign Harbour) with floating mooring pontoons also contain interesting and unusual species some of which are not known from the surrounding natural coast.

Previous studies on the algae

A preliminary appraisal of literature containing algal records for Sussex revealed 147 titles. Some are specific accounts of the algal flora of the county or parts of the county, while others cite Sussex records incidentally. The earliest literature sources date to the eighteenth century (e.g. Martyn, 1763; Ellis, 1768). By the early nineteenth century following the development of tourism, guides to seaside towns were published that contained lists of plants including algae (e.g. Dally, 1828; Hope, 1849). By the mid nineteenth century knowledge of the algae had developed considerably and papers on Sussex algae as a specialist subject were published (e.g. Tumanovicz, 1855; Merrifield, 1863, 1876; Guermonprez, 1892). In the first half of the twentieth century there were only few publications concerning the algae and probably the most important were the taxonomic and ecological studies of the algae of British chalk cliffs (Anand, 1937a, b, c). In the second part of the twentieth century there were many more publications concerning the algae but often they only cited Sussex records incidentally (e.g. Paul, 1958; Crisp & Southward, 1958; Jones, 1974). From 1975 nature conservation agencies commissioned coastal and marine surveys in Sussex resulting in reports that contained algal records (e.g. Arnott *et al*., 1978; Suncliffe, 1981; Tittley, 1985; Tittley *et al*., 1986, 1989; Wood, 1984, 1986, 1989; Wood & Jones, 1986). Other studies of note include a floristic and ecological account of the algae of the eastern English Channel (Tittley & Price, 1978), studies on non-native species (Farnham, 1980) and those on floating structures (Fletcher, 1980). The activities of 'Sussex Seasearch' resulted in an identification guide for divers (Irving, 1998) itemising 21 types of algae inhabiting subtidal locations. Most recently, algal records have been collated and mapped as an atlas of the seaweeds of Britain and Ireland that provides a useful provisional account of the algal flora of Sussex (Hardy & Guiry, 2003). A future task is to extract all literature and report algal records for the Sussex coast in order to create a historical account of the algal flora that may provide information on change in occurrence and distribution.

Algal specimen records

Collections of benthic marine algae from Sussex are held at national and local museums (Natural History Museum London (BM[1]); Booth Museum, Brighton; Portsmouth Museum). A preliminary assessment reveals specimen records for the past 250 years. Probably the earliest collections from Sussex are in the Sloane Herbarium at the Natural History Museum and include specimens from Hastings in the Buddle collection of the mid eighteenth century (Plates 1A, B). William Borrer collected specimens (in BM) from Brighton in 1807 and these include the red alga *Anotrichium barbatum*, a Biodiversity Action Plan species (BAP) that has not been found there since, also the brown algae *Aperococcus turneri* and *Mesogloia vermicularis*, and the green alga *Cladophora sericea*. As interest in the algae of Sussex grew further collections were made. The **knotted wrack** *Ascophyllum nodosum* was collected at Brighton in 1810 and is probably a drift record as the species does not grow there today; the **whiplash alga** *Chordaria flagelliformis* was found at Hastings in 1820 is also a probable drift record as it is absent from south-east England. Many more specimens at BM were collected during the 1830s, and these included the brown algae *Chorda filum* (**Bootlace alga**), *Cladostephus spongiosus*, *Cutleria multifida*, *Cystoseira nodicaulis*, *Desmarestia aculeata* and *D. viridis* from Bognor some of which were collected by a Mrs Robinson.

A Mr Stoddart made collections from Hastings in 1837 that included the brown alga *Dictyota dichotoma* and green alga *Cladophora rupestris*, species that still grow there today. The 1840s collections included *Cystoseira humilis* (probably drift, the species in Britain is restricted to the extreme southwest of England) and *Bryopsis plumosa* from Bognor (collected by Mrs Robinson), *Cystoseira foeniculacea* from Hastings (collected by Mr Jenner, probably drift), and the red algae *Aglaothamnion hookeri*, *Ceramium rubrum*, *Lomentaria articulata* and *Membranoptera alata* from Hastings (collector unknown). In the 1850s Mary

[1] The abbreviation BM as used in this paper refers to specimens at the Natural History Museum as this is their code prefix in the *Index Herbariorum*, an international list of herbaria.

Merrifield collected extensively in the Brighton area. E.M. Holmes, E.A.L. Batters and T.H. Buffham made large collections at Pagham, Bognor, Worthing, Brighton and Eastbourne in the 1880s and 1890s. Few collections were made in the first half of the twentieth century; the most noteworthy was from East Preston made by Lilian Lyle in the 1930s, mostly of drift material. In the last half of the century W.F. Farnham (University of Portsmouth) made collections from Chichester and Pagham Harbours, and L.M. Irvine, J.H. Price and I. Tittley (all at BM) collected at Pagham, Brighton Marina, Rottingdean, Hastings and other locations. A task currently in progress is the collation into a database of all specimen records for Sussex.

The current state of algal recording

Figures 1A and B show that there are algal specimens at BM for most of the 10 km grid squares on the Sussex coast. Figure 1A also shows species richness based on specimens at BM using a scale of 1-9 for each 10km grid square. The 10 km square that includes Brighton has the greatest number of species records. Those with Bognor Regis and Hastings also contain large numbers of species records. Figure 1B is taken from the British Phycological Society's seaweed atlas (Hardy & Guiry, 2003) and confirms the squares with Brighton and Bognor as the species richest in Sussex (large dots). Sussex is richer in species than Kent and Essex but less so than Hampshire and Dorset

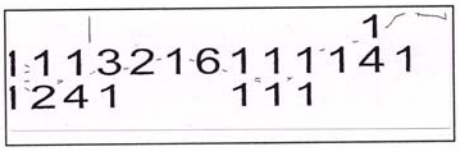

Figure 1A. BM collection

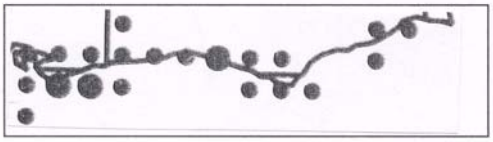

Figure 1B. British Phycological Society Atlas

Geographical distributions

Sussex is an important transition area for western warm-water species that reach their eastern and sometimes northern distributional limit in the eastern English Channel. The red alga *Chondracanthus acicularis* is an example of a western warm-water species that reaches its eastern distributional limit at the Isle of Wight and is absent from Sussex (Figure 2A based on specimen records in BM) although potentially may spread east should sea-temperatures rise. The red alga *Sphaerococcus coronopifolius* reaches its eastern distributional limit in Sussex (Figure 2B from specimens at BM). Another red alga *Brongniartella byssoides* is an example of a species for which there is a gap in distributional range between Sussex and Yorkshire (Figure 2C from specimens at BM) while the red alga *Furcellaria lumbricalis* (Figure 2D on page 7 from specimens at BM) is an example of a species recorded throughout Sussex and present on all coasts of Great Britain.

Figure 2A
Chondracanthus acicularis

Figure 2B
Sphaerococcus coronopifolius

Figure 2C
Brongniartella byssoides

Figure 2D
Furcellaria lumbricalis

Species known for Sussex

Table 1 presents species totals for Sussex for the three main algal classes according to data at BM, the BPS Atlas, and combined. The provisional overall total of 292 for the county represents approximately 50% of the seaweed flora of Great Britain and Ireland.

Table 1 species totals

Group	BPS Atlas	NHM (BM)	Combined
Chlorophyceae	29	35	42
Phaeophyceae	53	76	86
Rhodophyceae	117	133	164
Total	**199**	**244**	**292**

Conclusion

A provisional assessment of the marine algal flora of Sussex (vcs 13 and 14) reveals a moderately species-rich algal flora. Full appraisal of literature records and specimen records other than at the BM, may add new species records. Future field-work will confirm or deny the occurrence in Sussex of these records and probably discover species new to the county. A comprehensive resource of information on the county's seaweed flora will facilitate decision-making for species and habitat conservation.

Aids to identification

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LICHENS

by Simon Davey, Sussex Lichen Recorder

The Sussex Lichen Recording Group has had another successful year although I have not always been able to be present. Our first meeting was at The Mens, when we found an area of rather young ash, which proved most interesting for lichens. On an old, gnarled tree we found *Strigula taylorii* in one of its very few Sussex localities. Of even greater importance was *Trapelia corticola*, a species which has only been found previously at Ebernoe Common. The Mens is a huge area, and further study is needed to assess its true lichen importance. It is quite probable that it as rich as Ebernoe Common.

Another visit which was very worthwhile was to Heyshott Common. Our main goal was to refind *Gyalidea lecideopsis*, a lichen which has two British localities, both found by the late Oliver Gilbert. A great deal of promising material of this insignificant looking species was found. Unfortunately however, even after considerable microscopic investigation, no spores could be identified to confirm it. Without the spores, it was impossible to be sure whether the material was *Gyalidea lecideopsis*, or a *Verrucaria* species in which the top half of the pyrenocarps had been browsed away by molluscs. A similar species *Gyalidea subscutellaris* grows on heavy metal rich mine spoil in Wales, and Steve Chambers who is familiar with it, thinks that it produces ephemeral ascocarps during the winter months, and especially in the spring. Although good quantities of potential material was found, the important scree for lichens at Heyshott is threatened by scrub invasion, and it is hoped that this may be controlled in the future.

Sussex hosted the autumn meeting of the British Lichen Society at Ashburnham Place near Battle. This was a most enjoyable meeting, and the Society added a considerable number of species to the list for this important mediaeval deer park. An ancient beech tree had *Pertusaria velata* and *Lecanora sublivescens*, both of which are ancient woodland indicators and very rare in Sussex. The Park gave the Society sufficient interest to occupy the whole weekend and the church, as well as ancient walls, meant that by the end of the meeting a long list of species had been made.
Thanks are due especially to Jacqui Middleton, whose enthusiasm and organisational abilities have contributed greatly to the successful programme the Sussex Lichen Recording Group enjoyed in 2005.

FUNGI

by Peter Russell, fungus recorder.

After the outstanding season the previous year, 2005 was more mundane. However there were some records and sites worthy of mention.

In April & May David Bangs, Peter Russell, Tony Spiers searched the Brighton Downs looking for the **thimble-cap morel**, *Verpa conica*. This is a rarely recorded fungus with only 2 records in West Sussex and 271 sites nationwide. We found it in 8 of the 22 sites we visited, which implies it is not rare, just rarely recorded. We would be interested in any other records of this distinctive fungus, it tends to be found under mature hawthorn scrub on chalk. It was a poor season for other morels with the **half-free morel** *Mitrophora semilibra*, so abundant the previous season, fruiting very sparsely.

Mitrophora semilibra (left) and *Verpa conica*

Although many corticioid fungi can be used to indicate the importance of a beech wood for its dead wood fungi, recording them is a specialist interest, so it is fairly easy to add new records for the county.
One notable find from Crawley Down was *Hypochnicium subrigescens*, only the second British record

The West Weald Fungus Recording Group held 8 forays in the county in 2005. Interesting finds included the **ghost shield** *Pluteus pellitus* (a provisional red data list species) from Crawley Down and **Romangnesi's milkcap** *Lactarius romagnesii* from Houghton Forest (13th UK record). Again the lack or records partly reflects lack of recording rather than actual rarity.

On the other hand, the *Hericium* species are very obvious distinctive species whose lack of records does reflect their rarity. They have an exacting habitat or rotting trunks of mature trees and hence are unlikely to survive in woods managed for timber production. Two good records in 2005: **tiered tooth fungus** *Hericium cirrhatum* was found at Ebernoe Common (9th Sussex site), and the rarer **bearded tooth fungus** *Hericium erinaceaus* in Stanmer Park (7th Sussex site).

A survey of old grassland fungi on National Trust parks and pleasure grounds confirmed Petworth Park as one of the outstanding sites in the county and nationwide (22 species of waxcap were recorded in the area immediately in front of the house). The wild flower meadow at Nyman's Gardens had the nationally scarce waxcap *Hygrocybe ingrata* fruiting in abundance (the 26th UK record).

BRYOPHYTES

Howard Matcham, British Bryological Society Recorder for Sussex. E-mail: hwlgmatch@yahoo.co.uk

The year started with the astonishing report of a 41-year-old record from Kingley Vale near Chichester of **bark signal-moss** *Sematophyllum substrumulosum* previously known in Britain only from the Isles of Scilly and not collected from the mainland until Jean Paton found it on a decorticating conifer stump at a churchyard in East Cornwall during the latter part of 2004. Also astonishing was my relocation of this species in some quantity at Kingley Vale in April and further discoveries at Stoughton Woods, ancient yew woodland north of Kingley Vale, by Rod Stern and myself in November. Previously considered as most

likely to have been introduced on the Isles of Scilly with horticultural plants, this Oceanic Southern-Temperate species could well be an overlooked native moss on yew trees in woods on the chalk of the South Downs.

As with the proverbial London bus one waits for an age before two arrive together. So it has been with new and unusual bryophyte records in Sussex. A visit to the Weald and Downland Museum at Singleton by Rod Stern and myself during April turned up two second records for the county on the same roof. **Fringed hoar-moss** *Hedwigia ciliata* known previously from a clay tiled roof at West Stoke and subsequently lost due to re-roofing in the mid-1990's and **flat-rock grimmia** *Grimmia ovalis* only known from clay tiles on the roof of the farm shop at Adsdean. With these two species on the roof at Singleton we found a third uncommon moss, **hoary grimmia** *Grimmia laevigata.* Quite extraordinary was the fact that the mosses survived being relocated (and thence retiled) from the original site of the building at Lodsworth.

The active Southern Group of the British Bryological Society met at Lavington Common in December and amongst the 72 species recorded were **acute-leaved bog-moss** *Sphagnum capillifolium* subsp. *capillifolium* and **Teesdale feather-moss** *Rhynchostegiella teneriffae* both new to West Sussex. The *Sphagnum*, which has only recently been recognized as a distinct subspecies, has a very restricted distribution in Great Britain and the Lavington Common record is the first for southern England.

This year, in October, the Sussex Botanical Recording Society held a meeting at Verdley Wood. Here we spent the morning recording vascular plant species for the forthcoming Sussex Flora and the afternoon looking at bryophytes. Along one of the forestry rides **Drummond's thread-moss** *Pohlia drummondii* was growing on damp gravel. This has not been collected in Sussex since the late Ted Wallace and the late Alan Crundwell first recorded it in the adjacent 10km square in August 1950. We found growing with it the uncommon **Arnell's apple-moss** *Philonotis arnellii.*

If you wish to take up an interest in the Sussex mosses and liverworts you do not have to be a member of the British Bryological Society, any of you can come along and enjoy the day. I have a meeting in Sussex each year and informal meetings can be arranged.

VASCULAR PLANTS

Paul Harmes and Alan Knapp, vascular plant recorders for East and West Sussex respectively.

Last year we reported on the completion of the Botanical Society of the British Isles (BSBI) Local Change project and a résumé of the Sussex data was given at the Recorders Conference in February 2005. This data has been passed to the BSBI for inclusion in a nationwide analysis but we still await the results. We will evaluate these when we have them and publish them in the first available edition of Adastra.

With the completion of the above initiative, the Sussex Botanical Recording Society (SBRS) was able to concentrate more fully on the recording work for the forthcoming new County Flora of Sussex. This was the first full season of fieldwork, although records collected in the previous four years will also be included. As part of the project a web site has been set up to allow SBRS members to monitor progress and check what species have been recorded in any tetrad - http://www.sussexflora.org.uk/

At the time of writing some 108,000 + records have been collected for the first five years of the project, over 72,000 of them in 2005. With a target of 300,000 + records by the completion date of 2010, these figures are extremely encouraging, and we would very much like to thank all the contributors for their magnificent efforts. We also realise that the early totals are fairly easy to achieve and, as the project progresses, it will become harder to reach the final target. This is the end of the first year's concerted recording effort and it is important that the impetus is maintained in 2006 and beyond.

If you would like to be involved in this project, please contact either of the authors of this article, who will be only too willing to assist and advise you.

Some of the plants recorded in 2005 have been particularly exciting, these include:

Vc14 – East Sussex

Fen pondweed *Potamogeton coloratus* from a drainage ditch near Eastbourne: this species has not been recorded in Sussex since 1953. **Slender spike-rush** *Eleocharis uniglumis* from a dew pond near Seaford; **slender tare** *Vicia parviflora* from the grassy cliff tops at Beachy Head; **marsh clubmoss** *Lycopodiella inundata* and **royal fern** *Osmunda regalis* on Ashdown Forest; **cornfield knotgrass** *Polygonum rurivagum* from the Ouse Estuary Nature Reserve, Newhaven; **lesser butterfly orchid** *Platanthera bifolia* in Vert wood and **lizard orchid** *Himantoglossum hircinum* at Beachy Head. Finally, after a period of some twenty-five years, **wood small reed** *Calamagrostis canescens* was re-found at Herstmonceux.

Vc13 – West Sussex

Heath pearlwort *Sagina subulata*, which had not been seen in Sussex 1931, was found in Flexham Park in a formerly rather uninteresting area which has been transformed by recent coppicing. **Portland spurge** *Euphorbia portlandica* was discovered on Thorney Island during an SBRS field meeting. This is now the most easterly location for this species in the British isles. We also had a single plant of **lizard orchid** *Himantoglossum hircinum* in the Goodwood area. A further site for the Red Data Book species **red-tipped cudweed** *Filago lutescens* was discovered near Midhurst and a new and possibly native site for **pennyroyal** *Mentha pulegium* was found by a pond near Bolney. Finally we had the first British record of a new alien grass, **saltmeadow cordgrass** *Spartina patens* from the saltmarsh by Thorney Island. This is a native of North America and we wait with interest to see if it will stay there or start to spread.

ORCHIDS

by David Lang, author of Wild Orchids of Sussex (Pomegranate Press, 2001).

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The orchid season in 2005 reminded me of the curate's egg – "I assure you, my Lord, parts of it are excellent!" It was a weird season, some species flourishing, others failing to appear at all, with anticipated flowering dates a jumbled mess. I get the impression that there are critical times of year, different for different species, when certain criteria of temperature and moisture – especially the latter – must be met, otherwise the plants abort the process of developing a flowering spike for that season. This happened after the drought year of 1976.

So far as the actual species are concerned, the **white helleborine** *Cephelanthera damasonium* did poorly. Following tree management in parts of Friston Forest, the increased light led to massive growth of **false brome grass** *Brachypodium sylvaticum* and **goosegrass** *Galium aparine* and a 90% drop in flowering spikes of the orchid. In the course of a routine survey at Balcombe Marsh, a single flowering spike of **marsh helleborine** *Epipactis palustris* was discovered, with three immature plants, the first for many years. The **green-flowered helleborine** *Epipactis phyllanthes* did badly in many sites as a result of poor management at Arundel and drought elsewhere. However, a new and thriving population was discovered on a roadside at Graffham. I am sure that more will be found, particularly on roadsides in West Sussex.

The **autumn lady's-tresses** *Spiranthes spiralis* had a splendid year, appearing on lawns and tennis courts all over Sussex in good numbers, but flowering more than two weeks earlier than usual. **Bird's-nest orchid** *Neottia nidus-avis*, however, had a poor season almost certainly due to the dry weather with few flowering plants anywhere. **Musk orchid** *Herminium monorchis* and **frog orchid** *Coeloglossum viride* also made a poor showing in most places. Sites which would normally boast more than a hundred spikes had none.

The **fragrant orchid** *Gymnadenia conopsea* seemed unaffected by the weather and made a wonderful show in many downland sites. Tight grazing in some areas, unavoidable due to lack of grass, decimated several populations, but elsewhere the species flourished. The Ashdown Forest population of subspecies *borealis* had more flowering plants than ever, but still shows no desire to spread. The **lesser butterfly-orchid** *Platanthera bifolia* did badly in West Sussex, but reappeared in East Sussex after failing to show for some years.

The **bee orchid** *Ophrys apifera* had a splendid year and, once again, var. *atrofuscus* flowered in West Sussex, while var. *chlorantha* did even better near Beachy Head. Elsewhere bee orchids did well on road verges in many places. The **early spider-orchid** *Ophrys sphegodes* also did splendidly on Castle Hill, the many sites near Beachy Head and elsewhere as it flowered early enough to be unaffected by the weather. The **lizard orchid** *Himantoglossum hircinum* flowered in moderate numbers at Camber, but far more exciting were a single spike near Beachy Head and another single near Goodwood, an area where it was recorded regularly from 1900-1930. Maybe we shall see an upsurge in records for this species, as happened in the warm summers of the early 20th century – provided the winters are wet enough!

The early-flowering form of the **burnt orchid** *Orchis ustulata* did well, reappearing in a number of old sites, but the late-flowering form suffered from the drought and failed to flower in most of its known sites. Following my plea for records of the **green-winged orchid** *Orchis morio* I now have a scattering of 'new' sites in the north of Sussex, but would welcome more. Both the **early marsh-orchid** *Dactylorhiza incarnata* and the **southern marsh-orchid** *D. praetermissa* did surprisingly well. At Ferring the huge population, with hybrids, was a sight for sore eyes, and a number of gardens nearby now boast wind-blown colonies. The other Sussex subspecies of the **early marsh-orchid** *D. incarnata* ssp. *pulchella* did exceptionally well on Ashdown Forest so, paradoxically, 'wet' plants did well in a dry year.

Once again, may I solicit orchid records for both East and West Sussex. Everything is of value to help us build an accurate picture for the new County Flora.

STONEWORTS – CHAROPHYTA

by Frances Abraham, Sussex Charophyte recorder

In 2005 it was exciting to receive a specimen of **bristly stonewort** *Chara hispida*, found by Paul Harmes and Tony Spiers in a recently excavated brackish ditch in the Ouse Estuary Nature Reserve. A few weeks later a second specimen arrived, this time from Ashley Leftwich, who had found it in a ditch near Eastbourne, not far from one of its old Sussex sites at Upperton.

Chara hispida is usually robust, with a broad stem and is clothed with a spectacularly dense array of bristles. This distinctive species was last recorded in Sussex around 1910. It seems to be pure coincidence that these two finds were made in the same year.

I mentioned briefly at the end of last year's report (page 22) that a stonewort found by Alan Knapp in a farm pond at Wineham in 2001 had at last been identified as *Nitella syncarpa* - the first UK record for this species. It resembles **slimy-fruited stonewort** *N. capillaris* in that its fruiting parts are enveloped in conspicuous mucus but, unlike *N. capillaris*, it is sexually dimorphic. *N. syncarpa* has a scattered distribution in continental Europe but is rare everywhere. In the Netherlands it occurs occasionally in recently cleaned ditches, but is highly sporadic, and seldom seen twice in the same location (pers. comm. Joop van Raam). True to form, it does indeed appear to have already vanished from Wineham…

It is notable that both of these species are, as are so many stoneworts, frequently associated with new or recently cleaned ponds and ditches – it is always worth checking any newly dug out water bodies.

AMPHIBIANS & REPTILES

Sussex Amphibian & Reptile Group: life in the herp lane 2005

Jenny Bacon
Chair: Sussex Amphibian & Reptile Group

The 2005 toad migration was affected by the snow in March which delayed our amphibian friends from venturing out and which meant the migration was over in a flash (approx 10 days) unlike other years when it can run from mid-January to March depending on our ever changing climate. We also saw a noticeable increase this year at the toad crossings in Sussex in particular Littlington near Eastbourne and Offham Road near Lewes the latter being a site where no toads had been crossing for many years but are back in sufficient numbers for there to be a need to put up fencing and work with collection buckets. We also saw a site in Newhaven and one in Uckfield going from strength to strength which is good news as the numbers we have been reporting in recent years have been poor. Our fingers and toes are crossed for 2006.

The Sussex Amphibian & Reptile Group's annual general meeting and members' day was held in May and for the first time at Arlington Reservoir. The sun shone throughout and the AGM was followed by a picnic lunch and then a hunt for small mammals and some reptiles, all of which we saw, although you had to be quick to spot them. Later in the month we attended the Wildlife Weekend in Rye organized by East Sussex County Council who had asked us if we wanted to have a stand at this new Sussex event which we attended with a selection of creatures that were well received by the public.

Our programme of talks continues and these bring information to the public including the basic differences between frogs and toads and grass snakes and adders plus much more. We also have excellent display material prepared by Linda Burnham and other members of the committee. Another member of our group, Janet Claydon, has been very supportive to the Powdermill Trust helping with herpetile surveys at the three reserves they own. Catsfield and Crowhurst were covered in 2005 and in 2006 we will be recording at their Rotherfield reserve.

The group also became involved over the summer with the Ouse estuary site owned by ESCC with the RSPB and other wildlife organisations. There were concerns with the way in which the site was being managed and we aimed to try and make sure best practice took place with regard to reptiles and amphibians. The Council intend to set up a management committee in which all groups will be involved.

As a group we do many more things including offering advice to the public on all aspects of native amphibians and reptiles. In the summer, for example, I received a phone call from someone with a snake caught in some plastic wire on an allotment in Lewes. It turned out to be an adder but no one was available to help. Fortunately, however, the man who phoned was able to get the snake plus the wire into a box which he took to the Eridge wildlife hospital where the adder was released and returned safely back to the allotment in Lewes where it was found.

GRASSHOPPERS AND RELATED INSECTS

John Paul, Sussex recorder for grasshoppers and related insects

One of the highlights of 2005 was the discovery of the nymph of a **mole cricket** (*Gryllotalpa* sp.) in a nursery in Ashington. Our native mole cricket *Gryllotalpa gryllotalpa* is listed as 'Endangered' in the GB Red List and is legally protected. Though it may now be extinct in Britain as a breeding species one, probably of Italian origin, was recorded from West Sussex in 2003. The Ashington nymph was found in association with bamboo from northern Spain but, as the insect was immature, identification to species level remains uncertain. There are several species of mole cricket in southern Europe in addition to *G.*

gryllotalpa. Fortunately the Ashington nymph is still alive and kicking and I hope its final moult into an identifiable adult will occur in 2006. I had a look round the nursery to see if I could find any other exotic insects and was rewarded with a nest of the southern European ant *Tapinoma nigerrimum* among the roots of a Spanish olive tree in a tub outdoors. One wonders how many invertebrates are being imported to the UK and about the possibilities of new species becoming established.

During August I visited Petworth Park to check a recent record of **stripe-winged grasshopper** *Stenobothrus lineatus* and was amazed to find it in every 1km square within the park. On the same day I searched the roadside at Cowdray Park and quickly found it there also. When Chris Haes mapped Orthoptera from the 1960s to 1980s all records of this species were from the South Downs apart from sites at Thorney Island and Iping Common (C. Haes pers. comm.). Either the insect was previously rare in parkland and easily overlooked or it has recently spread into this habitat in Sussex. Support for the latter possibility was the discovery of **Roesel's bush-cricket** *Metrioptera roeselii* and **lesser marsh grasshopper** *Chorthippus albomarginatus* also at Petworth, two species that are known to be increasing their ranges. It will be interesting to concentrate future surveys on this type of habitat elsewhere in the county.

COLEOPTERA

by Peter Hodge, Sussex Coleoptera recorder

The list of beetles recorded from Sussex continues to grow, in fact the number of recent colonists in Britain still appears to be gathering pace and further additions to the British fauna are expected in future years.

A really exciting discovery was made at the base of the cliffs at Newhaven that subsequently proved to be a beetle new to Britain. On 16th May 2004 I collected a moderately large rove beetle with red elytra from under a stone not far from the Hope Inn. The specimen was placed to one side and forgotten until David Hance reported finding a unfamiliar rove beetle at Newhaven on 11th April 2005 which he believed to be *Astrapaeus ulmi*, a native of the Mediterranean area apparently associated with old trees. It was soon realised that our specimens were identical, so although I have a valid claim for the first British specimen, David must be credited with the honour of identifying the species and formally reporting it as new to the British fauna. The breeding habitat is something of a puzzle though, because no trees grow anywhere near Newhaven cliffs and it is thought very likely that the beetle lives in birds' nesting holes in the cliff face.

On the 8th May Gordon Jarman sent me a fine photograph of the **harlequin ladybird** *Harmonia axyridis* resting on his finger. The specimen was found on a nettle leaf at Snaylham Farm, near Icklesham and although this cannot be claimed as the first Sussex record it is certainly 100% genuine. This aggressive species is already widespread in many parts of England but is not yet a familiar sight in this county.

Another species of ladybird *Clitostethus arcuatus* was discovered in Sussex for the first time between May and August 2005 by A. W. Jones in his garden malaise trap at Newhaven. In contrast with the harlequin ladybird this species is tiny, being less than 1.5 mm long. Listed in the 1992 national beetle review as 'Endangered' it has been noted with increasing frequency in recent years. It is probably associated with ivy.

On the 16th May 2005, whilst carrying out an entomological survey of Brickfield Meadow, a Sussex Wildlife Trust reserve at Fairwarp, I swept a small blue-coloured weevil which was instantly recognisable as *Mecinus janthinus*, a species not previously recorded from Sussex. Associated with **common toadflax** *Linaria vulgaris* this beetle was first reported from the British Isles in 1948 by A. A. Allen who found it in a chalk-pit near Dartford, Kent. The species has spread only very slowly and is currently recorded from Surrey, Essex, Middlesex and Hertfordshire.

During a visit to Colhook Common near Petworth on 22nd May 2005, David Hance and I discovered a colony of the minute weevil *Rhamphus subaeneus* resting on the leaves of **wild apple** trees. The host plant

provides a strong clue to the identity of the three virtually identical species of this genus in Britain; *R. pulicarius* is associated with willows and *R. oxyacanthae* with hawthorn. All three species are leaf miners, *R. subaeneus* being by far the rarest, recorded from just two English sites: Epping Forest and Windsor Great Park.

Whilst visiting Burton Pond to monitor the rare reed beetle *Donacia aquatica* on 26th May 2005 I netted a large soldier beetle-like insect flying around my head at Snipe Bog. This proved to be a female *Hylecoetus dermestoides*, which passes its larval stage in dead wood and was formerly regarded as a northern species in Britain, but is now established in parts of West Sussex and Surrey.

Finally, on 17th August 2005, whilst carrying out a survey of the eastern side of Cuckmere Haven, I swept a solitary female of an unfamiliar *Sitona* weevil off saltmarsh vegetation, close to the shingle beach. My suspicions that it might be the very rare *Sitona cinerascens* were later confirmed by Roger Booth of the Natural History Museum, London. Currently known to be breeding only on Canvey Island in Essex, this beetle is thought to be associated with **slender bird's-foot trefoil** *Lotus tenuis* which is also established at Cuckmere Haven.

THE VALUE OF INSECT RECORDS IN SITE ASSESSMENT AND MANAGEMENT PLANS

The following address, by our county Aculeate Hymenoptera recorder Mike Edwards, was published in an account of the indoor meeting of the British Entomological Society on 9 November 2004. The full reference is: ***Anon.*** *(2004) BEHNS Indoor meetings. 9 November 2004.* Br. J. Ent. Nat. Hist. ***18*** *(2) June 2005: 124-125.*

Mr Mike Edwards spoke on the subject of whether insect assemblages can be used as a monitoring tool to assess sites and contribute to management plans. Compared with plants, birds and mammals, insects and other invertebrates present problems when a conservation site is being surveyed. They may be difficult to find or identify and their abundance cannot be easily assessed. Many sites will have some sort of insect list but this may be nothing more than a list of species. Species lists of insects need annotating to provide site managers with information, where available, about habitat requirements, geographical range and conservation status. Insect surveys need to record the common species as well as rarities, since it is the more common, and hence more easily found species that define the broad invertebrate habitats. Animals higher up the food chain usually depend on the more common species lower down, rather than feeding on rare species. No insect in the UK is dependent on the Lady's Slipper Orchid, although that plant may need insects for pollination. It is those species in the middle range of scarcity that are likely to be most helpful in assessing a site. These species may occur at low densities over a wide area or may be relatively abundant under certain localised conditions. They often have specific needs and it is these species that form the backbone of the idea of assemblages, i.e. groups of species that might be found together in roughly similar situations.

Defining habitat types in too much detail can lead to problems. Broad descriptions, such as heathland, deciduous woodland or grassland are useful starting points that can be sub-divided to bring in other characteristics such as vegetation types, soil moisture and aspect. When recording species assemblages, it is advisable to base the assemblage on a wide range of insect Orders. This may require the involvement of several entomologists to provide the necessary specialisms to cover the principal invertebrate groups found on a site. There is a danger that management plans may be based on "flagship" species in the belief that what suits those particular species will also benefit others that live in similar habitats. That may be true but ecosystems are usually much more complex than that.

The speaker's interest in insect assemblages began when he and Peter Hodge were involved in a survey of West Sussex heathlands in 1993. When the data were collated from this and other surveys carried out earlier, including one in 1992 by Francis Rose, it was clear that some species were present on many sites, while others were apparently on only a few. This led to a consideration of whether combinations of the

scarcer species could be related to habitat features on the heaths. Lists of "Indicator species of West Sussex heathlands" were compiled according to the habitat features these species required. These were tabulated against the sites being surveyed and the decade during the 1970s, 1980s and 1990s in which the indicator species had been most recently recorded. Consideration of the recording effort and the presence of suitable habitat features allows individual sites to be described in terms of their features for invertebrate assemblages and to predict what extra species might be present. The West Sussex heaths survey was repeated in 2003-2004. The indicator species identified in the earlier survey were still present, although not necessarily on the same sites. Nevertheless the basic assemblages have proved reasonably consistent and can be used to indicate whether a site has gained or lost important features. This means that site managers can be given better guidance on what is needed to maintain habitats.

The speaker said that, in his experience, vegetational succession, both in terms of species and structure, will take place, whatever efforts are made to halt the process. The role of management should not be to arrest the succession process but to allow it to proceed and then restart it. This implies destroying one habitat to create another. The single most important thing for management is not to do the same thing everywhere at the same time – variety is the spice of life!

As our county recorder for bees, wasps and ants, Mike Edwards says "There are several things for people to look out for in Sussex in 2006, most notably the presence of the BAP brown carder bee *Bombus humilis* east of Brighton on the Downs. It appears to be struggling on, but I/D is an absolute devil, it really needs a specimen. Sometimes a good photo will do - but not often. Males (August - September) are good as the genitalia are distinctive and their capture does not damage populations. Queens should not be taken as voucher specimens but later season workers (August on) are probably not likely to be a problem. There is a suggestion that this species has expanded its range slightly in the past five years elsewhere in the UK. Does this mean it has done better where it has been hanging on? If so it should be more findable in Sussex - most years the records are of singletons, if at all, despite directed searches."

(Mike Edwards is co-author with Martin Jenner (2005) of the *Field Guide to the Bumblebees of Great Britain & Ireland* published by Ocelli Limited) though he says it will not give much help with *Bombus humilis*.

BOOK REVIEW *THE ANTS OF SURREY*

Number 9 in the Surrey Wildlife Atlas series, this small but attractive book by John Pontin covers all the Sussex species and is well-worth the outlay for anyone wishing to study this fascinating group of insects in greater depth.

Pontin, J. (2005) *The Ants of Surrey.* Surrey Wildlife Trust (£14.00 plus £2.40 p+p). More details at:
http://www.surreycountryside.com/Default.asp?mainmenu=publications&EntityID={73234DA5-A5C8-4273-B629-2F8441DA3907}

BUTTERFLIES

by Bill Taylor, Butterfly Conservation recorder for Sussex.

In Sussex we are fortunate enough to retain 45 species of butterfly within the County. A total of just over 13,000 recordings were made, most by the walkers of various transects. In 2005 most of the common species retained that status with ease although we have a few species that continue to give cause for concern and whose status could possibly improve with appropriate management.

The weak colony of Silver Studded Blues at Heyshott Common may have been lost; certainly there is no record of a presence in 2005 in spite of several visits at the critical flight time. Conditions at this site are not ideal for this species although, as can be seen at Chapel Common, under good management this species can thrive.

The Duke of Burgundy continues to hang on at a handful of sites on the north face of the Down but in very low numbers. However, its potential to regenerate was amply demonstrated at a site on the south side of the Downs where it was seen in relative abundance. Again it is probably a question of trying to digest exactly what conditions favoured this small population explosion and attempting to replicate them elsewhere.

Thankfully, Silver Spotted Skippers have continued to thrive on the Downs between Newtimber Hill and Eastbourne but, in spite of earlier optimism, they do not appear to be expanding their range westwards.

Purple Emperors were seen across the north of West Sussex but fewer were sighted in the west of the county. The possible appearance of a second brood specimen has caused some excitement.

In 2005 we learnt the results of the National Pearl Bordered Fritillary Survey and the disastrous decline in colony numbers in Sussex, from 28 in 1997 to 10 in 2004. Considerable effort is being put into stabilising the situation at its present level.

Over the past two years Wood Whites appeared to be gaining strength in West Sussex, spreading down from the Chiddingfold Woods in Surrey as far as Ebernoe in Sussex. Unfortunately, as there are rather few records of this species for 2005, has not been possible to re-confirm this spread.

Small Tortoiseshells are still not making any sort of return to abundance. On the other hand, Red Admirals are now the commonest vanessid and the last butterfly of the season - with a sighting on December 31st 2005.

LARGER MOTHS IN SUSSEX DURING 2005

By Colin R. Pratt, F.R.E.S., *County Recorder of Butterflies and Moths for East and West Sussex*

Native species

2005 proved to be a very poor season both for the quality and quantity of native moths – the worst since 1992. Nonetheless the year was unusually good for the delightful day-flying Pyralid moth *Anania funebris* (a Notable/Na species) with its black-grounded cream-blotched wings. Nowadays the only county colonies are restricted to sheltered herb-rich clearings between Chailey and Lower Dicker. Similarly advantageous times were enjoyed by the only known Sussex colony of the yellow-coloured Pyralid *Mecyna flavalis* (an insect in danger of extinction in Sussex), another day-flyer on the downs at Wilmington. Other notable highlights concerned the **red swordgrass** *Xylena vetusta* (Notable/Nb) seen for the third year in succession at Walberton, and the **dotted chestnut** *Conistra rubiginea* (Notable/Nb) which is now recolonising East Sussex with 2005 encounters at Heathfield, Ditchling, and Wadhurst. Three Sussex specialties - the **marsh mallow moth** *Hydraecia osseola hucherardi* (RDB1), the **rush wainscot** *Archanara algae* (RDB3), and **Webb's wainscot** *Archanara sparganii* (Notable/Nb) – remain well established in the county.

Migrant species

Sussex is a frontline county for the recording of ocean-crossing insects from three continents - and 2005 was another eventful season. The migrant year started with a species completely new to the UK - **Patton's tiger** *Hyphoraia testudinaria*. The moth was found at Kingsham, near Chichester, on May 29th 2005 by Sarah Patton. This insect normally inhabits the more mountainous regions of Europe, where larvae feed on low-growing plants.

Other notable European migrants included the first all-Sussex record of the Pyralid *Vitula biviella* at Icklesham, the first East Sussex record of the **dusky hook-tip** *Drepana curvatula* at Ditchling, the second

West Sussex record of the **orache** *Trachea atriplis* at Ferring, and the third record of **Dewick's plusia** *Macdunnoughia confusa* in each vice-county came from Icklesham and Walberton.

Colonising species

The first UK colony of the Pyralid moth *Evergestis limbata* has been established at Mile Oak, Portslade, since 1995. Pushing westwards, the insect was, by 2001, breeding at Ferring, by 2003 at Walberton, by 2004 colonisation had reached West Wittering, and by 2005 Hampshire. Isolated sightings were also made in East Sussex during these years, at Winchelsea and Icklesham.

A new colony of the reed-bed-loving Pyralid moth *Nascia cilialis* (Notable/Na) - only the third known in West Sussex - was discovered at Burton Mill Pond. For the second season running the **olive crescent** *Trisateles emortualis* (RDB3) was noted at Beckley and for the third year the **pale-lemon sallow** *Xanthia ocellaris* (Notable/Na) appeared at Walberton. Meanwhile, the **white-point** *Mythimna albipuncta*, **l-album wainscot** *Mythimna l-album*, and the **toadflax brocade** *Calophasia lunula* (RDB3 and a BAP species), in earlier times scarce immigrants from mainland Europe, have colonised a range of habitats all along the Sussex coast and are now locally common. The **delicate** *Mythimna vitellina* has a similar history but is less numerous. But perhaps the most exciting record concerned a **dusky peacock** *Semiothisa signaria* at Beckley. This was the second time the moth has been seen here during recent years – and there is no known colony in the whole of the UK.

Much of the above information was kindly supplied by members of the Sussex Moth Group. For information on the Group, and its aims, activities and meetings, contact the secretary Tony Davis at Butterfly Conservation, Manor Yard, East Lulworth, Wareham, Dorset BH20 5QP. Telephone 01929 400209, or e-mail: tdavis@butterfly-conservation.org

For queries and information on Sussex Lepidoptera contact the County Recorder of butterflies & moths for East and West Sussex: Colin R. Pratt, F.R.E.S. at 5 View Road, Peacehaven, East Sussex BN10 8DE. Telephone 01273 586780, or e-mail: colin.pratt@talk21.com

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DIPTERA (TWO-WINGED FLIES)

by Patrick Roper, Diptera recorder for Sussex.

Following the publication of the AIDGAP guide to British Plant Galls, there has been an upsurge of interest in these fascinating structures. There are huge number of diptera that cause galls, many from large Cecidomyiid genera like *Contarinia* and *Dasineura*. During 2004 we have had records for *Contarinia coryli* on **hazel** in Fairlight Country Park (Andre Halstead); *Dasineura cardaminis* on **lady's smock** *Cardamine pratensis* (Rachel Nicolson, Patrick Roper); *D. plicatrix* on **bramble** in Brede High Wood (Andrew Halstead); *D. ulmaria* on **meadowsweet** *Filipendula ulmaria* also in Hastings Country Park (Andrew Halstead) and *D. sisymbrii* on **creeping yellow-cress** *Rorippa sylvestris* at Westhampnett (Howard Matcham). All these are new records for SxBRC except for *Dasineura cardaminis* which was last recorded over 100 years ago.

Records, including some of those above, have now started to come through from the Dipterists Forum field trip to East Sussex in autumn 2004. These include some rare species like the Nationally Scarce (RDB2) fungus gnat *Mycetophila caudata* taken by Peter Chandler in Flatropers Wood. Another interesting revelation in 2005 was the determination, by German specialist Frank Menzel, of a black fungus gnat *Bradysia pseudodalmatina* from Hastings Castle. This is the first English record, the only other example from this country having been taken on the mountain of Cadair Idris in Wales.

We have been lucky in recent years to have one of the country's leading dipterists, Steve Falk, taking his summer holidays in Eastbourne and making field trips to the nearby Downs. In 2005, among other things,

he recorded four rare *Cheilosia* hoverflies: *C. nebulosa* (RDB3), *C. psilophthalma* (until recently only known from Ireland), *C. cynocephala* (Notable/Nb) and *C. nigripes* (RDB3). The early stages are associated with plants: the host of *C. nebulosa* is unknown, that of *C. psilophthalma* is thought to be mouse-ear hawkweeds, *C. cynocephala* favours thistles and *C. nigripes* buttercups. Steve also found the 'vulnerable' **wasp hoverfly** *Doros profuges* a large, spectacular, wasp-mimicking insect. This is a rare and elusive BAP species and one of the most enigmatic on the British list with little known of its life history.

One of the highlights of the year was the new-to-Britain picture-winged fly **Tephritis divisa** (below) *found by* ***Peter Hodge****. This is his account of its discovery:*

During the latter part of 2004 Peter May, Treasurer of the Amateur Entomologists' Society, received a request from Arun District Council for help in trying to ascertain the invertebrate interest at a site on the outskirts of Bognor Regis, known as The Brooks. This area is now designated as a public open space, having previously been in agricultural use. A non-profit making organisation, The Friends of The Brooks, has been set up to help manage the site for the general public as well as to benefit wildlife. In order to help with this, surveys of flora and fauna have been carried out to obtain some basis for future planning.

On 13th August I carried out an insect survey of The Brooks, organised by the Amateur Entomologists' Society. The site is bounded on the southern side by a small river and is divided into three separate fields, surrounded by ditches and abandoned hedges. Flowering herbaceous vegetation in the fields included several plants typical of former arable land, the most dominant species being **bristly oxtongue** *Picris echioides*, with a few patches of **ragwort** *Senecio* sp. and **creeping thistle** *Cirsium arvense*.

Two males and a female of an unfamiliar looking picture-winged fly, swept off bristly oxtongue, were provisionally identified in the only available British publication as *Tephritis separata*, a species stated to be recorded only from Mildenhall in Suffolk more than 60 years ago and associated with this plant. However, John Smit, a dipterist and specialist in Tephritidae from The Netherlands has determined my specimens as *Tephritis divisa*, a native of southern Europe. The larvae develop in the flower heads of *P. echioides* and possibly other species of *Picris*.

On a return visit on 30th August the fly was found to be present in large numbers and this led me to investigate other sites where bristly oxtongue grows during September and October 2005. As a result *T. divisa* was found at Steyning, Lewes and Icklesham, but so far not outside Sussex. I also discovered a specimen in my reference collection, misidentified as *Tephritis cometa*, labelled 'Avis Road, Newhaven, 2nd August 2002'. It is therefore rather surprising that the species has remained undiscovered in this country as it has apparently been present for several years.

SPIDERS

Andy Phillips, Sussex recorder for spiders.

New Species and Significant Records for Sussex, 2005

The most significant find of the year was *Megalepthyphantes* sp. n. at Camber Dunes. This is a newly discovered species that has yet to be described. It was first found in Kent in 1999 by Peter Harvey and at Camber Dunes as new to Sussex in October 2005 by Tony Russell-Smith.

Megalepthyphantes is a genus within the Linyphiidae family of spiders that includes the money spiders. This family attains its highest diversity of species in the temperate regions of Europe, Asia and North America as opposed to most other families of spider that reach their highest diversity in the tropical and sub-tropical regions. It is the largest family of spiders in Britain and due to the relative difficulty in identifying linyphiids the family is ignored by some arachnologists and is still relatively unknown. This is why it is possible to make considerable taxonomic discoveries in Britain such as *Nothophantes horridus* that was described as a new genus and species from England in 1995.

Another important linyphiid discovery was a male of the nationally scarce *Porrhomma oblitum*, found by Phil Bance at Bewl Water. This record still needs checking but if confirmed will be a first for Sussex. It is a wet woodland species found amongst low vegetation in fen carr and waterside woodland. It is believed this species disappears when a woodland is drained or dries out so it is important that wet woodlands are conserved and the conditions needed for its development of wet in river valleys are enhanced for the continued survival of this species in Britain.

Another species new to Sussex *Tetragnatha nigrita* was recorded from a meadow by the author in Burwash as part of a survey of meadows in the High Weald organised by the Weald Meadows Initiative. This long-jawed spider in the family Tetragnathidae usually spins its orb webs on the lower branches of trees and amongst scrub but can also occur amongst tall vegetation as was the spider at Burwash.

Another Tetragnathid species *Meta menardi* was found by Richard Price in cliff-top fissures at Beachy Head. This is an unusual habitat for the species that is usually found in completely dark habitats such as caves, ice houses and long railway tunnels as its common name **cave spider** denotes. This species has been known for many years from the sandstone caves within the cliffs at Hastings, but Beachy Head is only the second site known for Sussex.

Araneus alsine was found by Gordon Jarvis on the 5th October in Bixley Woods. This is a nationally scarce orb-weaver that usually occurs in marshy woodland clearings. It can be very difficult to find as it spins a silken retreat within a leaf that it curls into a cone only emerging to gather prey from its web. The species is quite variable in colour, like many members of the *Araneus* genus, ranging from orange with pale spots to purple with yellow spots. A picture of the Bixley Wood spider can be found at http://rxwildlife.org.uk/?p=689

One of my personal favourite finds of 2005 though were two male *Micrommata virescens* found by attendees of the Heathland Spider Conservation & Identification day held on the 15th June at Ashdown Forest, run by the author and Chris Bentley and funded by the Weald Heathland Initiative. Male *M. virescens* (right) are amongst the most colourful of European spiders sporting a green cephalothorax and legs, with a bright yellow and red striped abdomen. It is not easy to find males as they live very short

lives as adults so it saved the day after torrential rain in the morning to find two colourful specimens during a brief period of sun in the afternoon near the Ashdown Forest Centre.

British Arachnological Society News

Other news within the world of British Arachnology includes the development of Phase Two of the National Spider Recording Scheme, which will profile the ecological requirements of British spiders, further enhancing the distribution maps published in 2002.

A UK Biodiversity Action Plan review for spiders has been undertaken by the society and a list of species suitable for inclusion with the UK BAP has been published in the newsletter of the British Arachnological Society.

In 2006 a review of the national statuses of British spiders is being undertaken using the IUCN criteria for assessing threat of extinction and is being funded by JNCC.

For any spider conservation or identification advice, or if you would like to help with spider recording in Sussex please contact me using the details in the directory section of this publication.

WOODLICE (TERRESTRIAL ISOPODS)

by Steve Prosser, isopod recorder for Sussex.

Another year has passed by and I have to confess that actually getting out in to the field to search for woodlice specimens has been somewhat constrained by time. However, I do feel that a large part of a county recorder role is not just to collate lists but to try to encourage and nurture interest in his or her chosen group.

Perhaps now is a good time to go back to a few basics. Currently we have 37 terrestrial woodlice on the British list and some of these are habitat-specific. For example the **sea slater** *Ligia oceanica*, though relatively common is restricted to the coast and typically a rocky shore species. *Halophiloscia couchi,* another coastal species, seems to be far less common with only occasional single animals being found. Another specialist is the **ant woodlouse** *Platyarthrus hoffmannseggi,* a small, blind, white animal associated with ants and usually found in their nests. Clearly, just from these examples, there is a great deal of diversity in form, distribution and habitat preference amongst terrestrial isopods.

In terms of records, the situation has not changed much from last year but I am currently working on the identification of twelve months of samples from a coastal shingle site in East Sussex. This will probably amount to between 390 to 450 individual specimens. It is quite a sobering thought that these samples will in total constitute a nearly 50% increase in the number of Sussex records. This one fact alone brings home how very under-recorded these animals are, so for those considering a change in, or addition to, their natural history interests there is an available niche.

The commonest species in the samples are *Trichoniscus pusillus*, the **common pigmy woodlouse** and *Armidillidium vulgare*, the **common pill woodlouse**. Pigmy woodlice are only a few millimetres long with a characteristic shape under the microscope. In woodland habitats they are described as being abundant in litter on the ground. They are probably the commonest woodlice in Britain. But the habitat being monitored is treeless coastal shingle. The abundance of this animal suggests the shingle is well-vegetated and no doubt there is sufficient litter and moisture just under the surface to create conditions similar to the woodland floor. The **common pill woodlouse** is one of the famous common five. My favourite, *Halophiloscia couchi,* has cropped up as a singleton in most samples of between thirty to sixty specimens. I suspect this animal is widespread but only in small numbers. This creature has very long antennae and when dead it is a woeful sight to see with them draped along the side of the body. When alive they look

ridiculously out of proportion with the rest of the animal as they wave about like giant television aerials. Given these apparently cumbersome appendages it is surprisingly active when attempting to evade capture and can run very fast.

I hope to give more detailed information about this project in next year's Adastra, in the meantime, please do get out in the field and take a closer look at this interesting group of crustaceans. Finally, I can thoroughly recommend the AIDGAP guide produced by the Field Studies Council: 'Key To The Woodlice of Britain and Ireland' by Stephen Hopkin. There are good photographs, clear diagrams and an excellent user-friendly key.

MOLLUSCS

A new record and a lot of new names!

by Martin Willing, mollusc recorder for Sussex.

A new Record for East Sussex

There have been few new molluscan records of note in Sussex during 2005. Of some interest, however, is the discovery, at the mouth of the Cuckmere River estuary, of the semi-marine **two-toothed white snail** *Leucophytia bidentata*. This species, which is a new vice-county record for East Sussex, lives in a rather specialised upper-shore habitat, typically in rock crevices or buried in stable gravel and cobbles. It is only immersed at extreme high tides and so, despite its links with the sea, is more a terrestrial than an aquatic species. This snail has a localised distribution in the British Isles (see Fig 1) being scarce on south-eastern coasts. In West Sussex it is only found in a narrow length of beach at Pagham Harbour and so this new record is only the second for the species for both East and West Sussex. This snail was found during an English Nature survey to study the likely impacts resulting from the possible removal of embankments on the Cuckmere estuary.

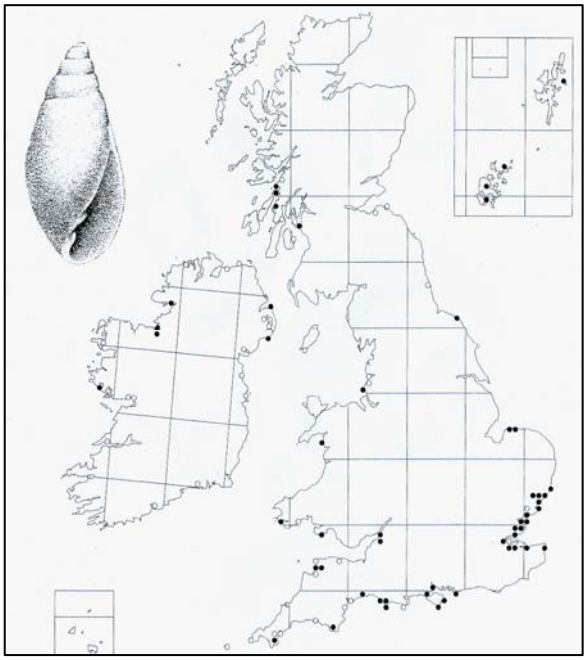


Fig 1: Map displaying UK distribution of ***Leucophytia bidentata*** *(prior to new East Sussex record)*

The illustration right is from **Kerney M. P.** (1999) *Atlas of land and freshwater molluscs of Britain and Ireland*. Harley Books, Colchester and on the following page from **Adam, W.** (1960) *Mollusques Terrestres et Dulcicoles*, Faune de Belgique, Institut Royal des Sciences Naturelles de Belgique, Brussels.

As in previous years I issue a challenge (for any interested parties!). My challenge for 2006 is to find morepopulations of this rather elusive snail; there are many other potentially suitable habitats, which might support it in both East and West Sussex.

A new non - marine species list for UK Mollusca

The Conchological Society has recently published (Anderson 2005) a revised list of non-marine Mollusca for Britain and Ireland. The last full non-marine recording lists were published in 1976 (Kerney 1976, Waldén 1976) and since that time many name changes have appeared in British and European literature. Kerney (1999) incorporated some of these changes, but in 2001 a new European list appeared. This

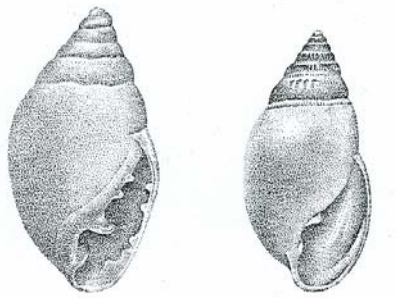
publication, the 'CLECOM' list (Falkner et al. 2001), advocated a major revision of nomenclature for many species. This new Conchological Society list seeks to resolve many of these changes for the British fauna, especially in the light of the on-going development of the RECORDER software because future editions of this have yet to be finalised.

The Anderson list includes 213 native and naturalised species together with 14 hothouse aliens. This means that it contains all molluscs with "established persistent or permanent breeding populations" in Britain and Ireland. It also includes the somewhat problematic group of species, which are described as the 'peri-marine' fauna. These are some of the upper-shore and estuarine species that Anderson includes if they are species "capable of breathing air or of surviving immersion in freshwater for substantial periods". Anderson states that, in compiling the list, he has adopted the 'precautionary principle' avoiding name changes, which are not, for various reasons, well-established.

So what will the impact of these changes be for field workers, those maintaining biological records or reading reports? Clearly a name change means that records and databases need to change and there is (hopefully only a short term) possibility of confusion. Where a partial change occurs, such as the generic name only, then the transition is eased. With a total change (such as for well known **common pond snail** *Lymnaea peregra* changing to *Radix balthica*) old and new names are likely to need to run concurrently for a some time. Perhaps the greatest difficulty arises when what has been considered to be one species is considered to be two (or more) species. I describe below a number of such proposed splits for species living in Sussex.

The **tree snail** *Balea perversa* agg. is a rather localised species in Sussex, most often encountered on lichen covered elder bushes on the South Downs. Recent work has demonstrated the existence of a species named *B. heydeni* living on islands of the eastern Atlantic. Studies of *Balea* from many localities in the UK appear to show that both species exist here. Work is currently in progress to clarify the UK situation, but unfortunately at present there are no readily available texts to aid identification.

The **mouse-eared snail** *Myosotella (= Ovatella) myosotis* (right) is a very common upper shore species typically living amongst flotsam and salt-marsh vegetation at the high-tide level of estuaries and other brackish locations. According to some ecological studies this is actually two species, *M. denticulata* (which has more 'teeth' in the aperture of the shell) living on exposed open coasts and *M. myosotis* (far right) present in more characteristically estuarine habitats. Unfortunately intermediate shell forms exist. Work is needed to produce a reliable identification guide to these species.



In 2003 a paper was published (Carr & Killeen 2003) which provided a convincing case that the **marsh pond snail** *Lymnaea palustris* was in fact two species, *Stagnicola fusca* and *S. palustris*, the former being by far the commonest in the UK. Unfortunately separation of these species does not seem to be possible on shell morphology alone; dissection and comparison of genitalia being required. This new list accepts this split, but reverts the generic name back to *Lymnaea*!

Another water snail which has 'suffered a split' is the **button ramshorn snail** *Anisus leucostoma*, a common species found in habitats subject to occasional drought. Some workers on the continent recognise two forms of this species, the broader-whorled *A. spirorbis* and the narrower-whorled *A. leucostoma*. There is not complete agreement on this split and so certainty of identification of these two species may, in the short term at least, prove problematic. No readily available I.D. guide is currently available.

Finally the very common **nut orb mussel** *Sphaerium corneum*, was separated in the UK into the two species *S. corneum* and *S. nucleus* in 2004 (Killeen et al 2004). *S. nucleus*, which differs from *S. corneum*, chiefly by a number of rather subtle shell characteristics, appears to be a species largely associated with old

grazing marsh drains such as those at Pevensey. It is likely that this species will be found quite widely throughout Sussex.

Where people are unable to determine which, of a split taxon they are dealing with, then it is probably best to record as an aggregate of the original name and retain dead shell reference material (or material in spirit if a later dissection is required).

A separate reprint of this new paper is available from the Conchological Society (for details see http://www.conchsoc.org)

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Table showing some of the name changes for mollusc species found in Sussex

New Name (* where a species split has occurred: further discussion below)	**Old name/s**	**Common names and brief notes on status in Sussex**
Mercuria cf. *similis*	*Mercuria confusa* *Pseudamnicola confusa*	Swollen Spire Snail: restricted to upper tidal situations on the lower River Arun.
Peringia ulvae	*Hydrobia ulvae*	Laver Spire Snail: common and widespread in all estuaries and salt marshes.
Ventrosia ventrosa	*Hydrobia ventrosa*	Spire Snail: locally abundant in non-tidal brackish pools.
***Balea perversa* *Balea heydeni*	*Balea perversa*	Tree Snail: As aggregate species found very locally in crevices and beneath bark of elm and elder.
***Myosotella denticulata* *Myosotella myosotis*	*Ovatella myosotis*	Mouse-eared Snail: An upper shore species common in estuaries and saltmarshes.
Merdigera obscura	*Ena obscura*	Lesser Bulin Snail: On deciduous trees trunks on calcareous soils.
Cornu aspersum	*Helix aspersa*	Garden Snail: Widespread in a wide variety of natural and disturbed habitats.
Trochulus hispidus	*Trichia hispida*	Hairy Snail: Widespread and often common in moist, well vegetated places although not in gardens or deep woodland.
Trochulus striolatus	*Trichia striolata*	Strawberry Snail: Common and widespread in gardens, waste ground and also sometimes in old woodland.
Galba truncatula	*Lymnaea truncatula*	Dwarf Pond Snail: Common and widespread in wet, marshy fields, temporary pools mostly living out of water.
***Lymnaea fusca* *Lymnaea palustris*	*Lymnaea palustris*	Marsh Pond Snail: As aggregate, widespread in stagnant pools, slow flowingdrainage ditches but not fast flowing rivers.
Omphiscola glabra	*Lymnaea glabra*	Mud Pond Snail: Very locally distributed in pools subject to seasonal drought on nutrient poor soils.
Radix auricularia	*Lymnaea auricularia*	Ear Pond Snail: Locally distributed in larger bodies of freshwater in 'good' quality' hard-water habitats.
Radix balthica	*Lymnaea peregra*	Common Pond Snail: Very common and widespread in a wide variety of freshwater habitats.
Oxychilus navarricus	*Oxychilus helveticus*	Glossy Glass Snail: Locally common in a fairly wide range of natural and disturbed moist sheltered habitats.
***Anisus leucostoma* *Anisus spirorbis*	*Anisus leucostoma*	Button Ram's-horn Snail: Widespread in pools and ditches subject to seasonal drought.
Pyramidula pusilla	*Pyramidula rupestris*	Rock Snail: Very locally distributed on old flint walls usually built using lime mortar.
** Sphaerium nucleus* *Sphaerium corneum*	*Sphaerium corneum*	Nut Orb Mussel: Widespread and common in a variety of freshwater habitats (running & still plus hard and soft water)

BIRDS

by Christian Melgar, recorder for the Sussex Ornithological Society (SOS).

John Hobson retired as Sussex Ornithological Society Recorder under the five-year rule in April 2005 and I had the daunting task of taking his place. Tim Parmenter, Assistant Recorder, will be retiring in 2006 also under the five-year rule and Tony Cook will be standing for election at our April AGM to fill the void left by Tim. Both John and Tim have worked very hard dealing with records during the time they have been in office - I would like to thank them for this and I only hope that Tony and myself will be able to fill their shoes.

In 2004, 65,730 records were received of 262 different bird species from 590 observers. The number of submitted records was the highest total ever and reflects not only increasing observer coverage, but also more effort in the capture and collation of records and the increasing number of Society members who are willing and able to submit their material. Although most records continued to come from the major birdwatching sites around the county it was encouraging to see that many additional and less-frequently visited sites were also included. Collated records were again received from most of the more popular sites, such as Pagham Harbour, Rye Harbour, Pulborough Brooks RSPB, Weirwood Reservoir and Chichester Harbour and the British Trust for Ornithology's Migration Watch and the Wetland Bird Survey (WeBS) counts.

The number of scarce and rare descriptions accepted for 2004 numbered 129 of 58 different species or sub-species of which 104 were accepted by the SOS Records Committee and 25 by the British Birds Rarities Committee (BBRC) and appeared in the relevant reports. The records for 2005 are now being entered and will be added to the numerous records already received electronically. The continuing success and wider and more regular use of the SOS website has also resulted in a large increase in records and the number of individual species records that have been or will be entered into the database has exceeded those from previous years.

In 2004 a drake **lesser scaup** *Aythya affinis* was recorded at Scotney Gravel Pits and was the first record of this North American species for the county, although it has long been predicted as the number of individuals being observed in the UK and Ireland has dramatically increased since the first British record in 1987. A full review of **ivory gull** *Pagophila eburnea* records highlighted the fact that few of those previously submitted were acceptable by today's standards and it was recommended that the species be removed from the Sussex list. Some records had already been reviewed and found wanting by the BBRC, and so after formal acceptance of the proposal by the SOS Scientific Committee and SOS Council the species was removed from the Sussex list. The list now stands at a still impressive 389 species.

Some of our once-commoner resident species still appear to be struggling, with some such as **willow tit** *Parus montanus* and **grey partridge** *Perdix perdix* still declining in the numbers observed and in the frequency of sightings. On a brighter note others such as **tree sparrow** *Parus montanus* appear to be making a slight recovery and it is encouraging to see a rise in both the numbers nesting and those wintering within the east of the county.

For the first time since the early 1800s a pair of **Red Kites** *Milvus milvus* nested successfully in West Sussex in 2004 and two chicks fledged. With the numbers nesting elsewhere in the country in recent years this is an event which many hope will be frequently repeated in Sussex. **Little egrets** *Egretta garzetta* also continued their British invasion with the overall population trends seen nationwide mirrored in Sussex. Up to fifteen nests were discovered during 2004, many of which successfully produced young and numbers observed during migration and over-wintering continue to be high. The former large roost at Thorney Island sadly remains abandoned.

Lastly, the SOS decided to share most of its records with the Sussex Biodiversity Record Centre, as it was realised that most county and local authorities were not accessing our records, and that many more commercial organisations were going to the SxBRC for records data than were going to the SOS. Consequently we felt that are our material was not being used as much as it should be, and that sharing it with the SxBRC would be better for conservation. After considerable negotiations and hard work by members of the SOS and SxBRC a formal agreement was signed and over 500,000 records were shared, although records of certain vulnerable or scarce species were excluded to protect nesting and winter roost sites.

BATS

by Martin Love, recorder, Sussex Bat Group.

This past year seems to have been rather mixed as far as bats are concerned with less calls for rescues either of grounded injured bats or lost babies, at least early in the year, suggesting that perhaps climatic conditions delayed their breeding season. Activity picked up later in the year with very young babies being found into August.

Population figures from the National Bat Monitoring Programme published by the Tracking Mammals Partnership suggest that the numbers of some bat species have increased slightly. These species are - **greater horse-shoe** *Rhinolophus ferrumequinum,* **lesser horse-shoe** *Rhinolophus hipposideros,* **common pipistrelle** *Pipistrellus pipistrellus*, **Natterer's** *Myotis nattereri* and **Daubenton's** *Myotis daubentonii* bats, with all the rest still declining.

Although this may appear to be good news we shall have to wait and see if this trend continues. It may be that the recent relatively warm winters has meant that more bats have been visible for counting during the winter rather than hidden away deep in crevices and cavities.

The Sussex Bat Group have instigated a monitoring programme in a number of West Sussex hibernacula to record their temperature and humidity throughout the year. This information should help in working out why some sites are more favourable to bats for hibernation and guide future decisions on appropriate management of these very important places. The Sussex Bat Group would like to thank the owners of these sites for their support in getting this monitoring underway.

The British bat list now stands at 17 species with the **greater mouse-eared** *Myotis myotis* , being reinstated after having been declared extinct in the UK since 1990; the single male has appeared in the same hibernaculum for the last three winters. Hopefully he will return this winter and it will be even better if he should bring a mate.

Pressure on Sussex bats continues at a high level with the loss of roost sites and feeding areas, damage to insect populations by farming practices, excessive use of insecticides and herbicides both domestically and commercially and isolation when bat navigation routes to and from roosts and feeding areas are impeded.

The conversion of farm buildings to domestic habitation is one of the more significant areas where bats are being compromised. Sadly very few Local Authority Planning Departments even consider bats when allowing planning applications despite it being a requirement that they do so and the potentially high fines, even imprisonment, for those who destroy bat roosts.

CETACEANS AND OTHER MARINE MAMMALS

by Stephen Savage, Sea Watch Foundation, Sussex Regional Co-ordinator.

In 2005 we recorded 4 species of cetacean, **bottlenose dolphin** *Tursiops truncatus*, **harbour porpoise** *Phocoena phocoena*, **common dolphin** *Delphinus delphis* and **pilot whale** *Globicephala melaena*. Sadly, common dolphins were only recorded as strandings, including a live stranding of an elderly female on Lancing beach 21st March.

Harbour porpoise sightings continue to increase in Sussex and Dr Peter Evans head of Research Sea Watch Foundation has reported that analysis of the Eastern Channel sightings show a slow but steady increase of the species in the region. One sad occurrence relating to this porpoise involved a live stranding of a calf (umbilicus attached) at Eastbourne in July. A search was instigated and two adult harbour porpoise were located by Sussex Sea Fisheries Patrol vessel, but it was too late as the calf (attended by British Divers Marine Life Rescue) deteriorated fast. The Hastings area remained important for sightings again in 2005, including harbour porpoise and pilot whale. We ran a cetacean ID training day for the Hastings area which was organised by Andy Phillips from the Hastings Borough Council. A further training day was organised as part of the beach warden training programme for the West Sussex Coastal Marine Project.

The most interesting sightings in 2005 focussed around a group of three bottlenose dolphins that took up temporary residence in the Looe Channel off Selsey Bill. We first heard of the dolphins in February when we received a report and photograph forwarded to us from the Sussex Sea Fisheries vessel the 'Watchful'. By March we were getting anecdotal reports of three dolphins in the area interacting with vessels followed by further substantial reports. There appeared to be two adults and a juvenile. While they swam together at times during vessel interactions, it appeared to be one adult that initiated contact (later nicknamed 'Adidas' by a yachtsman Colin Stratton, who observed and reported them on several occasions). The other adult and the juvenile appeared to hang back during such encounters. We continued to receive reports until early September when the dolphins disappeared. We are currently analysing this sighting data and attempting to obtain any other sightings and images that people may have (as the Looe Channel is a fairly busy channel for vessels). We have some photos of photo-identification quality images showing unique markings which may help us to track down where the dolphins came from or where they have moved on to. We are keen to hear from anyone who has seen or photographed these dolphins.

We have also received a few seal reports this year, both **common seal** *Phoca vitulina* and **grey seal** *Halichoerus gripus* (and anecdotal reports usually recorded as unknown species). This includes a common seal in the river Ouse at Lewes, East Sussex on 27th November and a grey seal swimming and diving off Hove beach on 20th December. For any biological recorder or site interested in recording/receiving sea mammal sightings, please enquire about our electronic sighting network. Since it was set up in December 2004 it has proved to be very useful in supporting volunteers and for receiving and feeding sightings back to participants.

Sussex Sea Mammal Sighting hotline: 0777 361 0036
Website: www.seawatchfoundation.org.uk

HABITAT CREATION AT RYE HARBOUR

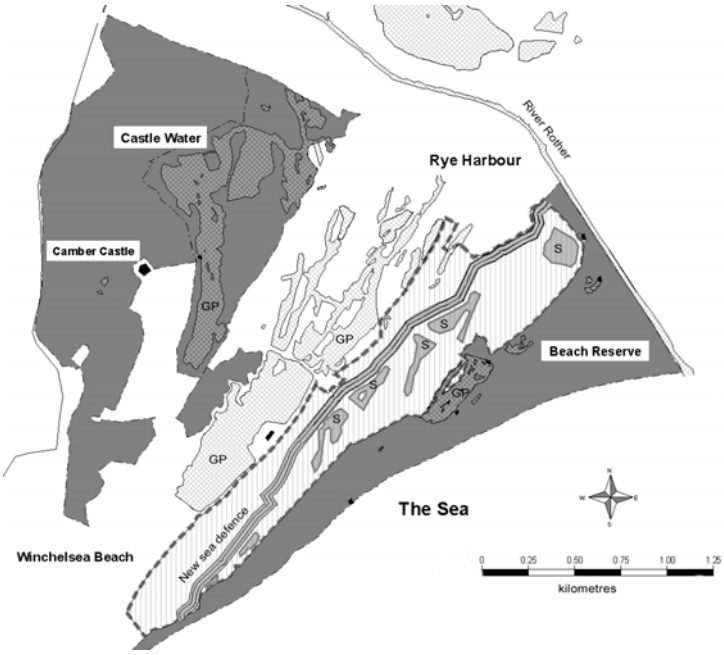
by Barry Yates, Manager, Rye Harbour Nature Reserve

At Rye Harbour Nature Reserve, and right next to it, there has been some dramatic development during the last two years. But this is not threatening the wildlife interest; in fact it offers one of the largest habitat creation projects in the county. The Pett Frontage Sea Defence scheme is necessary because the existing defences were only giving a poor level of protection to villages and industrial land.

The map opposite shows the extent of Rye Harbour Nature Reserve (dark grey), with the existing large gravel pits (cross-hatched and marked GP).

Where the river Rother meets the sea there has been much engineering work, with an enlarged concrete terminal groyne and a new steel groyne, creating an "extraction pocket" more than 200m. long and 60m. wide. The shingle from this pocket is extracted each winter to re-nourish the sea defences at Pett Level. The sea refills the pocket each year by longshore drift.

The land adjacent to the Beach Reserve, known as Rye Harbour Farm, was purchased by the Environment Agency in March 2003 to enable the sea defences to be improved. The farm, some 120 ha., was mostly arable land when purchased, although the potential for significant habitat restoration was clear to see - it has SSSI and SPA designations. The history of the farm is that it comprised mainly saltmarsh and shingle ridges until being converted to grassland in the 1950s and then arable land in the 1970s.



Given the existing designations on the site, the Environment Agency's overall vision for its landholding of Rye Harbour Farm and the Beach Reserve is to provide a much improved defence against the sea and yet to maximise the environmental gain and also to enable sympathetic visitor access.

To date the work has constructed a 3.1km secondary sea defence, a large clay and earth embankment – work was not quite completed in 2005 when wet weather set in (shown as New sea defence on the map). All of the material for this was excavated from the farm, creating seven new lagoons that are saline/brackish (shown as grey shaded areas with darker outline, - five are labelled as S). The location of the embankment and the excavation of the pools was carefully considered to avoid the shingle ridges and this was agreed with English Nature.

Later this year the embankment will be completed and some areas fenced to establish conservation grazing. Plans for managing the eastern part of the farm as saltmarsh will be completed and further landscaping of the new lagoons will make them better for wildlife.

Targets for the farm include the restoration or creation of the following habitats:

- Vegetated shingle – enhancing what remains and stripping soil from ridges damaged by farming.
- Saltmarsh – enabling a controlled access of the sea from the adjacent river.
- Saline lagoons – the seven new pools will all be saline/brackish.
- Reedbeds – potential for extending the small areas that exist.
- Grazing marshes – establishing conservation grazing is a priority.

The existing saline habitats on the farm and nature reserve were investigated by Dr Mark Telfer in autumn 2005 and he found that, "*Overall, the brackish and saline habitats at Rye Harbour SSSI are very important for invertebrates. They support a fauna which is not large at 221 species but which contains a very high proportion (19.0%) of species of conservation significance. A substantial proportion of these invertebrates are sufficiently dependent upon brackish or saline habitats that they will not be represented on the fresher, more landward parts of Rye Harbour SSSI.*"

This land has considerable potential for breeding birds that are scarce in Sussex: little grebe, shelduck, shoveler, avocet, lapwing, redshank, oystercatcher, ringed plover, common tern, Mediterranean gull, black-headed gull, grey partridge, yellow wagtail, wheatear, skylark, corn and reed buntings.

The most important flower on the farm is **marsh helleborine** *Epipactis palustris* and we are managing this by removing the willow trees that were shading it. We will encourage some of the shingle plants, such as the BAP species **red hemp-nettle** *Galeopsis angustifolia* and the more common **yellow horned poppy** *Glaucium flavum* and **viper's bugloss** *Echium vulgare* to colonise new areas of shingle habitat. The key to his will be managing the rabbit population and establishing conservation grazing. For the last two years the nature reserve has been managing a small number of goats on the damaged shingle areas to control the spread of bramble and elder. This is proving successful, but I am sure we still have lots to learn.

This project is being undertaken on a Site of Special Scientific Interest and a Special Protection Area, so great care has been taken to ensure a minimum of damage to existing wildlife and the geomorphological interest and also to maximise the potential for wildlife and visitor management. There has been a long dialogue between the Environment Agency, the consultants Halcrow, English Nature, Rother District Council and Rye Harbour Nature Reserve. So far, the results are impressive, but we have many years work ahead of us to make Rye Harbour an even better place for wildlife and visitors.

Check for progress of this project on the new nature reserve website;

www.wildRye.info

OBITUARY – FRANK PENFOLD

by Mary Briggs and Henri Brocklebank

Sadly, as many readers will have heard, Frank Penfold died in November 2005. Born in Arundel, Frank lived his long life of 92 years in Sussex, and he was an outstanding figure in the conservation of wildlife in the Counties. After schooling at Midhurst Grammar School and an engineering apprenticeship, Frank joined his father's business in Arundel supplying agricultural machinery. This gave him a very long association with farmers and the countryside – it was Frank who introduced combine harvesters to Sussex in the 1930s. He became well- known for his active championship of high grade habitats and for his local knowledge of sites of plants of special interest. At his last home in Burpham he found morels on the lawn when moving in, and named the house after them. In recent years he was known for his green mowing regime which allowed a wonderful wild flower meadow to grow with cowslips and pyramidal orchids.

Frank was a founder member of the Sussex Trust for Nature Conservation, now the Sussex Wildlife Trust, and was its Chairman for 25 years. He was also a founder member of the Sussex Flora Society Committee, and its first Chairman from 1966-72. This was the Society which published the Sussex Plant Atlas in 1980, and which became the Sussex Botanical Recording Society (SBRS). Frank was elected an Honorary Member of SBRS last year. Together with Frances Abraham he launched the Sussex Black Poplar Project, surveying all the Sussex specimens and successfully piloting a programme for their conservation by the Sussex Wildlife Trust and the Royal Botanic Garden at Wakehurst.

As a Trustee of the Sussex Wildlife Trust Frank was always very supportive to the Sussex Biodiversity Record Centre and was a regular attendee of the Sussex Biological Recorders Seminars (where he was always to be found sitting on the front row!).

Frank made a huge contribution to Biological Recording in Sussex and will be sadly missed.

SUSSEX COUNTY RECORDERS 2005/6

Records of any plant or animal species should be sent to the Sussex Biodiversity Record Centre who will pass them on to the relevant recorder(s) listed below.

Sussex Biodiversity Record Centre (SxBRC)
Woods Mill, Henfield,
West Sussex BN5 9SD
Tel: 01273 497553
sxbrc@sussexwt.org.uk

SxBRC Survey Unit
Theresa Greenaway
Sussex Biodiversity Record Centre
Survey Unit
(Address as above)
Tel: 01273 497506
theresagreenaway@sussexwt.org.uk

Sussex Wildlife Trust
Woods Mill, Henfield,
West Sussex BN5 9SD
Tel: 01273 492630
enquiries@sussexwt.org.uk

Higher Plants

MARY BRIGGS
(Sussex Botanical Recording Society
West Sussex)
9 Arun Prospect, Pulborough RH20 1AL
Tel: 01798 873234

PAUL HARMES
(Sussex Botanical Recording Society
East Sussex)
10 Hillcroft, Mile Oak Road,
Portslade BN4 2QD
p.harmes01@ntlworld.com
Tel. 01273 880258

Sussex Botanical Recording Society
web site: www.sussexflora.org.uk

Orchids

DAVID LANG
1 Oaktree, Barcombe, Lewes,
East Sussex BN8 5DP.
Tel: (01273) 400446
dclangbarcombe@yahoo.co.uk

Bryophytes

HOWARD MATCHAM
21 Temple Bar, Strettington,
near Chichester,
West Sussex PO18 0LB
Tel: 01243 781238
hwlgmatch@yahoo.co.uk

Lichens

SIMON DAVEY
10 Cottage Homes, Common Lane,
Ditchling, Hassocks
West Sussex BN6 8TW
Tel: 01273 844436
srdavey@globalnet.co.uk

Charophytes (Stoneworts)

FRANCES ABRAHAM
Old School House, Ebernoe, nr Petworth,
West Sussex GU28 9LD
frances.a@solutions-inc.co.uk

Fungi

PETER RUSSELL
15 Graham Avenue, Patcham,
Brighton BN1 8HD
pjrthe1st@yahoo.com

Amphibians & Reptiles

Records should be sent to the

Sussex Biodiversity Record Centre (SxBRC)
Woods Mill, Henfield,
West Sussex BN5 9SD
Tel: 01273 497553/554
sxbrc@sussexwt.org.uk

River Fish

RICHARD HORSFIELD
Team Leader, Ecological Appraisal,
Environment Agency, Sussex Area Office.
Saxon House, Little High Street, Worthing,
West Sussex BN11 1DH
Tel: 01903 703812
richard.horsfield@environment-agency.gov.uk

Birds

Bird recording queries:

CHRISTIAN MELGAR
Recorder: Sussex Ornithological Society
36 Victoria Road, Worthing,
West Sussex BN11 1XB
Tel: 01903 200064
recorder@sos.org.uk

Conservation enquiries:

JOHN GOWERS
Tel:01825 723296
conservation@sos.org.uk

All other enquiries:

RICHARD COWSER
Tel:01903 770259
secretary@sos.org.uk

Mammals (see below for bats, badgers & cetaceans)

Records should be sent to the
Sussex Biodiversity Record Centre (SxBRC)
Woods Mill, Henfield,
West Sussex BN5 9SD
Tel: 01273 497553/554
sxbrc@sussexwt.org.uk

Bats

MARTIN R.T. LOVE
4 The Cherries, Rookwood Rd,
West Wittering,
West Sussex PO20 8LT
Tel. 01243 513650
halcon@globalnet.co.uk

Badgers

Badger Trust (Sussex)
Tel: 07910 198720
Badger Trust website: www.badger.org.uk

Cetaceans and Seals

STEPHEN SAVAGE (Seawatch)
45 North Road, Portslade,
East Sussex BN41 2HD
Tel. 01273 424339
stevep.savage@ntlworld.com
www.seawatchfoundation.org.uk

Moths and Butterflies

COLIN PRATT
(County recorder for moths and butterflies).
Oleander, 5 View Road,
Peacehaven, East Sussex.
colin.pratt@talk21.com
Tel. 01273 586780

BILL TAYLOR
British Butterfly Conservation Society –
Sussex Branch, 54 Greenacres Ring,
Angmering, West Sussex BN16 4BS
Tel: 01903 774551
Email: william.pendrich@tesco.net
British Butterfly Conservation Society website:
www.butterfly-conservation.org

SARAH PATTON (Microlepidoptera Group)
c/o Sussex Biodiversity Record Centre
Woods Mill, Henfield,
West Sussex BN5 9SD
Tel: 01273 497553/554
sxbrc@sussexwt.org.uk

Glow-worms

ROBERT and JULIE HOWARD
(Sussex Glow-worm Recorders)
Tulip Tree Cottage, Spinney Lane,
West Chiltington, West Sussex RH20 2NX
Tel. 01798 812141

Spiders

ANDY PHILLIPS
Flat 5, 21 West Hill Road
St. Leonards on Sea
East Sussex
TN38 0NA
Tel: 01424 716919
threecubes@gmail.com

Orthoptera & related orders

JOHN PAUL
Downsflint, High Street, Upper Beeding,
West Sussex BN44 3WN
tetrix@pavilion.co.uk

Dragonflies

JOHN LUCK
British Dragonfly Society – Sussex branch
4 Mill View, Ringmer
East Sussex BN8 5EP
Email: johnluck@gotadsl.co.uk
Web: www.dragonflysoc.org.uk

Coleoptera (beetles) & Heteroptera (plant bugs)

PETER HODGE
8 Harvard Road, Ringmer,
East Sussex BN8 5HJ
Tel. 01273 812047
Peter.J.Hodge@tesco.net

Hymenoptera: Ants, Bees & Wasps

MIKE EDWARDS
Lea-side, Carron Lane, Midhurst,
West Sussex GU29 9LB
Tel. 01730 810482
ammophila@macace.net

Diptera (two-winged flies)

PATRICK ROPER
South View, Churchland Lane,
Sedlescombe, East Sussex TN33 0PF
Tel. 01424 870208
patrick@prassociates.co.uk

Hoverflies

ROGER MORRIS & STUART BALL
National Hoverfly Recording Scheme
7 Vine Street, Stamford
Lincolnshire PE9 1QE
Email: roger.morris@dsl.pipex.com
Web: www.hoverfly.org.uk

Hemiptera/Homoptera (Auchenorrhyncha: Leafhoppers & planthoppers)

ALAN STEWART
31 Houndean Rise, Lewes,
East Sussex BN7 1EQ
a.j.a.stewart@sussex.ac.uk
Tel. 01273 476243

Molluscs

MARTIN WILLING
14 Goodwood Close, Midhurst,
West Sussex GU29 9JG
Molluscs@willing.fsbusiness.co.uk
Tel. 01730 814790

Isopoda (woodlice) and related groups

STEVE PROSSER
43 Marchant's Drive
Camber, East Sussex TN31 7RF
mail@camber43.freeserve.co.uk
Tel: 01797 229334

Pseudo-scorpions

GERALD LEGG (National Recorder).
Booth Museum of Natural History, 194 Dyke Road,
Brighton,
East Sussex BN15AA
gerald.legg@brighton-hove.gov.uk
Tel. 01273 292777

Geology

JOHN COOPER
Booth Museum of Natural History, 194 Dyke Road,
Brighton,
East Sussex BN15AA
john.cooper@brighton-hove.gov.uk
Tel. 01273 552586

Marine Records - (see also Cetaceans)

GERALD LEGG
Booth Museum of Natural History, 194 Dyke Road,
Brighton,
East Sussex BN15AA
gerald.legg@brighton-hove.gov.uk
Tel. 01273 292777

VACANT GROUPS : VOLUNTEER COUNTY RECORDERS NEEDED

Ephemoptera (Mayflies), Neuroptera, Mecoptera and Megaloptera, (Lacewings, Scorpion-flies, Alderflies and Snake-flies), Coelenterata, Nemertea (Nematode worms), Oligochaeta (Oligochaete worms), Bryozoa, Annelida (Flatworms), Myriapoda (Millipedes), Crustacea.

OTHER USEFUL ADDRESSES

Ashdown Forest

The Conservators of Ashdown Forest
The Ashdown Forest Centre
Wych Cross, Forest Row
East Sussex RH18 5JP

Tel. 01342 823583;
conservators@ashdownforest.fsnet.co.uk

Badgers – see under Badgers on page 33.

Butterfly Conservation - Sussex Branch

Branch contact: Graham Parris

E-mail: contact@sussex-butterflies.org.uk

East Sussex County Council

Alex Tait, County Ecologist,
Transport & Environment,
County Hall, St. Anne's Crescent,
Lewes, East Sussex BN7 1UE

Tel: 01273 481621
E-mail: alex.tait@eastsussexcc.gov.uk

English Nature

Sussex and Surrey Team,
Phoenix House, 33 North Street,
Lewes, East Sussex BN7 2PH

Tel: 01273 476595
Email: sussex.surrey@english-nature.org.uk

Environment Agency

Sussex Area Office
Saxon House, Little High Street,
Worthing, West Sussex BN11 1DH

Tel: 01903 215835
E: cherry.weeks@environment-agency.gov.uk

Forestry Commission

South East England Forest District,
Bucks Horn Oak, Farnham,
Surrey GU10 4LS

Tel: 01420 23666
Email: enquiries.seefd@forestry.gsi.gov.uk

High Weald AONB Unit

Woodland Enterprise Centre,
Hastings Road, Flimwell,
East Sussex TN5 7PR

Tel: 01580 879500
E-mail: info@highweald.org

National Trust

South East Region, Polesden Lacey,
Dorking, Surrey RH5 6BD

Tel: 01372 453401

Otters and Rivers Partnership

For information on this scheme in 2006,
contact the Sussex Biodiversity Record Centre

RSPB

South East England Regional Office
2nd Floor, 42 Frederick Place,
Brighton BN1 4EA

Tel: 01273 775333

South Downs

Chris Todd, Campaign Officer
South Downs Campaign
PO Box 3473, Brighton BN1 7FZ

Telephone: 01273 563358
E-mail: southdowns@zoom.co.uk

South Eastern Water

3 Church Road
Haywards Heath
West Sussex RH16 3NY

Tel: 0845 301 0845
Email: contactcentre@southeastwater.co.uk

Southern Water

Environment & Product Quality
Southern House, Lewes Road
Falmer, Brighton BN1 9PY

Tel: 01273 663150
E-mail: customerservices@southernwater.co.uk

Sussex Amphibian & Reptile Group

Hammonds Green Cottage
Hammonds Green, Framfield,
East Sussex TN22 5QH

Tel: 01825 890236
E-mail: jenny@baconjjgw.fsnet.co.uk

Sussex Bat Group

Sheila Wright
5 Penlands Vale, Steyning
West Sussex BN44 3PL

Tel: 01903 810119
E-mail: sheila@batbox.com

***Sussex Botany* magazine**

Enquiries to the Sussex Biodiversity Record Centre

Sussex Botanical Recording Society

For details see web site:
http://www.sussexflora.org.uk

Sussex Lichen Recording Group

Details from Sussex Biodiversity Record Centre

Sussex Moth Group

Membership: Chris Glanfield
64 Greenfields, Wick, Littlehampton,
West Sussex BN17 7HF

Recorder: Martin Love
4 The Cherries, Rookwood Rd,
West Wittering,
West Sussex PO20 8LT

Tel. 01243 513650
E-mail: halcon@globalnet.co.uk

Sussex Ornithological Society

See under *Birds* on page 33 above.

Sussex Wildlife Trust

Woods Mill, Henfield,
West Sussex BN5 9SD

Tel: 01273 492630
E-mail: enquiries@sussexwt.org.uk

Sussex Wildlife Trust – WildCall

Tel: 01273 494777

Weald Meadows Initiative

At High Weald AONB Unit (see above).
Email: meadows@highweald.org

West Sussex County Council

Environmental and Economic Policy Services
The Grange, Tower Street, Chichester,
West Sussex PO19 1RH

Tel: 01243 777273
E-mail: env.dev@westsussex.gov.uk

Woodland Trust

The Woodland Trust, Autumn Park
Dysart Road, Grantham
Lincolnshire NG31 6LL

Tel: 01476 581111
E-mail: conservation@woodland-trust.org.uk