

ADASTRA

2014



**An annual review
of wildlife recording in Sussex**

published by
The Sussex Biodiversity Record Centre

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A review of wildlife recording in Sussex in 2014

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by the

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Cover picture: Stictoleptura rubra, 12.07.2014, Su Reed, Stedham Common.

A foreword from Penny Green, the outgoing Record Centre Manager.

2014 was a sad year in the Sussex biological recording community as we lost eight eminent recorders and inspiring figures. Phil Bance, Mary Briggs, Joyce Gay, Chris Haes, Phil Haskell, Nigel Holmes, Wilberforce Jones and Alan Malpass. They all contributed to Sussex biological recording in different ways, whether it was from their extensive knowledge, the inspiration they provided to others, publications and atlases that they led on, getting Sussex on the map nationally and their dedication to the cause. Although it is sad to know that they aren't physically with us anymore, I believe that these great people live on through the legacy of their records, their studies and from the skills that they patiently shared with others, so we should celebrate their accomplishments and make good use of the records and skills that they left us with.

January 2015 marks the end of my time in the Sussex Biodiversity Record Centre, having been there since 2003 it was time for a new adventure! I feel so fortunate to have spent the formative years of my career in such an inspiring and ever-changing environment. I remember that I didn't get the first job I applied for in the record centre and I thought that my career was over before it had even begun! Luckily for me, six months later a role came up that suited my skills much better, and the rest is history.

I feel so fortunate to have been surrounded by such lovely people over the past 11 years ...who are these people? Biological recorders of course! Inspiring people who dedicate their lives to their passion of recording; people who have so much knowledge about their subject and who are so very generous in sharing their experience and skills with others. My work at the record centre has been an absolute delight due to you, and I am very grateful for this. I haven't worked out how many species records have come in over the past 11 years but I think it is about 4.5 million; many milestones have been passed on the way and several computers have so very nearly been thrown out of the window!

This report encapsulates all that Sussex biological recorders are about. Over the past year there have been so many exciting finds in Sussex, which can be read about in this excellent edition of AdastrA. The iRecord website, which we have been encouraging recorders to use, has resulted in some new to Sussex records, and confirmed a species new to Britain (due to the ability to upload photos with the records). Lots of new recorders have been engaged through iRecord and we're grateful to the county recorders for all of the verification work that they do on these records. We have had 57,421 records submitted via iRecord so far, with 30,346 having been verified and 27,075 awaiting verification.

I have thoroughly enjoyed reading the articles submitted for this edition of AdastrA, from the social lives of barkflies through to leafy liverworts – I hope you enjoy them too, and many thanks go to all of the authors who make this such an excellent publication.

FUNGI

by Martin Allison, Sussex Fungi Recorder

The start of the season did not bode well for fungi. There was an initial flush towards the latter half of August, stimulated by cool damp conditions more reminiscent of autumn than of summer. These conditions encouraged a selection of micorrhizal fungi into fruit, mostly Boletes and Russulas. September then returned to hot dry conditions and few fungi were to be found throughout the month and into early October. A change in the weather to wet, but still mild, conditions by the third week of October saved the year, and by November, fungi finally began to appear, sometimes in prolific numbers.

In late August, a photo was sent in to the SxBRC of a toothed fungus growing on tree limbs in an orchard near Three Bridges. We later confirmed the wood as **Apple *Malus domestica***. A sample of the fungus was requested, and proved to have a yellow tinge to the flesh and an interesting smell variously described as sickly-fruity, pineapple, or liquorice (my sample was more akin to Gorgonzola!). The detective work over, the species was identified as **Orchard Tooth Fungus *Sarcodontia crocea***, a rare UKBAP and Red Listed species confined to apple wood, and a new West Sussex record. Material has been deposited at Kew.

A few early forays were cancelled, but one at Broadwater Warren with the Sussex Fungus Group on 7th September proved worthwhile. This reserve manages to produce fungi even when most other sites hold precious few. Here we found the weird little **Twisted Deceiver *Laccaria tortilis*** along muddy ride edges. As its name suggests, the fruit body can be surprisingly contorted and deformed. Two far more striking species found close by were the potentially lethal **Deadly Webcap *Cortinarius rubellus***, of horse-whisperer fame, and the beautiful **Violet Webcap *C. violaceus***, the latter possibly becoming more frequent in south east England.

Three visits were made to different woodlands and grasslands at the National Trust's Devil's Dyke complex of woods and grasslands, and each site held at least one Red List species. In order of appearance, at Newtimber Hill on the 3rd October, a strange green-tinged cup fungus appearing in large numbers was collected from fallen mossy branches. After a bit of microscopy at home this was determined as ***Chlorencoelia versiformis***, a UKBAP and Endangered Red List fungus. Not a bad find from amongst only 22 species recorded for the day!

My second visit was to Wolstonbury Hill on 9th October, another steeply wooded slope on the chalk. Here I literally stumbled over a fallen log where a dense cluster of a beautiful bonnet species sprang out of the mossy surface. The stems were yellow throughout, the caps an attractive pink-brown, and the odour was of bleach. I was convinced I had found the **Beautiful Bonnet *Mycena renati***, a fungus I have hoped to find for many years. It is now at Kew, where the general consensus is that it is indeed this species, but it has yet to be confirmed. *M. renati* is a UKBAP and Vulnerable Red List fungus. There are only 13 UK records since 1911.

My final visit to Devil's Dyke was to the grasslands of Southwick Hill on 6th November. There were a few waxcap species dotted about the hill, but it was gratifying to find the striking **Big Blue Pinkgill *Entoloma bloxamii*** amongst them. This is yet another UKBAP species, and new to this site.

I was fortunate to be commissioned to survey the Elm's Farm ringing station land at Icklesham. This is a complex of wetland, farmland and woodland, with survey work mostly concentrating on woodland habitat this year. The dry weather meant that early visits were mostly unproductive with little fungi showing, but a final visit on 4th November revealed an unexpected diversity of species. There were several new or scarce county species found. Amongst the new were ***Entoloma lividum***, a very showy, scarce woodland Pinkgill; ***Naucoria salicis***, an Aldercap found most often with *Salix* spp.; ***Tubaria dispersa***, associating with **Common Hawthorn *Crataegus monogyna***; ***Psathyrella tephrophylla***, one of many lookalikes in this difficult genus; and ***Russula robertii***, a splendid species of swampy ground. Of the scarce species, ***Gymnopus ocior*** tops the list, but oddly this was seen also at Pulborough Brooks this season, so perhaps it is spreading? Two other scarce species found at Elm's Farm, and showing increasing regional distribution, are ***Dichomitus campestris*** and ***Plicaturopsis crispa***, both found on several forays at other sites in 2014.

On 21st October, Graeme Lyons and I visited Camber Sands on what must have been the windiest day of the year, but despite blowing sand and occasional pelting rain, we set off in search of dune inhabiting fungi, eventually putting together an excellent list of species mostly restricted to this habitat. The highlights were: *Marasmius anomalus*, Hairy Parachute *Crinipellis scabella*, Winter Stalkball *Tulostoma brumale*, Garland Roundhead *Stropharia coronilla* and the splendid Dune Waxcap *Hygrocybe conicoides*. New county records from Camber were *Phellinus hippophaeicola*, restricted to stems of Sea Buckthorn *Rhamnus catharticus*; *Melanoleuca cinereifolia*, poking out of pure sand in the dunes, and *Arrhenia spathulata*. All in all, worth a bit of sand in the eye!

Nick Aplin of the Sussex Fungus Group has kindly supplied the following highlights from his group forays. There were some interesting winter and spring records: *Descolea antarctica* was found with Southern Beech *Nothofagus sp.* at Wakehurst Place January 10th. This is likely to be a new English record (the fungus originates from Patagonia!). *Cortinarius pratensis* and Verdigris Navel *Arrhenia chlorocyanea* were recorded at East Head in West Sussex on the 29th March, the latter a Red Listed species with 13 records on the UK database, and I think new to the county. I have seen it on the Kent side of the East Sussex border at Pembury, Tunbridge Wells.

Webcaps were one of the most widespread genera of fungi this autumn, and Nick recorded several scarce species including *Cortinarius vernus* and *C. psammocephalus*. Of particular interest, most of these were seen at more than one location.

Vivien Hodge provided a list of mostly personal records from her Sussex forays. Holly Parachute *Marasmius hudsonii*, mentioned in my 2013 Adastra report, was seen by Vivien at The Monastery, Crawley Down, a site well covered by mycologists over many years but nevertheless a new record for this species there. It was also at Slaugham Churchyard. There was a potentially exciting record of the UKBAP Date Waxcap *Hygrocybe spadicea*, also from Slaugham Churchyard. It is currently awaiting confirmation. Another scarce species, Yellowfoot Waxcap *H. flavipes*, was recorded from St. Bartholomew's Churchyard in Maresfield on 18th October. Two further species, again from Slaugham, were *Camarophyllopsis schultzeri* and *Entoloma olorinum*, the latter a new county record. Finally, one of my all-time favourite fungi, *Entoloma euchroum*, was recorded from Ebernoe Common in mid- November. This beautiful species normally favours damp nooks and crannies in the bark of Hazel *Corylus avellana*, and is a joy to find. Aptly described by Vivien as gorgeous, this is a fitting species to end a report of a season that promised nothing but eventually provided so much.

Freshwater Algal Species from Temporary Pools in Arable Fields in the Chichester area

by Howard Matcham

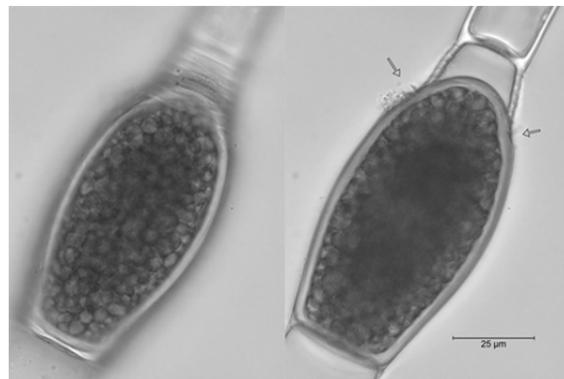
Heavy rainfall led to an unprecedented high water table in the Chichester area of West Sussex during autumn 2013 and spring 2014, so that depressions in arable fields filled with water that remained in many instances for eight months, and still contained water when crops were due to be harvested. One field immediately south of my house at Strettington had several such areas, which from April onwards were filled with macroscopic and microscopic algal species. With the exception of the genus *Vaucheria* (see below) all species mentioned are members of the Phylum Chlorophyta (Green Algae).

Since finding *Sphaeroplea soleirolii* new to England in April 2010 at Boxgrove (Adastra 2010) I have taken a serious interest in studying algae, encouraged by the eminent algologists Chris Carter (Northampton) and David John (BM). Asked by Chris if I could send more material of *S. soleirolii* for digital imaging, I returned to the site and collected macroscopic algae in the hope of relocating *Sphaeroplea*. I was not successful, but one fertile filamentous species in the genus *Oedogonium* proved puzzling. Chris sent it to David John who identified it as *Oedogonium pachydermum*: new to Britain! This is also believed to be the first record from Europe, which is simply astonishing. It is currently known from the Great Lakes and has a disjunct distribution in Nepal. It is perhaps understandable that a unicellular species could lurk undiscovered in Europe, but most unlikely that a filamentous species could do so, and *O. pachydermum* would appear to be of a genuinely and exceptionally rare world occurrence. Just a few weeks previously I had found the unicellular desmid *Cosmarium laeve* var. *distentum* in a disused cattle trough, new to the British Isles and probably also

to Europe. European algologists are unsure, but David Williamson, the British authority on the desmid flora, believes that it is and has a publication in press.

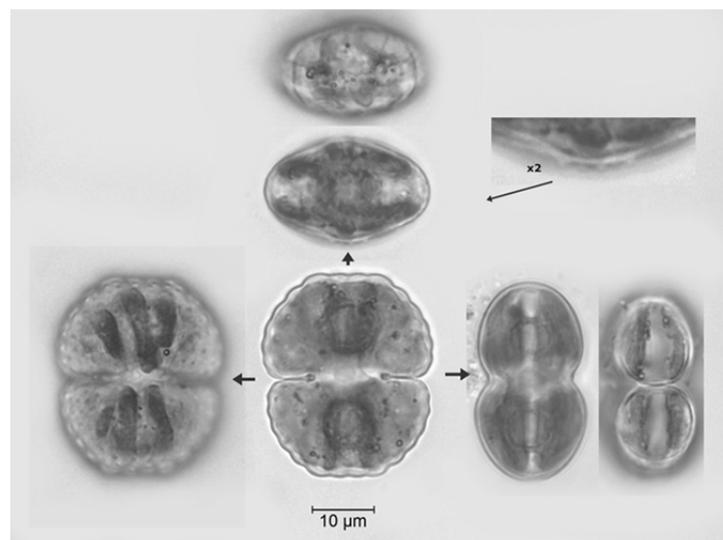
Returning to the arable field in front of my house, I made several collections during April with amazing results. From the same temporary pool I collected the filamentous species *Spirogyra singularis*, the first authenticated record for the British Isles, and *Oedogonium suecicum*, which has not been seen in England since reported from Devon in 1933, and with a record from North Wales in 1954. A large membrane-like species turned out to be *Monostroma bullosum*, which is not common in the British Isles and has been found most frequently in the Tweed catchment area (River Teviot). It was not considered to be present in southern England, but Ian Tittley at the Natural History Museum searched the herbarium for possible past specimens from Sussex and showed me a folder containing a large collection from the Lewes area dated 1846! As far as we are aware, this is the only previous gathering of this species from Sussex.

I visit my mentor and great friend Rod Stern every week, in the nursing home at Fishbourne where he resides, and during the summer took the opportunity to look at temporary pools in arable fields in the area. Here I found the filamentous species *Oedogonium vaucherii*, not previously known from southern England, and with only three British records: Hertfordshire 1845, Cambridgeshire 1899 and Yorkshire 1900. It is widespread in Europe, but exceptionally rare in Britain.



By Chris Carter (Northampton)

The unicellular desmid *Cosmarium subcrenatum* is described as an Arctic/alpine species and is found in the upland areas of Britain, where it is widespread in Scotland and the Scottish Islands in the littoral of nutrient-rich lakes and ponds. My collection from a cattle-poached depression in a meadow at Fishbourne is the first authenticated record from southern Britain. Described as a 'chance plankter', could it have arrived via a lift from a migrating Brent goose? I like to think so!



By Chris Carter (Northampton)

In mid-December, after heavy rain, I collected the extremely common filamentous genus *Vaucheria* a member of the Phylum Xanthophyta (Yellow-Green Algae) where water had collected in the bottom of the ultimate plough furrow at the edge of an organically farmed arable field at Maudlin. *Vaucheria* can be easily seen with the naked eye as dark green mats on the soil but not identifiable to species without zygospores. On the filamentous branches were several algal epiphytes, diatoms and chlorophyta, nestling within the filaments several of the common desmid *Closterium acerosum*, looking like a microscopic mini cucumber both in shape and colour and prominently multi-striate its entire length. I sent the entire collection to Chris Carter who, believing that the desmid had unusual features, forwarded them to David Williamson. David agreed, suggesting that the striae were much more pronounced than usual for the species and perusing the literature found that the species matched the description of the seldom collected *Closterium acerosum* var. *africana* not seen outside Côte d'Ivoire. However, as it is most unlikely that this species could have turned up in a ploughed field in Sussex, David suggests it is more probably an environmental adaptation of the type. The possibility remains, however, that it is a previously undiscovered taxon for Britain and Europe.

A subsequent conversation I had with David John at NHM would suggest that all of the above were discovered because I had looked at the right time of the year for fertile material, and that algologists have not, and do not, look at temporary pools in arable fields!

I would like to thank Chris Carter and David John for encouraging my algal studies and identifying, or confirming, the above records.

An abridged version of this article appeared in the January 2015 edition of the Sussex Botanical Recorder newsletter.

[See the website <http://www.algaebase.org/> for superb images of all species mentioned in this article from the Chichester area of West Sussex]

LICHENS

by Simon Davey, Sussex Lichen Recorder

2014 was a quiet year for lichens in Sussex. Perhaps the greatest lichenological event of the year was the finding in a wood in next door Kent, of six pollarded hornbeam trees that supported the lichen *Enterographa elaborata*. Recent British sites include one in Fermanagh, otherwise it grows on one moribund beech tree in the New Forest. It closely resembles the common *Enterographa crassa*, but differs in having a paler, often almost white thallus, which is frequently tinged with pink. In the New Forest, it forms mosaics with *Enterographa crassa*. It would be well worth looking at ancient hornbeam pollards for *Enterographa elaborata*. By the time of our spring meeting, I will have seen it in Kent, and hopefully will be able to advise on its occurrence on hornbeam.

I have heard of no further Sussex records of either *Teloschistes chrysophthalmus* or *Llimonaea soredata* both of which I reported on last year. Neither are hard to identify. The first occurs particularly on hawthorn or blackthorn close to the sea, and the second, the pink species occurs in churchyards on the shaded north side. Please take up the challenge!!

MOSESSES, LIVERWORTS & HORNWORTS (BRYOPHYTES)

by Tom Ottery, Sussex Bryophyte Recorder

2014 was another very good year for bryophyte recording in Sussex with several new species for the county, the re-finding of numerous 'old' records, and even a new species for Britain (and that's in addition to the two we had last year). Sussex has always been 'on the map' in terms of bryophyte recording and it's still one of the more important counties in England for mosses and liverworts. That's not to say we have an abundance of rarities - indeed the more interesting plants often take a lot of searching for - but they are often there for the patient observer to find.

At the beginning of the year the author was involved in a survey of all the sandstone outcrops in the Ardingly area; the outcrops around Wakehurst Place are justifiably famous and some of the rarest liverworts in our county are to be found there. The rocks in adjoining woodland are well maintained too, with brambles and *Rhododendron* kept under control. The gardens themselves are also exceptional for bryophytes and the gardeners have an enlightened view when it comes to weeding. Two species of hornwort grow in one part of the gardens in profusion, but these are generally very uncommon in Sussex. Even better for lovers of leafy liverworts, the tops of some of the sandstone rocks by one of the streams have an abundance of *Jungermannia hyalina* in one of its few extant sites in the county. Nearby Paddockhurst has an abundance of the rare liverwort *Tritomaria exsectiformis*, and still has the same small colony of *Dicranodontium denudatum* that Francis Rose found in 1969 - there is probably only one other site for that now in Sussex. In the same general area, sandrocks at Philpots near West Hoathly have an abundance of *Dicranum scottianum* amongst many other special plants. There is optimism that these rock outcrops will continue to remain one of the highlights of Sussex well into the future as long as maintenance, funded by Natural England, continues to keep the *Rhododendron* at bay.



Sphaerocarpos texanus in a flower bed at Ashburnham Place. First record for East Sussex.

Ashburnham Place was visited twice in the year, it was another site well known to Francis Rose and has a diverse range of habitats. In April, a large colony of the rare *Sphaerocarpos texanus* was discovered growing in an earth border by a wall; it is one of our most extraordinary liverworts with inflated 'balloons' each with a tiny apical pore for spore dispersal. The two species of *Sphaerocarpos* have an eastern distribution in Britain with Norfolk being their stronghold. In the same border was *Entosthodon fascicularis*, a decidedly scarce moss. Ashburnham is one of the few places in Sussex where a list of over 100 species in a day is easy to achieve; the gardens and woodland are well looked after.

The author organised a five-day meeting for the British Bryological Society in April; this was centred in Rolvenden, Kent, but more than half of the meetings were in East Sussex. On one of these Sam Bosanquet spotted an *Orthotrichum* he couldn't identify - Sam is one of the country's experts for this genus. Its true identity remained uncertain until one of the world's experts, Francisco Lara, was

shown a specimen of the moss during a specialist course later in the year and he immediately recognised it as *Orthotrichum rogeri* new to Britain. This was found on an Oak tree on Ashdown Forest, in an otherwise unremarkable patch of open woodland. There are many similar spots in the county and several other species of *Orthotrichum*, either never seen in this country or not seen for a very long time, could well be present. Anyone interested in searching for them would be well advised to get the latest published volume in the Spanish flora (*Flora Briofitica Iberica*), which covers the genus in exceptional detail although it should be noted that the text is in Spanish.

A big achievement this year, masterminded by Penny Green, was to transfer to computer all of Rod Stern's records. The site record cards had never been digitised before and Bob Foreman, aided by several SxBRC volunteers, managed to get it all into one Excel file. This was then checked against the cards by this author. There are nearly 9,500 records in that dataset and it covers large parts of West Sussex and numerous places in East Sussex. Rod has been thanked for the recording, for keeping the cards and for making them available for this exercise. Although the data had been included at the 10km grid square level in the Atlas that Howard Matcham produced with Rod and Francis Rose, this is the first time that localised records have been available for many sites.

Ashdown Forest has occupied much of the author's time during 2014. It was well known to William Nicholson who lived in Lewes and was active in the early part of the last century. Several species that he considered to be frequent have declined and there have regrettably been a few losses. Many changes in the bryophyte flora of the area can be attributed to reduction in grazing and consequent tree growth which the Conservators work hard to control. Atmospheric pollution is a more insidious factor causing grasses such as *Molinia* to thrive, often at the expense of species of *Sphagnum*. Against this trend, *Sphagnum molle* was once considered to be rare on the Forest but is now known to be widespread there. There are 17 types of *Sphagnum* on Ashdown Forest, quite remarkable for south-east England; it is highly unlikely that any more will be added now. The one that most people want to see is *S. magellanicum*, a beautiful deep wine-red in colour. There are only a few places to see this, but a couple of new patches were discovered this year. One of the best finds in 2014 was *Scapania curta* in Hindleap Warren, which adjoins the public land at Ashdown Forest; it is one of several species that Jean Paton used to find quite regularly in the 1950's but which have either got rarer, or perhaps we have not got quite the same keen eyes as that remarkable lady.

Old Roar Ghyll is a very special locality in the middle of Hastings, it has recently been transformed with new walkways replacing what was once a jungle. By the ghyll stream are numerous outcrops of thinly bedded sandstone that is very calcareous. Here can be found both *Leiocolea turbinata* and *Jungermannia atrovirens* in one of their very few locations away from the chalk. Rocks by the stream have large quantities of *Fissidens rivularis* – far more than at nearby Fairlight Glen. Rocks actually in the stream support both *Rhynchostegiella curviseta* and *R. teneriffae*, often growing together. Most of these plants are very rare in East Sussex and the ghyll must be considered one of the top bryophyte sites in the area.

In May, Jacqui Hutson took a few of us to a very wet wood in Plumpton Green - at one time this was a mill pond but is now mostly alder carr. The water is decidedly calcareous; however, since the stream feeding it comes from the foot of the downs. Here we found some good patches of *Plagiomnium elatum*, an extremely rare moss in Sussex, together with *Oxyrrhynchium speciosum*.

Both these are also found in similar woodland near Offham, but there can't be many such sites. As Fran Southgate has reported before, chalk streams are rare and special places.

Grimmia is often considered a difficult genus, partly because many of them are very rare. Last year I mentioned finding *Grimmia ovalis* on a roof only a few miles from where I live. In 2014 I was able to add *Grimmia laevigata* from the same roof - I've seen them growing together in Wales so it was very much a targeted search and the owners are very friendly. *Grimmia dissimulata* has a chequered history in Sussex: Howard Matcham and Rod Stern found it on the church wall at Slinfold, near Horsham, but for some reason the specimen, which would have proved it beyond doubt, vanished. It

was thought to have been sent to either the referee for the genus or the national recorder for mosses but neither has any record of having received it. So, even though it was seen, it couldn't be accepted as new for the county. Fortunately it was found in November growing in some abundance on the roof of the small church at Coolhurst, also near Horsham. The local sandstone from which the roof is made can be very calcareous at times and this is a plant that usually grows on limestone.

Racomitrium is a closely related genus and mostly found on siliceous rock on mountains. But in some ways, roofs are not that dissimilar to montane habitats and four species of that genus are recorded from clay tiles on roofs at Balcombe. A visit in December with David Streeter and Sue Rubinstein found two of them, *R. affine* and *R. lanuginosum*, as well as large cushions of the very attractive *Hedwigia stellata*.

Sometimes good discoveries are made during organised field meetings. The BBS Southern Group arranged a visit to Iping Common in the autumn; this was primarily to admire the *Sphagnum magellanicum* and *Mylium anomala* that still thrive there, albeit in fairly restricted areas. A more general search on the surrounding damp heathland looked like producing nothing more than huge quantities of very common species, such as *Campylopus introflexus*, then one of the party, John Norton, spotted something different - a fine stand of the very rare *Dicranum polysetum*. There are quite a lot of species of Dicranum in Sussex but this is probably the hardest to find. Francis Rose knew of one patch on Graffham Common but it had never been re-found. This time we have a very accurate GPS reading so we can keep an eye on it.

I've saved until last what I consider to be the best discovery of the year. Whilst looking at a small chalk pit near Glynde, Sue Rubinstein chanced upon several patches of *Gymnostomum viridulum*, completely new for Sussex. These plants form very small cushions on bare chalky soil but the oval leaves reflect the light and can appear like tiny green jewels on a damp day. Given its close proximity to Lewes it's inconceivable that Nicholson would have overlooked it, as he seems to have found everything else in the area. It must, therefore, be a more recent colonist; the nearest place to see it being in a chalk pit on the Isle of Wight. How such colonisations of mosses take place is still largely unknown but insects, wind, birds, people and vehicles have all been suggested as possible dispersal mechanisms, the present species having abundant asexual propagules in the leaf axils just waiting to be spread. The Pottiaceae are an attractive family of mosses, but are often difficult to identify.

VASCULAR PLANTS

by Paul Harmes (BSBI Recorder for East Sussex - VC14) & Mike Shaw (BSBI Recorder for West Sussex - VC13)

2014 was our last year of recording towards our new Flora of Sussex with the emphasis on targeting missing species and under-recorded habitats. We have added some 11,000 records, the vast majority of which were new tetrad finds. Although we will be continuing to search for specific old records in 2015, along with missing RPR (Rare Plant Register) plants, our emphasis now is on using the accumulated data to write species accounts for the Flora. As these will, in many cases, reflect the change in the county from the Sussex Plant Atlas (Hall 1980), we have made a considerable effort to collect and verify historical data from previous floras, other books and herbaria. We estimate that our historical database (pre-2000) will contain over half a million records by the time of publication. All these, together with the data since 2000, will be shared with the BSBI and the SxBRC. There is still a huge amount of work to be done before publication, but we plan to devote more time in 2015 and future years on visiting interesting botanical sites to relieve the monotony of the 'square-bashing' which has dominated our activities over the last decade.

We continue to work on critical genera with continuing expert help from David Allen and David McCosh. Our Rubus field trips in 2014 produced, among many others, two new vice-county records for West Sussex: *Rubus dumnoniensis* and *Rubus tardus*, and three new to Sussex as a whole: *Rubus*

mucronatifomis, *Rubus porphyrocaulis*, and *Rubus watsonii*. Many new *Hieracium* records were made, including one new to the county, *Hieracium oblongum*, and another site for the rare *Hieracium argutifolium*.

Interesting finds this year in West Sussex include a new site for *Leersia oryzoides* at Chesworth Farm, Horsham, found during a habitat survey. *Ranunculus aquatilis* was confirmed at Maudlin Pond, Westhampnett, only the second extant site in Sussex and David Donovan found *Cuscuta campestris* growing on *Callistephus chinensis* in an allotment in Rustington, new to Sussex. Lastly there were five finds of *Oxalis dillenii* (Sussex Yellow-sorrel) which was thought to have become near-extinct in the county.

In East Sussex, two exciting records were made by Arthur Hoare. He discovered the female plant of *Petasites fragrans* at Borde Hill, Haywards Heath which was confirmed by Fred Rumsey and is new to Europe. Not to be outdone, he also found *Juncus anthelatus* near his home in Crawley, this time only a new county record. Jacqueline Rose nearly equalled Arthur with a discovery of *Euphorbia prostrata* from a pavement in Hastings (see photos below), only the second British record. *Dittrichia graveolens* finally turned up in Sussex, as predicted, on the central reservation of the A27 near Brighton; *Myosurus minimus* was found at Crowhurst, the first record in VC14 for over a century, and Tony Spiers confirmed the persistence of the hybrid Gentian, *Gentianella x davidiana*, at Castle Hill NNR.



Our year was sadly overshadowed by the death of Mary Briggs, our president and ex vice-county recorder for West Sussex. Her contribution to botany in Sussex over many decades, and her support and encouragement to society members, was immeasurable and she will be greatly missed by all who knew her. In 2012 Rod Stern, the SBRS chairman since the 1970s, stepped down for health reasons. As many of you will know, Dr Nick Sturt, committee member and field meetings convener for West Sussex, was elected as our new chairman at the 2013 AGM. Nick has proved himself an excellent successor to Rod and has ably steered the society through the recent difficult period.

We continue to liaise closely with our local Biodiversity Record Centre (SxBRC), BSBI recorders in adjacent VCs and other organisations such as Natural England.

ORCHIDS

by David C. Lang, Sussex Orchid Recorder

Once again we were treated to a flowering season of variable fortunes, with some species failing to appear in flower, while others flowered in impressive quantities, especially on the Downs in mid-summer.

White Helleborine *Cephalanthera damasonium* had a poor flowering season in most of its usual sites.

Broad-leaved Helleborine *Epipactis helleborine* One interesting record for Tilgate Forest, Crawley, in July was for a colony all very pale flowered – almost cream in colour.

Common Twayblade *Listera ovata* had a splendid flowering season in most localities, with an impressive flowering of large numbers of very large spikes at Wellcome Bottom, Wolstonbury.

Bird's-nest Orchid *Neottia nidus-avis* had yet another poor flowering season, with very few records in any of the known sites.

Fragrant Orchid *Gymnadenia conopsea* had a splendid season, flowering abundantly at Chantry Hill, Sullington; on the Downs east of Southease; and on the Downs at Wolstonbury. Several hundred var. *densiflora* were recorded near Blackcap, Plumpton.

Greater Butterfly-orchid *Platanthera chlorantha* produced many large flowering spikes at Wellcome Bottom, Wolstonbury.

Bee Orchid *Ophrys apifera* did well generally, with two interesting new localities: one in dense woodland at Firle Park, and the other at Chidham.

Early Spider-orchid *Ophrys sphegodes* flowered in quantity on Castle Hill (1,500 counted) including var. *flavescens* but few in other regular sites near the coast.

Fly Orchid *Ophrys insectifera* had a poor season in all sites visited.

Burnt Orchid *Orchis ustulata* did well on Caburn with 1,100 flowering spikes counted. The late flowering variety var. *serotina* produced 33 flowering plants at Lullington.

Green-winged Orchid *Orchis morio* did well with sheets of flowers at regular sites at Peacehaven, Arlington, Laughton and elsewhere.

Early-purple Orchid *Orchis mascula* flowered well, being especially abundant in the area of Beachy Head.

Common Spotted Orchid *Dactylorhiza fuchsii* flowered well in all its regular sites.

Man Orchid *Aceras anthropophorum* produced only a few flowering spikes at one of the known sites at Wolstonbury.

Pyramidal Orchid *Anacamptis pyramidalis* had a highly impressive flowering season, with many downland sites carpeted in flowers, rendering the slopes pink!

I must offer my apologies for a less than extensive record for the year, but I was absent for the peak flowering season abroad.

CHAROPHYTES

by Frances Abraham, County Charophyte Recorder

Stoneworts, also known as Charophytes, have the distinction of being the only organisms which are not vascular plants to be covered by the BSBI, and they will be included in the new Sussex Flora. They are aquatic green algae, members of Kingdom *Viridiplantae*. Sussex recording of this often overlooked group has waxed and waned over the years, but in the last few years has been doing rather well. Several SBRS members and others have been submitting records and specimens. All records are of interest, even of the most widespread species.

In 2014 there were a number of interesting finds, including several records of *Nitella mucronata* (Pointed Stonewort). Although the species is not infrequent in the UK, the authority Nick Stewart has in recent years only seen the native form in Sussex. Elsewhere an introduced variety appears to have taken over.

The first UK record of *Tolypella prolifera* (Great Tassel Stonewort) was from the Adur Valley at Henfield, where the botanist William Borrer found it in a ditch near Brookside Farm in 1827. He also recorded it from a ditch close by near Rye Farm in 1840. It was searched for subsequently without success, and recently has been known only from a few sites in the Arun Valley, Somerset and Cambridgeshire. Hence I was delighted to find it in two recently-cleaned Henfield ditches this year. Brookside Farm was moved at some point, perhaps due to the building of the railway, and the 2014 ditches are midway between its old site and Rye Farm.

Please look out for stoneworts, I am happy to help with identification. Spread specimens out on kitchen paper and press them lightly before sending them in more absorbent paper, as if kept wet in plastic bags they are liable to disintegrate into smelly green soup.

MOLLUSCS

by Martin Willing, Sussex Mollusc Recorder

Desmoulin's Whorl Snail *Vertigo moulinsiana*

Between late autumn 2013 and May 2014 the Wildfowl and Wetlands Trust (WWT) at Arundel supported a baseline molluscan survey of their reserve. In addition to a good range of widespread terrestrial and aquatic species, a number of scarcer molluscs were recorded. Autumn 2013 resulted in the surprise discovery of a few specimens of **Desmoulin's Whorl Snail** *Vertigo moulinsiana* from a corner of the reserve's 'Reedbed SSSI'. Further searches of this extensive habitat in May 2014 located another and larger population of the snail, living in a patch of un-shaded *Carex* dominated fen in a different part of the site. Sample tray beating of the fen vegetation at this second site located many live individuals at a density of approximately 12 m⁻². The removal of vegetation samples from the same site also revealed the presence of *Vertigo antivertigo*, a similar, but rather more common species and, like *V. moulinsiana*, is an indicator of old wetland sites.

V. moulinsiana (Dupuy, 1849) is scheduled on Annex IIa of the EU Habitats & Species Directive, is a Section 41 'Species of Principal Importance' in England (replacing the UK BAP priority species in 2006) and is considered Vulnerable on the recent IUCN based UK red list review. The snail is mainly found in unshaded calcareous fens and marshes, often bordering rivers and lakes. It lives on both living and dead stems and leaves of tall monocotyledonous vegetation especially various *Carex* species and grasses (*Glyceria maxima*) and less often on reeds (e.g. *Phragmites australis*). Ground water conditions are also of critical importance for the snail, it surviving best when the ground is saturated (but not flooded) throughout the year.

In Britain *V. moulinsiana* is locally distributed across southern and eastern England from Dorset to north Norfolk, with a few isolated populations elsewhere such as west Cornwall, North Wales and east Kent.

These new Arundel finds are important because *V. moulinsiana* is a rare species in West Sussex (not known in East Sussex) as there are relatively few sites in the county, several of which have been lost in recent years. Of six recorded sites in 2013 it was only known to be living at two; these latest discoveries add a further site. Interestingly this snail was recorded in marginal fen at the nearby Swanbourne Lake in Arundel Park, but populations were thought to have been lost there before 1999. Are these recent WWT finds evidence of new *V. moulinsiana* colonisation or a small remnant population? Elsewhere in West Sussex the snail remains in large populations only at Chingford Pond and Burton Mill Pond (both linked and lying south of Petworth), but it has been lost from Harting Pond (in the 1970s probably because of drainage work) and at Fishbourne and Selham Fens, both in about the last 14 years (site shading a likely cause).

The Carthusian Snail *Monacha cartusiana*

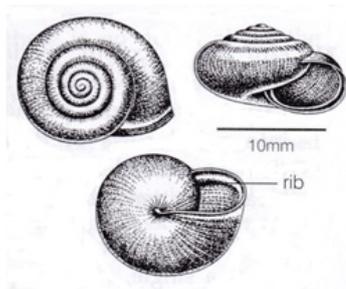


M. cartusiana from the Ouse

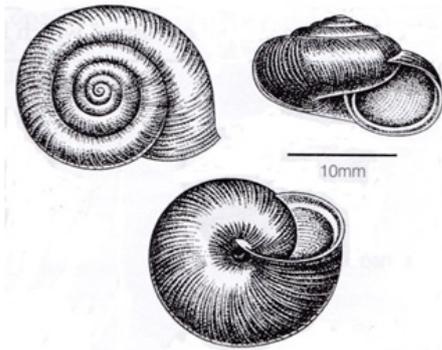
The Carthusian snail *Monacha cartusiana*, which is a probable Neolithic introduction to Britain, was categorised as Rare in the 1991 Red Data Books, whilst in the latest 2014 UK non-marine molluscan status review it is judged to be 'nationally rare' and 'Near Threatened' when adopting IUCN criteria. More locally the snail is mentioned on the Brighton and Hove draft Local Biodiversity Action Plan (consultation draft 2012) as a LBAP species in the context of lowland calcareous grassland.

M. cartusiana typically inhabits open, unshaded locations on calcareous soils. Most UK populations have been recorded in dry, short-turfed chalk grassland, but it has also been recorded in alluvial pastures near the sea. In Sussex the snail tends to avoid tall, rank and improved grasslands. *M. cartusiana* is one of a small group of dry calcareous grassland species often indicative of natural and semi-natural habitats with a long and stable history and so of conservation value. Post-glacial fossils show that the species was historically much more widespread in the south-east England and East Anglia than at present. With further declines in the 20th century it now appears to have been lost from Surrey, Hampshire and West Suffolk. It may now only survive in three areas of the country: East Kent, East Suffolk and in East and West Sussex. In 1999 in relation to East Suffolk, M. Kerney cited work (from and before the early 1990s) suggesting that its survival there was 'precarious'. In Sussex post 1995 it has only been recorded from a number of downland sites, mostly in the vicinity of Lewes (such as the large populations seen on parts of Southerham Farm by Graeme Lyons in 2014). Most Sussex records were made over 20 years ago (some considerably earlier than this!) and many populations may now have been lost. East and West Sussex are now national 'strongholds' for the species, but the snail is vulnerable to loss or considerable range reduction here. The conservation of all Sussex populations is therefore a national priority.

Sustrans (a UK charity involved with developing the National Cycle Network and promoting sustainable transport) have been constructing a cycle path, 'The Egrets Way', on the western margins of the River Ouse between Lewes and Newhaven. In developing this route they have undertaken various biological surveys to locate 'species of environmental importance' to try to minimise impact to them during the path's construction. Part of the route passes close to a site, near Southease, where *M. cartusiana* was recorded by Mike Goodchild in 1970; until 2014 there had been no reconfirmation of this record on the Ouse banks. As a result of this record and the conservation importance of the snail, between October 2013 and July 2014 Sustrans supported surveys along the entire cycle route. Although the snail was not found close to the original 1970 site it was, however, located in two new areas. These included scattered, but isolated populations along about 200 m south of this bridge and also further north, along 1 km of bank running upstream from Rodmell. None of the populations were large, possibly suggesting sub-optimal habitat (or habitat management) and all were found living in areas of shorter grass, the snail avoiding the tallest rank vegetation. These new finds reconfirm the presence of the snail on Ouse banks after a recording hiatus of 44 years.



Monacha cartusiana



Monacha cantiana

It is not known if *M. cartusiana* is living at any sites on the eastern Ouse banks, but that will be a challenge for 2015! Sustrans are making efforts to minimise damage to the snail during the next stages of path construction. Anyone finding further *M. cartusiana* populations in Sussex is asked to check the identification carefully. The species is easily confused with the closely related, but common and widespread Kentish Snail *Monacha cantiana*. Confusingly this species occasionally lives together with *M. cartusiana* (as with the Ouse bank populations). *M. cantiana* has a larger shell (width 17 – 20 mm) which is globular, has a small umbilicus and a near-circular mouth bearing an internally thickened lip in adults. *M. cartusiana* by contrast has a smaller, more compressed shell (width 10 – 15 mm), which is more compressed with a more elliptical mouth and tiny umbilicus. This species also has white internal shell lip in adult shells, which is usually far more conspicuous than that in *M. cantiana*. If you do locate suspected *M. cartusiana* then aim to get a series of photographs (from different angles) including some indication of scale. If dead shells are available then a retained voucher specimen would be useful.

Plate taken from "Cameron, R. 2003. Land Snails in the British Isles. Field Studies Council AIDGAP guide" reproduced with permission of the author.

The Green Cellar Slug *Limacus maculatus*

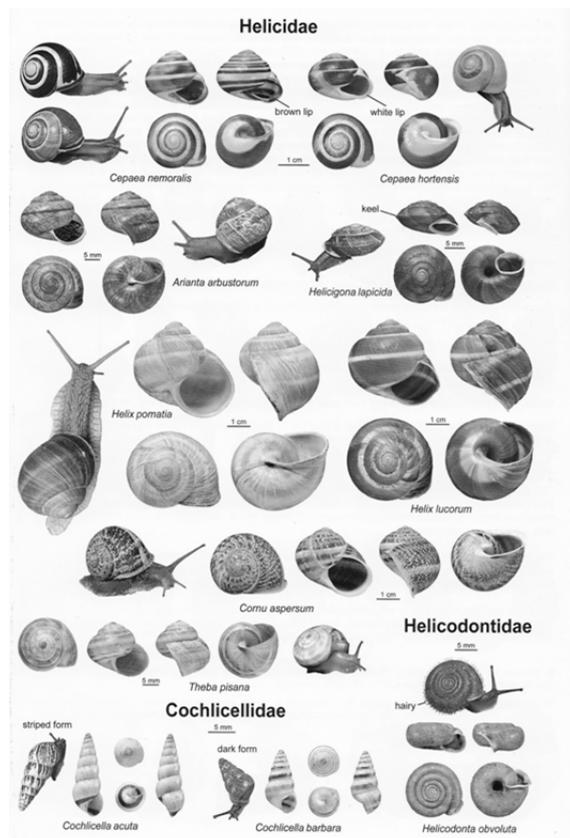
Early in 2014 I took receipt of a new slug guide to review. This encouraged me to take a second look at the rich variety of slugs living around my house and garden. What I had previously assumed to be small numbers of a rather dark form of the quite common Yellow Cellar Slug *Limacus flavus* was in fact the similar, but more strikingly coloured Green Cellar Slug *Limacus maculatus*. When checking the Conchological Society's non-marine records I discovered, much to my surprise, that this was the first verified vice-county record for West Sussex (VC 13). *L. maculatus* (previously also known as *Limax grossui* and *Limax pseudoflavus*) is a medium to large slug extending up to about 130 mm in length with a very distinct green-grey blotched or mottled appearance and large body-surface tubercles. *L. maculatus* is an introduced species to the British Isles with a native range in the forests of the Crimea and the Caucasus; it has been spread by man throughout much of Europe. The slug is now common and widespread in Ireland, but still relatively scarce in Britain where the first confirmed presence was from Christchurch (Hampshire) in 1884. It may have been introduced to Ireland at an earlier time which might explain its relative abundance there. As recently as 1999, there were still only two post-1965 records in southeast England (Surrey and Kent). Like *L. flavus*, *L. maculatus* is often closely associated with man, being found near buildings and in gardens, but, unlike the former species, is also present in the wider countryside including woods and farmland. The species seems to be especially fond of large items of human rubbish dumped by roadsides and in gardens where it may be found in groups of several dozen individuals. There is some evidence suggesting that *L. maculatus* is expanding at the expense of *L. flavus*, which now seems to be becoming rarer across the country. It is also possible that some historic *L. flavus* records may have been misidentified as *L. maculatus*. Sussex iRecord molluscan entries have also shown several probable East Sussex records (more specific details in next year's report). I suspect that this species is far more widespread than records suggest, so do check out any large and 'blotchy' slugs carefully.

New molluscan identification guides

On the subject of slugs, 2014 saw the publication of THE essential guide for all those interested in slugs or their identification. Until recently those wanting to identify slugs have had a difficult time due to a lack of recent publications. In 1983 the Field Studies Council (FSC) published their first slug

ID guide, 'A field key to the slugs of the British Isles' (Cameron, R.A.D., Jackson, N. & Eversham, B; in 1986 issued as an AIDGAP booklet). This guide relied upon external features only, referring the reader to other publications in order to deal with dissection. Whilst some species are relatively easy to identify, others can be extremely difficult to separate. This problem has come about with the arrival and spread of non-native species and also the realisation that some established species may have been incorrectly named (or consist of closely inter-related species complexes). Thankfully, in 2014 the publication of a completely new FSC 'AIDGAP' slug guide has resolved many of these issues. The new book completely revises and updates slug taxonomy, clarifies the situation with a number of established slug groups and recently recognised new colonists and also includes a number of new British species. This new work describes 43 slug species, a 54% increase from the first FSC guide. This relatively small and neat volume manages to include a tremendous amount of information; its compact dimensions mean that it can be taken into the field for immediate identification use, or to allow decisions to be made as to which specimens to retain in captivity for study or dissection.

An image of the new snail ID guide cover



The British Isles currently supports 99 species of native or naturalised land snails, plus a further 12 exotic species known only from greenhouses and hothouses in botanical gardens (such as the Eden Project). In contrast to slugs, those identifying land snails are much better served with a variety of publications but few are as complete or straight forward to use as an identification guide also newly published in 2014. This fold-out publication is the outcome of an ambitious and successful project to provide a simple, cheap, pictorial overview that will assist in the identification of every species of land snail known from the British Isles. The bulk of the guide is packed with excellent shell images including different views of each species and for many also displaying the live animal. The special appeal of this excellent guide is that it provides a complete overview of the entire land snail fauna of the British Isles in one neat 'bargain-priced package'. Its plastic lamination means that it can survive usage in the field if handled with wet or muddy hands.

Details of the new identification publications:

Slugs of Britain & Ireland. Identification, understanding and control

Authors: Ben Rowson, James Turner, Roy Anderson and Bill Symondson
 Field Studies Council, Telford 2014 (with support from The National Museum of Wales and the Leverhulme Trust)

136pp., colour – illustrated Price: £14.50
 ISBN 978 1 908819 0

An illustrated guide to the land snails of the British Isles

Authors: Fred Naggs, Richard C. Preece, Roy Anderson, Amritha Peiris, Harold Taylor & Tom S. White. 2014.

Joint Conchological Society / Malacological Society Publication, SRP Ltd., Exeter 2014 (Published in association with the Natural History Museum and the University Museum of Zoology, Cambridge).

12 page laminated fold-out, colour-illustrated. Price: £2.00
 ISBN 0 565 09363 0.

Copies of the guide can be ordered from either (1) the Conchological Society <http://www.conchsoc.org> or (2) NHBS which can be visited at <http://www.nhbs.com>

iRecord – some advice if submitting molluscan records

People use iRecord for a variety of reasons; to submit records to another recording scheme (e.g. in Sussex the SxBRC), to act as a personal repository of their own data and / or to seek identification verification help from an expert.

In 2014, as County Mollusc Recorder, I started to check some molluscan records submitted for East and West Sussex. The quality of submissions have been very variable; whilst some are excellent allowing quick verification, many others have been deficient in various ways and not allowed records to be confirmed. It seemed useful to supply some guidelines to assist people submitting future molluscan records to iRecord to make verification or re-identification more likely.

Unless you are a known expert (with a proven track-record of molluscan identification) then, verification is difficult without a photograph. It is essential, when including a photograph/s that consideration is given to show key diagnostic features. For example quite a few entries were made of the **White-lipped Snail** *Cepaea hortensis* and the **Brown-lipped Snail** *C. nemoralis*, but only those clearly showing the diagnostic lip colouring could be confirmed. With this split it is also not possible to confirm juveniles (without dissection). For some species an indication of scale is important.

The value of photographs is such that, even if a submitted identification is incorrect, they can sometimes allow a re-identification to take place and often providing interesting or valuable records such as these examples:

<u>Submitted Record</u>	<u>Actual identification from a good photograph/s</u>
The Large Black Slug <i>Arion (Arion) ater</i> (a common species)	The Ash-black Slug <i>Limax cinereoniger</i> (a rare old woodland species)
The Lapidary Snail <i>Helicigona lapicida</i> (very local old-woodland species)	The Girdled Snail <i>Hygromia cinctella</i> (a rapidly spreading non-native)
The Leopard Slug <i>Limax maximus</i>	Green cellar Slug <i>Limacus maculatus</i> (a rapidly spreading non-native)

Habitat data is also useful or even essential for verification. Thus if some species are found in the 'wrong' habitat then identification is suspect. For example records of the **Depressed River Mussel** *Pseudanodonta complanata* in lakes and ponds are questionable as it does not live in still waters.

For some species a retained specimen may be essential for identification as photographs will only go so far. This applies to some slugs and a few snails (such as *Lymnaea fusca* / *L. palustris*) that require dissection and also for the shells of some tiny snails like the *Vertigo* spp.

There is very little point in submitting only generic or family names as they usually provide almost no useful information. Thus for records of *Pisidium* spp or Sphaeriidae.; virtually every body of freshwater from temporary ditches to a large lakes and rivers support some species.

Before submitting a record check likelihood of the species living in Sussex and then in the habitat where it was found. Thus the very rare and highly habitat specific Shining Ram's-horn Snail *Segmentina nitida* is most unlikely to be found outside late-successional ditches on one of only two coastal and flood plain grazing marshes in the counties.

Always check with an identification guide and make the most of on-line ID facilities such as those provided by the Conchological Society (web address given above).

SUSSEX'S ARUN & ROTHER CONNECTIONS PROJECT

DRAGONFLY SURVEYS

by Fran Southgate, Sussex Wetlands Officer

This year, the Arun and Rother Connections project (ARC) funded a professional survey of the Arun & Rother rivers for dragonflies and damselflies. With over 60 km of waterway surveyed, a total of 27 species were recorded, including 11 damselfly and 16 dragonfly species. The majority of these species are likely to have been breeding, although evidence of breeding was only observed for 16 species. This is one more breeding species than was noted in the original SSSI citation. Notable species present were **Hairy Dragonfly**, **Common Club-tail**, **Scarce Chaser** and **Brilliant Emerald**, the first three of these species showing strong breeding populations. Overall 443 unique dragonfly and damselfly records were submitted, totalling over 6,800 individual records, with over 670 records of copulating pairs, 230 records of pairs or lone females ovipositing, 992 identified males, 946 identified females, 119 teneral and three exuviae recorded. The survey has added a significant amount to what we know about Odonata in the area, helping us to understand how to help protect and preserve these beautiful insects.

Having learnt of reports of **Common Club-tailed** dragonflies appearing as far down the catchment as Arundel where the river is tidal, we particularly wanted to learn more about how far and wide this distinctive dragonfly was distributed, and what habitats they were using.

In fact, our surveyor, Dave Sadler, was able to witness some unique behaviour from the **Common Club-tail** which even he had not witnessed before. Contrary to some opinion, it seems that **Common Club-tails** do not always emerge in the mornings. On non-tidal rivers, such as the Rother, where water levels do not rise, morning emergences are more likely, but on tidal rivers, such as the lower Arun, emergence necessarily takes place on the falling tide to avoid inundation by salt water.

The first sightings of mature adults returning to the River were on the Western Rother on 10th June where two males and a female carrying her egg-mass prior to oviposition were observed. Subsequently, up to five males were seen at this site, with a further two males on the Arun north of New Bridge, one south of New Bridge, and three including a mating pair, on 22nd June on the run near Houghton. The last sighting of **Common Club-tails** was a single male on 2nd July at New Bridge. This last date is probably early for their final appearance. However, numbers decline quickly and the species is difficult to find after the first week of July. There are occasional late records. In particular, one at Arundel recorded in August 2013.



Rare pictures of **Common Club-tails** mating, and a female carrying an egg mass © D Sadler

Although we were only able to record **Common Club-tails** on three far-separated reaches of the Arun and Rother rivers, it is inconceivable that the species does not breed successfully at points in between, and also beyond, these sites (e.g. as far as Shopham Bridge on the River Rother).

Thanks to the survey, our knowledge of the parts of the catchment where the **Common Club-tail** can be found along the river has greatly increased, and we hope to learn much more over the next few years about these unique dragonflies, and many of their counterparts.

To learn more about the ARC project and its work, go to:
<http://arunwesternstreams.org.uk/projects/arc>

GRASSHOPPERS, CRICKETS & ALLIES (ORTHOPTERA)

by John Paul, Sussex Orthoptera Recorder

A number of recorders submitted a nice set of observations in 2014 through iRecord. The system is working well.

The **Southern Oak Bush-cricket** *Meconema meridionale* was found at new sites in Horsham and Small Dole and an updated record was made in Seaford. I found an example of this insect myself during late summer on a Brighton pavement. It is clearly becoming an established member of the British fauna and continues to spread despite being flightless. It has been noted that these insects are apparently attracted to bright objects including motor vehicles. Ralph Hobbs provided an excellent piece of evidence to this effect in 2014 when he spotted a **Southern Oak Bush-cricket** on the outside of his car after emerging on the English side of the channel tunnel.

Roesel's Bush-cricket *Metrioptera roeselii* also continues to spread in the county. Records were received from along the south coast, from the South Downs and as far inland as Ashdown Forest. For those who can hear it, the high pitched monotonous buzzing call of the male is becoming a feature of our countryside. Useful updates were received for many of our other Orthoptera including the **Wartbiter** *Decticus verrucivorus* a Sussex specialty.

A sad thing to note about 2014 was the passing of Chris Haes who died in Cornwall, where he had moved to live on his retirement. He set the standard for Orthoptera recording by mapping the entire county on a tetrad basis during the 1970s. Under his guidance I saw my first British examples of the **Field Cricket** *Gryllus campestris* at Coates and the **Wartbiter** *Decticus verrucivorus* at Kingston Scarp near Castle Hill.

BOOKLICE AND BARKLICE (PSOCOPTERA)

By Marcus Oldfield, County Psocoptera Recorder

We don't often associate insects, especially really small ones, with any kind of interesting social or family life. The honey bee, some ant species maybe, but usually we reserve such properties for us hairy vertebrates.

In August 2010, bug history was made when the 100th species of UK Psocoptera appeared on tree trunks in leafy Westdene, Brighton. Called *Aaroniella badonneli*, it's a fascinating example of a specialised 'family' life in insects, with interconnected silk-domed homes just for one couple and their progeny. The male is fully DIY competent and the home can repel predators (the silk is thought to be spider web) whilst having streets made of webbing that connects to their neighbours' places. Well, we don't want to get lonely do we?!

This year's new Barkfly to Sussex demonstrates a definite colonial-arboreal society, not with the sophistication of *Aaroniella*, but nonetheless it has one based on parental responsibility for the offspring. That's pretty good for a bug that is only 2mm. This species is called *Peripsocus milleri* (or *reductus*). It was found in Hassocks by Dr. Ruth Eastwood, in the middle of the back garden on the trunk of a small tree. Actually, that was in 2012; I didn't see any in situ myself until 3rd August 2014.

The *Peripsocus milleri* community consisted of about 20, like a herd of microscopic cattle, living on stacks of old wooden fencing slats and grazing on the 'supermarket' of algae and lichen there. Most of them were adults and when disturbed seemed to move as one cohesive unit. A week later, it became apparent that they were far from being a bunch of carefree adults, for they had been replaced by their highly mobile juvenile progeny, in about the same numbers. Somehow, the next generation had been successfully reared and only one adult was with them.

Peripsocus, as for its fellow socialite Aaroniella, is immediately recognisable, for those with good (to very good!) close sight. Its unique morphological character is a combo of short wings, which, when closed over the back, enables a melanic bar to form laterally across the middle of the body. Another characteristic, of course, is the colonial lifestyle. Not many Psocoptera have such a way of life, four or five maybe in this country. *Reuterella helvimacula* is a specialist 'family Psocid' you may want to check out. Minute (1.5mm) and incredibly overlooked, yet they're regularly on trees on the green opposite my house in Westdene, Brighton, with a well co-ordinated neighbourhood of homes, which ramify together forming a kind of 'village'. Very advanced.

Another two or so species of Psocid I've noticed (eg. *Ectopsocus briggsi*) have 'gatherings' that may be mistaken for social structure but are for other reasons: hibernation, competing for favourable living space (SW1 or Mayfair for a humans!), mating assemblages or just solitary females with their young. (Usually the latter type keep their progeny within web confines, so that too can be seen as a forerunner to more community-based living).

Size matters, but with the Psocoptera it seems the size must be *extra small* before they can display these lifestyles. In that sense, the latest new Sussex psocid species, *Perispocus milleri*, is a very good example.

TRUE BUGS (HETEROPTERA)

by Graeme Lyons, County Hemiptera Recorder

So, I'm your new county recorder for bugs. There's a lot to do so I thought it would be really useful to tell you how I would go about approaching the roll. As far as I can tell there are three main aspects to being a county recorder:

- Being an expert and validating records. This means you need to hone your skills and put the time in to validating records; this means close work with the record centre too.
- Collating a county list.
- Promoting recording of bugs in the county.

So this was my plan: to spend 2014 really pushing to identify as many bugs as I can in and around Sussex and the south coast. This has proved to be quite successful as I added two species, which may have been county firsts, being *Megalonotus emarginatus* from Climping and the River Skater *Aquarius najas* from near Barcombe Mills. It's hard to say if they are for sure, as many of Peter Hodge's bug records are yet to find themselves into the SxBRC database. Last February when I took on the roll, I had seen only 132 species of Heteroptera in the country but now I've seen 208 species, which is not bad for a year's work. Finding the Lesser Water-measurer *Hydrometra gracilenta* on a private nature reserve close to the Pevensey levels in 2014 was perhaps my most important find.

With Bob Foreman and Penny Green's help, I extracted the 12,011 records from the SxBRC database and had a play with the data. I made a few obvious changes (like the removal of the erroneous New Forest Shieldbug) but I think a more thorough cleaning of the records will require a few more years knowledge of the more obscure mirids before I'm confident enough to make the call.

The Sussex list stands at 413 species of the 583 species on the UK list, an impressive 71% of all species. I'm sure there are many more bugs out there to be recorded. The oldest record is of a ground bug called *Peretrichus gracilicornis* made by 'Douglas' in Hastings in 1879, a species confirmed Peter

Hodge from a specimen but it's not been seen since, it would seem. Of the 413 species recorded in Sussex, 56 have been recorded only once! However, what are the most frequently recorded bugs in Sussex? Here are the top ten:

Tab. 1. The top ten most frequently recorded bugs in Sussex only account for 30% of the records made. The presence of so many water bugs is perhaps skewed by large amounts of aquatic survey data from Peter Hodge.

Rank	Species	English	No. of records
1	<i>Notonecta glauca</i>	Common Backswimmer	556
2	<i>Ilyocoris cirmicoides</i>	Saucer Bug	510
3	<i>Coreus marginatus</i>	Dock Bug	479
4	<i>Plea minutissima</i>	A water bug	441
5	<i>Palomena prasina</i>	Green Shieldbug	371
6	<i>Hesperocorixia linnaei</i>	A water boatman	286
7	<i>Pentatoma rufipes</i>	Forest Bug	267
8	<i>Corixa punctata</i>	A water boatman	241
9	<i>Dolycoris baccarum</i>	Sloe Bug	238
10	<i>Microvelia reticulata</i>	A water flea	234
TOTAL			3623

The most frequently recorded bug I haven't seen yet is *Plagiognathus chrysanthemii* with 102 records. I better keep my eyes open!

And who's recording them? Here are the top ten recorders. These ten recorders make up 78% of all records made in Sussex. I have a long way to go to match Peter's incredible achievement!

Tab. 2. Top ten bug recorders in Sussex by number of records made.

Rank	Recorder	Number of records
1	Peter Hodge	5249
2	Gordon Jarvis	774
3	Philip Bance	749
4	Graeme Lyons	736
5	Dave Monk	563
6	Kathleen Goldie-Smith	322

7	Environment Agency	288
8	Mark Telfer	284
9	Patrick Roper	281
10	Peter Kirby	156
	TOTAL	9402

So what's next for me? Completing this process annually seems like a worthwhile task. Continuing to verify records via iRecord is also a task. I'll be out there recording bugs again along with everything else I record, but I might start targeting a few species this year and see what I can turn up!

If you have any bug related questions, please get in touch at graemelyons@hotmail.com

BEETLES (COLEOPTERA)

by Peter Hodge, *Sussex Coleoptera Recorder*

It is more than two years since the weevil *Ceutorhynchus inaeffectatus*, associated with Dame's Violet *Hesperis matronalis*, was discovered in West Sussex new to Britain, but it has still not been reported from any other county. Ralph Hobbs knew I was hunting for stands of Dame's Violet and at the beginning of June he alerted me to a huge stand, in full bloom growing beside the weir on the River Ouse, at Goldbridge near Newick. On 3rd June 2014 I visited the site, and easily found the weevil by tapping the flowers over my net. A bonus was an example of the soldier beetle *Cantharis fusca*, a large and quite uncommon species that is usually found in unimproved grassland in wetland situations. It can be distinguished from the common *Cantharis rustica* by its entirely black legs and a black spot at the front margin of the pronotum.

On 24th June 2014 Graeme Lyons, Senior Ecologist for the Sussex Wildlife Trust, reported that his trainee assistant, Adrian Holloway, had discovered a specimen of the violet-coloured leaf beetle *Agelastica alni* on an alder at Burton Mill Pond in West Sussex; this is apparently a new county record. This species has had a chequered history in Britain and in the past it has been recorded from several counties in southern England, though always regarded as rare. A few years ago the beetle

suddenly appeared on alders in the Manchester district, where it has spread rapidly to adjacent counties. In 2014 it was discovered in large numbers on alders near Eastleigh in Hampshire. Whether this is yet another species being introduced with imported nursery stock from abroad is not known, but this is certainly a possibility. The beetle is easily spotted on alder leaves, and any sightings should be reported to the Sussex Biodiversity Record Centre.

On 11th July 2014 Graeme discovered another species new to Sussex, the small but distinctly coloured rove beetle *Paederus caligatus*, at Leythorne Fen Meadow near Chichester. This is the rarest of the four British species of *Paederus*, all of which look very similar to each other and require microscopic examination for their accurate determination.



Agelastica alni by Graeme Lyons

On 12th July 2014 Su Reed discovered and photographed two beetles new to Sussex at Stedham Common Sussex Wildlife Trust Reserve. A female longhorn beetle was easily identified as *Stictoleptura rubra*, a large and impressive looking species which breeds in pine stumps. It was expected to arrive in Sussex, since it has recently been recorded from Woolmer forest in Hampshire. It is most frequently recorded from the Breckland of Norfolk and Suffolk, with only a few isolated records from elsewhere. The other new species Su discovered is much more exciting. For a number of years there have been several unconfirmed records of the black and white chafer *Oxythyrea funesta* but Su's photo leaves no doubt as to its identity. This species is very common over most of Continental Europe and although this one could have been a vagrant it is much more likely that it is attempting to establish itself in the south of England. This is certainly one to look out for, as it usually rests on a variety of flowers, including brambles and umbellifers in full sunshine.



Stictoleptura rubra by Su Reed



Oxythyrea funesta by Su Reed

Finally, Penny Lynch recorded *Paracorymbia fulva* at Woods Mill on 12th July 2014. This distinctive longhorn beetle was first found in Sussex by Chris Bentley at Rye on 12th July 2012, but Penny's record is the first for West Sussex. This is another beetle that is very common in France but scarce in England, although it appears to be extending its range here.



Paracorymbia fulva by Chris Bentley (Rye, 2012)

MOTHS (LEPIDOPTERA)

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

In some ways 2014 was a repeat of last season. The volume of macro-moths was about the same as in 2013, and members of the Sussex Moth Group added another huge lump of records to the Sussex Biodiversity Record Centre's data-base and to the thousands of distribution maps on the group's website at www.sussexmothgroup.org.uk. But both native and immigrant diversity was lower and, despite some *really* exciting exceptions, the meagre showing of scarce continentals was a great disappointment. Still, it was another unusually advantageous season for the commonplace **Diamond-back Moth** *P. xylostella* and the now regular **Vestal** *R. sacraría*, and it was the best year ever - at least since the late 1980's - for the humdrum **Rusty-dot Pearl** *U. ferrugalis*. One or two migrating **Western Conifer Seed Bug** *L. occidentalis* also raised eyebrows on arrival in a few moth traps.

Sussex has always been a front-line county for the detection of migrating channel-crossing continental lepidoptera. And, probably as result of climate change, recent decades have seen more foreign species making footholds here than ever before. The **Flame Brocade** *T. flammea* is still doing well at Beachy Head, as is the **Bloxworth Snout** *H. obsitalis* all along the coast, the **Jersey Tiger** *E. quadripunctaria* on the Selsey Peninsula, between Eastbourne and Seaford, and at Rye, and the **Scarlet Tiger** *C. dominula* which now primarily breeds here between Arundel and Eastbourne. The **Four-spotted Footman** *L. quadra*, previously a very rare immigrant, now breeds across the county, with continental arrivals adding to the show. The **Plumed Fan-foot** *P. plumigeralis* has been at the least an episodic resident in East Sussex since 1996, permanently so since 2000, and probably in the eastern part of coastal West Sussex since 2008; colonising from the east, it finally reached close to the Hampshire border in 2014. For around 150 years the **Small Ranunculus** *H. dysodea* was a great rarity in Sussex, and it had gone completely undetected here since 1939, but it is now well established between Worthing and Eastbourne, and at Horsham, and continues to gain territory. The **Red Sword-grass** *X. vetusta* is now breeding at low density in the extreme south-western corner of the county, probably since at least 2002, and the **Oak Rustic** *D. labecula* has also continued to colonise southern Sussex from Hampshire, pushing eastwards along the coast to reach Ferring and Findon Valley by 2012, and deep into East Sussex at Peacehaven by 2013, and to Eastbourne and Bexhill by 2014. However, a few of our recent acquisitions are in retreat. The most recent news shows that the breeding area held by the fabulous **Clifden Nonpareil** *C. fraxini* is now slowly falling back towards the Kent border.

The now almost traditional annual **Death's Head Hawk** *A. atropos* caterpillar was seen again, this time at Seaford, while three **Bedstraw Hawks** *Hyles gallii* showed up, at Rye, Peasmarsh, and at Wisborough Green. The fifth ever **Oak Processionary** *T. processionea* was recorded at Walberton, and there was a fresh **Crimson Speckled** *U. pulchella* at rest on downland grasses at Stoughton near Chichester. Both a **Beautiful Marbled** *Eublemma purpurina* and a **Small Marbled** *Eublemma parva* came to light at Bracklesham this year, as did the even rarer **Slender Burnished Brass** *Thysanoplusia orichalcea* at Northiam. With just three previous county records in 160 years, the colonising immigrant Pyralid **Udea fulvalis** also made a couple of appearances here in 2014, at Bexhill and Ferring. Of uncertain origin, probably from abroad or one of the east coast Kentish settlements, the second East Sussex record of a **Bright Wave** *I. ochrata* was also made at Rye.

There were two "moths of the year" for 2014, both from abroad. The first was an **Oak Yellow Underwing** *C. nymphagoga*, the first ever in Sussex and the sixth in the UK, which came to a 60 watt actinic light-sourced moth trap being run at Bexhill. The second insect was just chanced upon. An **Oleander Hawk** *D. nerii* - a Holy Grail for many lepidopterists - was discovered resting in the entrance tunnel to Newhaven Fort in mid November. With a wingspan of around nine centimetres, this beautiful insect was probably the offspring of a much earlier flight originating from tropical Africa, which had emerged in continental Europe.

Oleander Hawk
D. nerii by S. Teale



Oak Yellow Underwing
C. nymphagoga Esp.
by K. Alexander

BUTTERFLIES (LEPIDOPTERA)

by Michael Blencowe, Butterfly Conservation - Sussex Branch

It was the best of years; it was the worst of years. In 2014 our planet's climate continued to veer drunkenly from one extreme to the other. January smashed records for rainfall while September broke records for lack of rain. For our butterflies it's a life-cycle lottery. Depending whether your time spent in each stage as egg, larvae, pupae and adult coincides with suitable weather conditions, you can come out a winner or a loser.

During 2014 our climate continued its record-breaking roller-coaster ride, but before our butterflies could enjoy Britain's warmest year ever they had to endure Britain's wettest winter ever. While trees and fences came crashing down in the storms and the countryside of Southern England started to resemble the Lake District, it was easy to forget that overall the weather was very mild. There were hardly any frosts, and in those rare moments when some sun burst through the storms our hibernators were up and about. The first butterflies, **Brimstones**, **Comma** and **Red Admiral** were reported on the second day of the New Year but it was the **Small Tortoiseshell** who was the star of the show.

In the 80s and 90s the Tortoiseshell's population faltered and fell. Just five years ago a sighting of this once common butterfly was becoming a bit of a rarity, but since 2012 numbers have started to increase rapidly year on year and in 2014 it seemed the Tortoiseshell was back on top. People reported them in big numbers early in the year, and the Tortoiseshell was restored to its rightful place on just about every Buddleia in Sussex. A sighting of the **Small Tortoiseshell's** big brother the **Large Tortoiseshell** on March 12th was the only record of this rarity in the county in 2014.

As spring sunshine started to warm up our county our butterflies emerged, many species still slowly recovering after the battering they received during the dreadful weather of 2012. That herald of spring, the **Orange-tip**, appeared on March 29th and amazingly on the same date so did our first Wall. This is the first reported emergence of this species in March in Sussex.

However, during the spring there was terrible news in our woodlands for two of our rarest species. The **Small Pearl-bordered Fritillary** was on the ropes after suffering miserable weather during their late May-July flight period in 2012 and 2013. Numbers had plummeted across the south of England and were at an all-time low at our only population in East Sussex. The knockout came in the winter of 2013/14 when this butterfly, which spends the winter as a larva in damper habitats, found itself submerged by the deluge. This may well have finished off the butterfly in Sussex and there were no reports in 2014. Elsewhere in the south of England other Fritillary populations also fell or were wiped out.

In West Sussex the rare **Wood White** was also hit. During the winter floods impatient forestry contractors in a private woodland destroyed the wet rides with their heavy machinery, and one of our few remaining **Wood White** colonies was lost. There were no sightings of this delicate butterfly here in 2014 and numbers at the remaining west woodland sites were at a worryingly low ebb.

Yet, while the wet winter seemed determined to put a final nail in the coffin of two of our rarest species, the climate was helping other species get their foot in the door in Sussex. As reported at the 2014 Adastra conference, some of the **Continental Swallowtails** which had migrated into Sussex during 2013 had successfully laid eggs on fennel and carrots across the county. Thirteen **Swallowtail** larvae were monitored as they pupated and passed the winter in private gardens and allotments. On May 17th the first of these Sussex-born **Swallowtails** emerged, flew over the fence and was gone. Others soon followed, some seen in suburbia, others hill-topping high on the South Downs. There were 16 Sussex-born **Swallowtails** out there. It was hoped that some of these would meet and mate and we would see a second emergence in the autumn. However there were no confirmed reports later in the year and the invasion, it seems, has been postponed until further notice.

In woodlands numbers of **Silver-washed Fritillaries** and **White Admiral** continued to recover after suffering in the wash-out of 2012. Our survey work proved that **Purple Hairstreak** can be found on almost every oak tree in the county all the way from the Kent border down to the tip of the Manhood

Peninsula at Selsey. And if you spend time staring high into the trees in West Sussex it is becoming increasingly more likely that you'll see that regal ruler of the canopy kingdom: the **Purple Emperor**. 2014 was another successful year for the Emperor who continued to extend his empire eastwards all the way from Hampshire to an eastern front which runs in a line roughly from Barcombe to Broadwater. Time spent staring high at the treetops or low at some dog poo could well be rewarded in 2015.

Up on the downs two heat-loving butterflies were making the most of our planet's hottest year. Following on from busy flight periods in the hot summer of 2013 both **Grayling** and **Silver-spotted Skipper** flew in high numbers. The skipper had been busy colonising more areas of the Downs in 2013 and this Downland domination continued in 2014 when new colonies were established and high numbers could be seen. In contrast to the skipper's wanderlust I've long given up expecting the obstinate **Grayling** to ever set foot outside its downland stronghold. In 2014 the colony was busy doing what it does best: sitting still and avoiding being seen.

The warm summer of seemed to carry on until Halloween (the hottest Halloween on record). Small Copper and Wall enjoyed successful third broods until the end of October and migrant **Clouded Yellows** were everywhere, providing a splash of sulphur right into the middle of November. A **Red Admiral** in Crawley on Christmas Day marked the final record of a five-year survey of our county's butterflies. Throughout the period 2010-2014 surveyors have been out visiting every corner of Sussex and have sent in over 150,000 butterfly records. In 2015 we'll be collating and analysing this data and we hope to present our findings when we publish our book "The Butterflies of Sussex" in the autumn of 2016. Thank you to all the recorders who have contributed their records to this project.

TWO-WINGED FLIES (DIPTERA)

by Patrick Roper, Sussex Diptera Recorder

The number of Diptera records from Sussex submitted last year has been one of the largest. As well as the usual recorders, there are many new names and more people are probably taking interest in this order due to an increasing number of well-illustrated books and the burgeoning volume of online facilities for identifying insects down to species level.

Among the highlights of the year was the report of the wasp hoverfly, *Doros profuges*, from Kithurst Hill by Su Read. Although quite large and strikingly coloured, this species is rarely seen although there is quite a wide spread of records nationally. It is thought that the larvae might live in nests of the jet-black ant, *Lasius fuliginosus*, where they could feed on root aphids farmed by the ants.

There were also many records of two other large wasp/hornet hoverfly mimics, the belted hoverfly, *Volucella zonaria* (28 records) and the orange-browed hoverfly, *V. inanis* (14 records). The larvae of both these species live in wasp nests. *V. zonaria* arrived in Britain in the 1940s and has been spreading steadily in southern England since then. There is some evidence that it has difficulty in cold winters so, if the climate warms, we are likely to see more of this splendid insect which quite often occurs in gardens and urban areas.

Another garden hoverfly is *Cheilosia caerulescens*, a shiny black insect whose larvae mine the leaves of houseleeks (*Sempervivum* sp.). It was quite common in our garden in 2013 and many mines were seen in houseleek leaves as well as adults exploring the plants, but I saw none in 2014. Again I suspect this has something to do with climate, though the species originates (via the nursery trade) from cold mountain areas in mainland Europe. This species was first recorded in Britain in Surrey in 2006 and it is thought that it will spread quite rapidly.

Another interesting species recorded in 2014 was the cave fungus gnat, *Speolepta leptogaster*, from Uppark, the Midhurst Tunnel and the Drover's Tunnel at Singleton. It is normally found in caves, tunnels and cellars and, though rarely recorded, is probably widespread and common. It breeds inside the caves and the larvae live in a tube supported by threads covered in sticky droplets. It leaves the tube to feed on algae and microfungi growing on the cave walls. There is an illustrated web site about the species here: http://www.hoehlentier.de/flyer13_eng.pdf

The cave fungus gnat has occasionally been found away from subterranean habitats by sweeping and in light and Malaise traps. It is said to travel at night and, as well as caves and tunnels, may breed in rock crevices and animal burrows. I wonder how it locates new underground sites: perhaps it can detect chemicals released by the various organisms that live there. For those who want to increase their word power *Speolepta leptogaster* is classified as a 'troglophile' or a 'eutroglophile' meaning an organism that lives and breeds mainly, but not entirely, underground. It also had the distinction of being named as *Cave Animal of the Year 2013* in Germany.

There are more British Diptera and other animals associated with caves and other subterranean places, so any entomologist who wants to add to the list of Sussex records could enjoy exploring these habitats.

BIRDS (AVES)

by David Howey, Recorder, Sussex Ornithological Society

The Sussex Ornithological Society's report for 2013

With records for 2014 still being submitted to the Sussex Ornithological Society (SOS) the final total is not yet known. In 2013 over 160,000 records of 263 species were received, and these came from a record number of 1,146 observers.

The number of records of scarce birds submitted in 2013 was 267, of which 220 were accepted by the SOS Records Committee and a further 18 by the British Birds Rarities Committee (BBRC). A **Semipalmated Plover** seen in Chichester Harbour from 18th to 21st October was the first record of this species in Sussex, and increased the county to list to 399.

There was an extensive list of other rare and scarce species recorded in 2013 including a total of seven **Bean Geese** (all of the *tundra* race), a **Red-breasted Goose** in Chichester Harbour in both winters, a minimum of 52 **Balearic Shearwaters**, five **Storm Petrels**, a total of 13 **Great White Egrets**, two **Purple Herons** (over Beachy Head on 25th May and in Pagham Harbour on 4th August), a **Black Stork** near Horsted Keynes on 25th May, some 20 **Spoonbills**, six migrant **Honey-buzzards** (of which five were in the autumn), over 40 records of **Ospreys** (how long before they stay and breed in Sussex?), a **Spotted Crake** at Arundel WWT on 24th October (the first since 2008), a **Corncrake** at Beachy Head from 15th to 18th April (first since 2006), three records of spring migrant **Stone-curlews**, two **Kentish Plovers** at Rye Harbour in March (one of which had been ringed in Germany in 2009), an **American Golden Plover** at Cuckmere Haven from 11th to 14th June (only the third Sussex record), three **Temminck's Stints** at Rye Harbour on 26th May, two **Pectoral Sandpipers**, a **Terek Sandpiper** at Rye Harbour on 25th May (sixth for the county and the only one in Britain in 2013), a **Grey Phalarope** at Newhaven Tide Mills in November, two **Bonaparte's Gulls** (at Princes Park, Eastbourne from 27th January to 26th February and at Rye Harbour on 20th July – the sixth and seventh county records), two records of **Caspian Gulls** (both in the Cuckmere Valley), a single **Iceland Gull** at Piddinghoe Pond on 24th November, a **Glaucous Gull** at Pett Level on 15th March, three **Bee-eaters** (singles at Church Norton on 18th May and at Beachy Head on 25th May and 6th June), four records of **Hoopoes**, a minimum of 28 **Wrynecks**, four **Red-backed Shrikes**, a **Penduline Tit** at Pett Level on 30th October, a **Shore Lark** at Beachy Head on 27th October, a **Red-rumped Swallow** at Waltham Brooks on 18th March, three records of **Pallas's Leaf Warblers** and a minimum of 20 **Yellow-browed Warblers** in the autumn, a **Radde's Warbler** at Sheepcote Valley, Brighton on 12th October, a **Western Bonelli's Warbler** at Church Norton from 22nd to 24th April (fifth county record but only the second this century), a **Savi's Warbler** at Pett Level on 18th June and a **Melodious Warbler** at the same site on 27th July, three records of **Marsh Warblers**, a juvenile **Rose-coloured Starling** at Selsey from 1st to 8th October, single **Red-breasted Flycatchers** at Beachy Head on 6th October and at Pevensey Bay from 5th to 14th November, a **Tawny Pipit** at Cuckmere Haven on 25th September, two single **Serins** in May, a remarkable total of 62 **Common (Mealy) Redpolls** in the autumn, ten **Parrot Crossbills** in Ashdown Forest from 20th December until the end of the year, three records of **Common Rosefinches**, two single **Lapland Buntings** (Winchelsea Beach on 26th September and at Littlehampton on 24th November) and a **Little Bunting** at Pett Level on 24th October.

There were also some impressive numbers of some commoner species. During December there were 2,000 **Golden Plovers** and over 6,000 **Lapwings** in Rye Bay. In that same month in Chichester

Harbour there were 1,200 **Grey Plovers**, 1,100 **Knots**, nearly 15,000 **Dunlins**, over 1,000 **Bar-tailed Godwits** and 1,700 **Common Redshanks**. There were also several large movements of birds including 20,000 **Wood Pigeons** moving south over Broadbridge Heath on 13th November, 1,320 **Swifts** passing westwards at Beachy Head on 29th June while Selsey Bill had 7,000 **Barn Swallows** heading south on 23rd September and 6,500 **House Martins** moving east two days later. Autumn migration was also evident at Beachy Head where there were 750 **Chiffchaffs** on 23rd September. Two roosts deserve mentioning are 20,000 **Sand Martins** at Pett Level on 23rd September and 40,400 **Common Starlings** at Palace Pier, Brighton on 26th December.

The unseasonably low temperatures in May and June contributed to another poor breeding season for many species. Ground-nesting species were again affected most - a situation exacerbated by predation. One pair of **Stone-curlews** nested and a single chick was hatched but disappeared shortly afterwards - presumably predated. Although there were 120 pairs of **Sandwich Terns** at Rye Harbour, and a further 70 pairs in Chichester Harbour, no young were raised. Similarly, the 11 pairs of **Little Terns** at Rye Harbour managed to raise just one chick. Also at Rye Harbour the number of breeding **Mediterranean Gulls** continued to decline with 36 pairs raising only one young compared to 55 pairs and 10 young in 2012. Extensive flooding resulted in a major reduction in the availability of prey for **Barn Owls** and only eight broods were found in 230 nest boxes.

There was, however, better news regarding some other breeding species. Nine broods of **Pochards** were recorded (five in 2012), three pairs of **Honey-buzzards** raised a total of six young (just two in 2012), the number of nesting pairs of **Little Egrets** rose from 44 to 55, **Avocets** raised a total of 21 young (seven in 2012), 14 pairs of **Little Ringed Plovers** bred (four in 2012) and although there was a reduction in the number of pairs of **Common Terns** nesting, the number of young reared rose from 12 to 23. The breeding population of **Red Kites** was similar to that of 2012 with 15 pairs. On the Sussex Heaths the number of pairs of **Woodlarks** remained stable at 35 and although they remain scarce, the number of **Dartford Warblers** holding territories rose from two to eleven.

Further details of these and other records can be found in the *Sussex Bird Report 2013* published by the Sussex Ornithological Society. More details about the Society including all the Recent Sightings can be found on the SOS website: www.sos.org.uk.

BATS (CHIROPTERA)

By Tony Hutson and Sue Harris

Hibernation site reports

Mid and East Sussex

I've just been to the village shop, where I overheard a conversation which went like this: question (cheerily): 'hello, how are you, you having a good day or a bad day?', answer (morbidly): 'a good day, every day above ground is a good day!' I think I know what he meant, but he's missing out if he doesn't know that one can spend interesting and useful days underground (and still alive)!

About 16 underground or semi-underground sites are regularly monitored for hibernating bats in Mid- and East Sussex (more or less central Sussex) with the data contributing to the National Bat Monitoring Scheme. These are mainly rather small sites but, between them, help to monitor the distribution and numbers of hibernating bats. The whole round of a core of 14 sites is done over one weekend in January and one in February, Mid-Sussex on Saturday and East Sussex on Sunday. I do a couple of other sites separately, and Roger Jones and Sally-Ann Hurry do four or five more in far East Sussex. And a few other sites are done as opportunity arises. Because they are mainly small sites, many are not so immune to the effects of the external weather conditions and that may explain some of the wide variation in the counts.

We only get the standard species, **Brown Long-eared**, **Natterer's**, **Daubenton's** and **whiskered/Brandt's**, with the proportion of **whiskered/Brandt's** bats in these sites often quite high. This winter produced the usual mixed results; although overall counts were on the low side and certainly lower than last year. The maximum for any one site in Mid-Sussex was 19 (in January) and

for East Sussex was 12 (in February). Numbers of all species were down, but it was particularly the low numbers of **Natterer's** that affected the counts. Of course, where the bats are if they are not in these hibernation sites is a bit of a mystery, and the fluctuations mean that it can take some time to detect a real trend in population numbers.

But at least this year, overall, the weather wasn't too bad on the day (too warm, but not too wet), which is just as well since perhaps a higher proportion of the day is spent on the surface getting to these sites than is spent underground (doing the West Sussex sites, one has only occasional samples of what the weather is like outside).

Being mostly small sites, these sites offer good opportunity to see the species close up, but also they are a strange mixture of sites that demonstrate the ingenuity of people down the ages in building underground structures for a variety of purposes – even if, in at least one case, we have no idea what that purpose was. In terms of numbers and species diversity, this is the poor-person's hibernation site monitoring, compared with the West Sussex sites, but we are very happy for people to help with the surveys. Dates and contact details will be in *The Belfry* in the autumn for next winter's tours, although numbers of participants is very restricted.

Location Species	Mid-Sussex January	February	East Sussex January	February
Natterer's	17	11	9	7
Daubenton's	5	7	4	9
Whiskered/Brandt's	6	5	1	1
Brown long-eared			3	1
total	28	23	17	18

By Tony Hutson (article first published in the Sussex Bat Group's *The Belfry* newsletter, spring 2014)

West Sussex

As volunteers gathered in December to undertake the first of the winter hibernation counts in five disused railway tunnels and a sand mine in West Sussex, after a mild autumn and early winter, we thought that the number of hibernating bats would not be high. Little did we know that the mild weather would continue and we would have the wettest winter on record. Fortunately we were able to complete all of the planned counts, although it was not without some anxiety and route diversions for the hardy volunteers to meet up to the north of Chichester, getting around floods and fallen trees on the way. The tunnels were wet but nowhere near as wet as we thought they might be. Temperatures varied within the tunnels, but some were notably warm for hibernating bats during the counts.

In December we were delighted to find that the **Greater Mouse-eared bat** (GM-e) was still alive and hibernating, and he remained hibernating for the following two counts. For those of you who do not know the history of this bat, which is ringed, the following information may be of interest. There were a small number of this species known to roost in West Sussex with numbers dwindling until 1989 when the last known bat was found hibernating in a tunnel in the county. In 1990 the species was recorded as extinct in England, although they are widespread across the channel in Europe. In December 2002 a young male was found hibernating in one of the tunnels where they had previously been found hibernating. After an extensive search to try to identify summer roosts, no further information has been found but the solitary male has continued to hibernate each year in the same tunnel. There were no other rarities found in December.

One tunnel had had an attempted break in during the summer of 2013 but fortunately no one had gained access and the damage to the lock was rapidly resolved. The numbers in this tunnel had been increasing, but this year they were low again - this may be due to the higher temperatures found in the tunnel.

A **Bechstein's** was found to have joined the GM-e in January and there was a **Bechstein's** in the same tunnel in February. An exciting find was a **Bechstein's**, which was very much awake, found in a tunnel near Cocking which was a first for the tunnel in records from 1969.

Unfortunately, there had clearly been some human activity in the sand mine between the December and January count which, almost certainly, would have caused disturbance to the hibernating bats. The count in December was one of the highest at eight, but only four were found in January.

The tiny spaces that we found bats in never ceased to amaze the groups counting. There was quite a deep but small crevice in which a **Natterer's** had found a cosy spot to hibernate. The volunteers need to check carefully not only for very visible bats but for bats in crevices in the thick brick walls.

Boards were put into one of the smaller tunnels during some repairs in 2009. Since then the numbers, whilst remaining low, have shown an increase with most bats found under the boards. An example of the boards is shown in the following photo.

During 2013 the National Trust very kindly provided new timber to replace some of the deteriorating boards in the tunnel owned by the Trust. Daniel Whitby, assisted by volunteers, replaced some of the boards; some of which have already been found to be in use this winter. Many thanks to the National Trust and volunteers for assisting with this valuable work.



Martyn Phillis checking the boards with a mirror and torch

Many thanks also to all those who gave so much time to assisting with the counts, and apologies if I was not able to include you this year. The counts are undertaken very sensitively so numbers are restricted, and hence unfortunately it is not always possible to include everyone who would like to assist.

The numbers of bats counted this year were not the highest but neither were they the lowest:

SUSSEX BAT GROUP		BAT HIBERNACULA COUNTS												2013/2014				
Location	Tunnel 5			Tunnel 3			Tunnel 2			Sandmine			Tunnel 4			Tunnel 1		
	Dec	Jan	Feb	Dec	Jan	Feb	Dec	Jan	Feb	Dec	Jan	Feb	Dec	Jan	Feb	Dec	Jan	Feb
Daubenton's	3	4	7	15	11	13	26	48	88	1	1	1		2	1	14	19	41
Natterers	3	4	4	7	31	37	37	79	75	5		2	2	2	1	22	32	39
Brown Long-eared				2	2								2					
Whiskered / Brandt's																		
Alcathoe whiskered				11	15	14	2	5	4	2	1		1	2	1	2	4	2
Bechstein's						1		1	1									
Barbastelle																		
Greater Horseshoe																		
Greater Mouse-eared							1	1	1									
Long-eared - sp													2	2		4	1	
Myotis - sp						1			1									
No ID						1					2	1						1
Total	6	8	11	35	59	67	66	134	170	8	4	4	5	8	5	42	57	82

By Sue Harris (article first published in the Sussex Bat Group's The Belfry newsletter, spring 2014)

SEA MAMMALS

by Stephen Savage, Sussex County Recorder of Sea Mammals and Sea Watch Foundation Regional Coordinator

An interesting year of sea mammal sightings taken from my role as Sussex County Recorder for Sea Mammals and Sussex regional coordinator for the Sea Watch Foundation. As with recent years, seal sightings now outnumber the sightings of cetaceans (dolphins and porpoise) and this has been a steady trend over the last 10 years. The reduced cetacean sightings appear to be the result of a greater increase in water sports and other human activities close to shore. When I started recording back in 1991, inshore sightings of 100 -200 metres were relatively common in the summer (and sometimes closer to shore) and it is now the zone where many human activities take place. Below is a summary of seal, dolphin and porpoise sightings recorded in 2014 through my own volunteer network, and also organisations such as British Divers Marine Life Rescue (BDMLR) and the Inshore Fisheries and Conservation Authority (IFCA). This report does not include seals reported in the estuary at Thorney Island/Chichester Harbour area, however seals reported at Selsey are likely to be part of the resident community of **Common Seals** in Chichester Harbour.

Over the last five years we have recorded an increasing number of river sightings of seals and it's unknown at present if this is an increase in actual seals or increase in sightings due to publicity through the media and social media. Certainly, the increase in people with electronic devices with cameras (mobile phones etc. with okay to very good quality) has meant that I have been able to verify more sightings to species level and on occasions identify known individual seals through photo identification.

JANUARY and FEBRUARY: the first sighting of year (on 3rd January) was a known **Common Seal** *Phoca vitulina*, nicknamed 'Lewes' as this seal has been visiting the River Ouse for many years and is often seen near Lewes town. This sighting occurred on the river bank near the Lewes Railway Land Nature Reserve and the seal was seen again just north of Lewes a few hours later. A second **Common Seal** was reported on the same day by BDMLR on the River Cuckmere at Litlington near the footbridge crossing.

On 6th January a seal was spotted at the mouth of the River Rother, and on 11th January a **Common Seal** was spotted just outside the harbour mouth at Rye, looking into the harbour. On 11th February a pod of up to 20 **Bottlenose Dolphins** were observed off Selsey Bill by a fishing vessel. On 19th January a **Common Seal** was spotted off of Ovingdean Café near Brighton.

MARCH, APRIL, MAY: On 27th March a **Harbour Porpoise** *Phocoena phocoena* was spotted by bird watchers at Splash Point, Seaford, and on the 31st March, **Bottlenose Dolphins** were observed in the same location at Splash Point. A **Common Seal** also popped its head up a couple of times on the same day. On 4th April, a **Harbour Porpoise** was spotted at Selsey. On 26th May a **Common Seal** was observed off the coast at Saltdean.

JUNE and JULY: On 1st June a **Common Seal** was reported at Selsey, and from late June to July a pregnant female **Common Seal** resided in the busy Newhaven Harbour. A **Grey Seal** *Halichoerus grypus* was also present in Newhaven Harbour at the same time. Unfortunately the seals attracted a lot of visitors every day and BDMLR were concerned that this would add extra stress, so as on other occasions, a lot of effort was put into crowd control. The **Common Seal** was a rusty colour which is caused by iron oxide in the mud at some estuaries. It was suggested by BDMLR that this indicated that the seal had come from Essex. However this may not be the case as I know that a couple of seals at Chichester Harbour had this red pelage, and also seals on the French channel coast (and we know from seal tagging that occasionally French seals cross the channel to Sussex). The female seal gave birth to a pup which sadly did not survive. The female seal also died a couple of weeks later. The **Grey Seal** remained healthy. On 10th July a seal was reported off of Littlehampton beach, and on 26th July two **Harbour Porpoise** were spotted off Cuckmere Haven.

SEPTEMBER AND OCTOBER: On 1st September a seal was observed (by a few different people) in the River Adur near the airfield. On 3rd September three **Bottlenose Dolphins** *Tursiops truncatus* were reported by an IFCA vessel half a mile off of Brighton. The vessel was travelling west, the dolphins were sighted a few hundred metres in front of them. The dolphins swam east towards the vessel, dived down and then headed west with the vessel, riding the bow wave. After about eight minutes the

dolphins dived and continued on their way heading east. On 6th September four dolphins were observed off the coast at Eastbourne and on 23rd September a **Harbour Porpoise** was seen close to shore at Dover. In the week beginning 22nd September there were several sightings of a **Common Seal** in the lower reaches of the River Adur.

On 27th September a young seal was spotted on the concrete jetty at Seaford. Interestingly, this was also rusty coloured due to iron oxide. The seal pup hung around for a few weeks and was last seen at Saltdean on 20th October. On 7th October there were three separate dolphin observations by the same observer (although this may have been the same animal) at Birling Gap. On 18th October a young **Common Seal** was spotted swimming along the shore at Peacehaven and on 23rd October a **Common Seal** was spotted by the old cement works on the River Adur.

NOVEMBER and DECEMBER: On 1st November a young seal was reported on the beach at Middleton-on-Sea and on 11th November a seal was spotted off the beach at Lancing Widewater, swimming towards Worthing. On 20th November a **Common Seal** was spotted up the River Adur near the old cement works. A seal was seen hauled out the following day on Shoreham Beach LNR near Ferry Road entrance, and the seal entered the water when approached by the public. On 13th December a young seal was reported in the River Adur and subsequent sightings suggest it moved around a lot ranging from the harbour mouth, Norfolk Bridge, Cuckoo Corner and the cement works. A seal was reported on 21st December, observed at Cuckoo Corner on the River Adur. I received two separate sightings of a seal hauled out on the river bank near the Old Toll Bridge (River Adur) on 25th December. All the above River Adur sightings for November and December (and some anecdotal sightings) suggest that this is the same seal. At the time of writing the seal is still present in early January.

Dead Strandings

On 5th February a dead **Harbour Porpoise** was washed ashore at Bexhill (and there were anecdotal reports of another dead porpoise earlier in the week). On 6th February a dead decomposing dolphin washed ashore at Brighton, which I identified as a **Common Dolphin** *Delphinus delphis*. This and the previous dead porpoise were washed up after heavy storms. On 6th March a dead **Common Seal** was washed ashore on Selsey Beach. On 29th July an emaciated seal was found at Peacehaven, and sadly died later. Sadly, on 7th March, a dead **Harbour Porpoise** was washed ashore at Kingston Beach, Shoreham (inside the harbour), and on 29th August, a dead porpoise was washed up on the beach at Saltdean with the tail removed, suggesting bycatch. While the person discovering the porpoise provided photographs the remains were washed out to sea before they could be examined properly.

The most unusual stranding of the year was not a cetacean but a marine turtle. Not just any marine turtle, but the rarest of all the species: the **Kemp's Ridley Turtle** *Lepidochelys kempii*. It had been washed ashore dead at Saltdean on 17th February. **Kemp's Ridley Turtles** are mostly found in the Gulf of Mexico area and can range between tropical and temperate coastal areas of the northwest Atlantic Ocean; they have been reported as very rare visitors to the UK. This species is considered to be critically endangered. Interestingly a Kemp's Ridley had also been washed up dead in Devon in January 28th 2014. I verified the sighting based on the almost completely round shell and the number and arrangement of shell plates. On December 2013 a dead Loggerhead Turtle *Caretta caretta* was washed ashore at Worthing.

The only species that naturally occurs around the UK and occasionally seen alive off Sussex is the Leatherback Turtle as they are adapted to the cooler waters. They visit UK waters to feed on jellyfish.

Please report any sea mammal sightings to Steve Savage seawatch17@yahoo.co.uk photos and more information at <http://sussexmarinejottings.blogspot.com/>

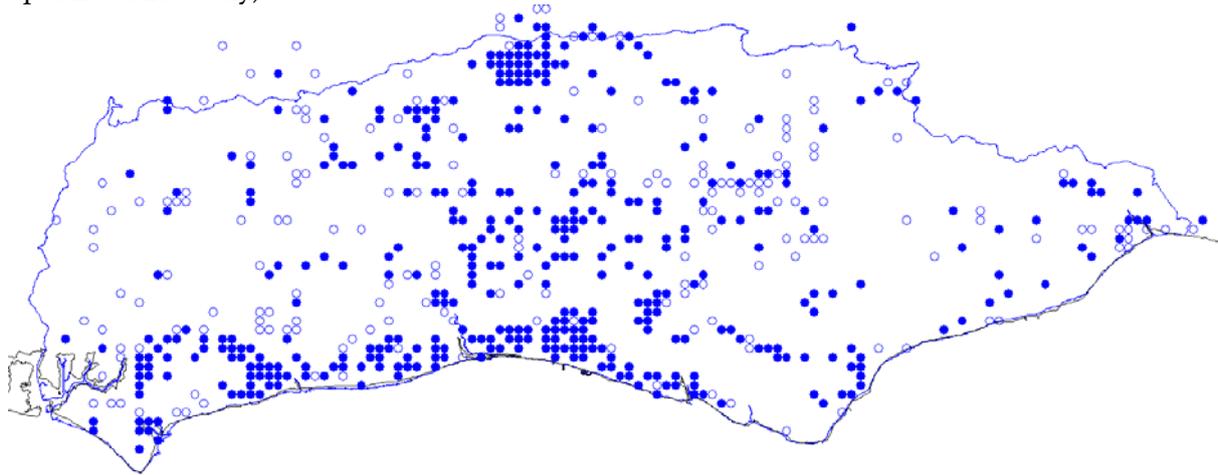
TERRESTRIAL MAMMALS

By Penny Green, Sussex Mammal Group

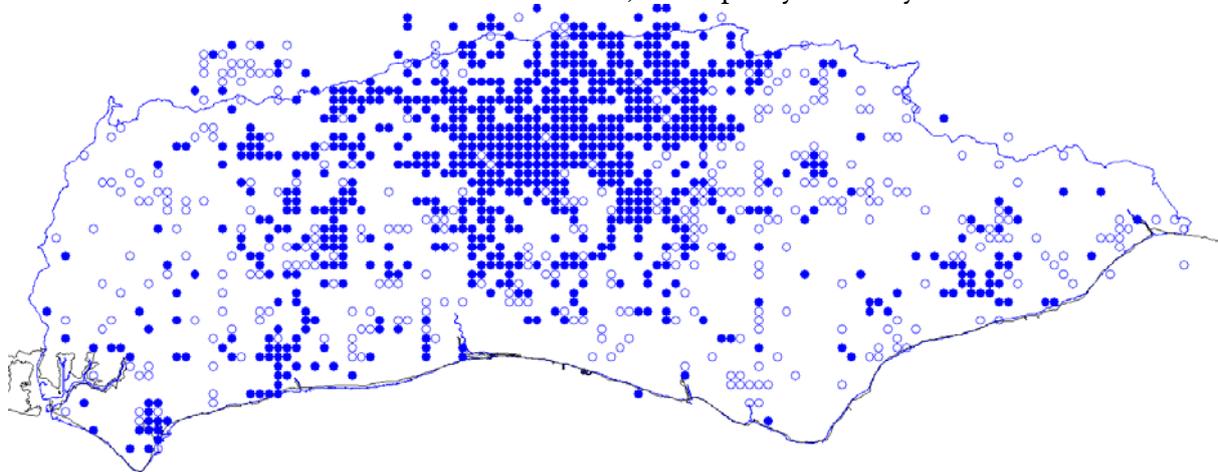
The Mammal Society has been awarded an HLF (Heritage Lottery Fund) grant to produce a national mammal atlas; the first part of the process is a pilot project to create an online South East Mammal Atlas by early 2015. The Sussex Mammal Group was involved with the initial meeting, along with

representatives from other SE region mammal groups, to decide on the level of resolution that each species should be mapped at. For example some of the more sensitive species are mapped at a 10km resolution whereas the more common species are mapped at a 1km resolution. They will be publishing maps using records from 2005 to 2015, but will be analysing data from 2000 onwards. This was a good opportunity for us at the SxBRC to review the mammal records held in the database here, and create maps for each species to enable us to spot any anomalies. The maps turned up some interesting distributions, which may be explained more by where recorders report from rather than it actually being the distribution of the species itself. The hollow dots are pre-2000 and the solid dots are post-2000.

The **Hedgehog** map shows that it is well recorded around large conurbations (or on roads, probably squashed ones sadly):



This map shows the **Mole**'s distribution in Sussex, again I think this represents where the main recorders live rather than where the Mole is found, as I'm pretty sure they do exist in East Sussex!:



There were a couple of species that the Mammal Society wanted to target recording work on in the short amount of time between announcing the atlas and its publication; **Harvest Mouse** and **Hedgehog**. As a result we put out an article asking for people's **Hedgehog** records to help fill the gaps, and Laurie Jackson has co-ordinated **Harvest Mouse** surveys in Sussex, which was kicked off with a training session, and then squares were allocated for people to search in. The **Harvest Mouse** is generally under-recorded in the county as they are so elusive, but nest searches often prove to be an effective way of recording them.

This, coupled with the Mammal Society's 'Mammal Tracker' app, has generated a lot of records for Sussex, so we're grateful to anyone who has sent in their mammal records via apps, iRecord, or by other means, as they all help us see what is going on locally, regionally and nationally.

If you would like to download the Mammal Tracker app for your smart phone then you can do so here: http://www.brc.ac.uk/mammal_tracker/ as the Mammal Society will be collecting records now for a national atlas.

In other mammal news, we've been receiving quite a bit of small mammal trapping results from Rachel Bicker at the Biodiversity Gatwick project, an area which previously had very few small mammal records. So **Wood Mouse**, **Bank Vole**, **Field Vole** and **Common Shrew** records have been boosted in that area!

We are still awaiting a lot of 2014 datasets as people spend the winter inputting their records, but we can report that plenty of people have been reporting their **Badger**, **Hedgehog**, **Rabbit**, **Brown Hare**, **Fox** and **Fallow & Roe Deer** sightings on iRecord, along with camera trap photos and videos. Incidentally, iRecord accounts for 85% of the mammal records that we have so far received for 2014. iRecord has increased the number of **Stoat** and **Weasel** records that have been coming in too, again photos with these help confirm correct identification.

Paul Roberts and Sue Milnthorpe have been recording like mad in their Sussex woodland; as part of their recording effort they put up some **Dormouse** nest tubes and when they installed a camera trap they picked up some great activity which can be viewed on the Sussex Mammal Group website: <https://sites.google.com/site/sussexmammalgroup/home>

If you would like to contact the Sussex Mammal Group then please email: sussexmammalsurveys@googlemail.com

Monitoring and casual recording on Sussex Wildlife Trust reserves and managed sites in 2014

by Graeme Lyons, with Rye Harbour covered by Chris Bentley, Sussex Wildlife Trust

Two large scale invertebrate surveys were carried out on reserves at Burton Pond and Flatropers Wood with Mike Edwards and Alice Parfitt/Chris Bentley respectively. Both are still being written up as I write, but my contribution alone to the Burton Survey produced over 500 species. The five areas we looked at were all very different and included some very interesting species.

The **Alder Leaf Beetle** *Agelastica alni* was recorded new to Sussex (found by Adrian Holloway) on the edge of Burton Pond itself on 24th June. Other highlights included the rare zebra spider *Salticus zebraneus* (Na) on open grown trunks on 30th May and the RDB3 wasp *Hedychrum niemelai* on scrapes also at Welch's Common on 21st July. Along the edge of the pond the VU snail *Vertigo moulinsiana* was not recorded until 22nd September and then only two individuals were recorded. A freshly emerged **Ornate Brigadier** *Odontimyia ornata* (VU) was recorded on 30th May and the spider *Tetragnatha striata* (Nb) on 23rd April, both also along the pond edge. The small weevil *Siroclades mixtus* (Nb) that feeds on Climbing Chorydalis was recorded in the Warren on 30th May. A single larva of the **Red Sword-grass** was swept from Purple Moor-grass in the Black Hole on 24th June.

Moth trapping by Penny & Dave Green and Tony Davis at the Black Hole on 17th July produced nearly 100 species with some scarce ones including **Dotted Fan-foot** (Nb), **Dentated Pug** (Na) and the unusual micro moth *Stathmopoda pedella* (Nb).

From Flatropers Wood, nearly 600 species have been recorded so far. This site is very under recorded for groups other than Lepidoptera so it is great to have records that inform management. Perhaps the highlight of the survey was the ant-loving **Scarce Seven-spot Ladybird** *Coccinella magnifica* (Na) which was recorded during March and April, but not throughout the whole summer showing the importance of early visits to carry out invertebrate surveys. The site remains the only known location for this species in Sussex. March was also the only time the willow specialist bee was recorded *Andrena apicata* (Nb). The scarce spider *Dipoeana tristis* was recorded in two areas on 12th June. Some interesting moths were recorded from the survey being *Anania verbascalis*, *Olethreutes arcuella* and **White-line Snout** (all Nb).

At Woods Mill, the arrival of breeding **Little Grebes** was a great surprise. This is the first year the lake was full in the breeding season after being left dry for a summer after the removal of the carp. In

addition to the **Little Grebes** successfully rearing at least one brood, **Coot** bred successfully too. In the Woods Mill moth trap, highlights included the first **Lappet** in many years on the 17th July and the rare migrant **Dusky Hook-tip** on 29th May.

Mapping of Heather and Juniper began again at Levin in 2014, and in the process a number of interesting invertebrates were recorded including the alien bug *Orsillus depressus* and the Nb spider *Araneus angulatus*.

Moth trapping at Ebernoe Common with Penny & Dave Green, Alice Parfitt and Tony Davis on 5th July produced 161 species including **Small Black Arches** (Na), **Festoon** (Nb), *Eudemis porphyrana* (Na) and *Elegia similella* (Nb).

At Stedham Common, twelve plants of **Marsh Club-moss** were spotted during an RSPB field trip, **White Beaked-sedge** was also present in the same area. **Allseed**, **Chaffweed** and **Chamomile** were also recorded at Stedham in 2014 by Frances Abraham. Monitoring of **Heath Tiger Beetles** continued for its second year and additional species using the scrapes included *Agonum sexpunctatum* (Na) and the spider *Xysticus sabulosus*. Tom Otley recorded the nationally scarce *Dicranum polysetum* at Iping Common in November.

Moon Carrot *Seseli libanotis* (NT) was surveyed at Seaford Head by the Seaford Head Natural History Society again this year and showed a decline in numbers from 2013. Migrant birds on site included a **Barred Warbler** using the scallops in September. Interesting invertebrates included several of the attractive day flying moth *Pyrausta oestrinalis* (Nb) on 12th August and the **Spring Dumbledor** *Trypocoris vernalis* (Nb) which is scarce in Sussex.

At Southerham, the rare plants were mapped across the site throughout the summer, and most exciting of all was the relocating of twelve **Burnt Orchids** *Neotinea ustulata* (EN) on 24th May. This small satellite colony of the nearby, and much larger, Caburn Bottom colony has not been seen for about ten years when they were recorded by Steve Tillman. An accurate grid reference has been submitted with the record so they shouldn't go missing again! In addition to this, **White Horehound** *Marrubium vulgare* (NS), **Bastard-toadflax** *Thesium humifusum* (NS), **Basil Thyme** *Clinopodium acinos* (VU) and **Chalk Milkwort** *Polygala calcera* were also mapped.

Whilst mapping the **Bastard-toadflax** on the 22nd July, I was amazed at how many **Carthusian Snails** *Monacha cartusiana* (NR) were present on all the good bits of chalk-grassland around the site. Many nymphs of the **Down Shieldbug** *Canthophorus impressus* (Nb) were recorded on the **Bastard-toadflax** too at this time too.

At Graffham Common **Woodlark** successfully bred the second year after felling. During the autumn, some unusual fungi were recorded there such as **Velvet Rollrim** *Tapinella atromentosa* and **Parasitic Bolete** *Pseudoboletus parasiticus* on the 30th September and numerous **False Truffles** *Elaphomyces granulatus* were brought to the surface by recent earth works on the 17th December.

In 2015, an invertebrate survey of Malling Down and Southerham is planned to take place on the same days throughout the year to make valid comparisons between these two sites, and the SWT will be acquiring a suction sampler in order to deal with the short swards. Rare plant surveys are also planned for several of our sites.

Rye Harbour

Once again predation, perhaps combined with inadequate food supply, resulted in a rather mixed year for breeding seabirds during 2014. Two-hundred and eighty pairs of **Sandwich Tern** nested at Rye Harbour this year, and did not manage to fledge any young, while only one pair of **Mediterranean Gull** attempted nesting but failed before the chick stage and 10 pairs of **Little Tern** produced a single fledgling. **Common Tern** did somewhat better, with around 90 pairs producing 40-50 fledglings, while 1,200 pairs of **Black-headed Gull** fledged about the same number of young. Our waders also had a mixed season, with around 20 pairs of **Redshank** and 28 pairs of **Avocet** having good fledging success, and the remainder, **Oystercatcher**, **Lapwing** and **Ringed Plover**, having a poor year. Some notable visitors during 2014 included **Kentish Plover** during late April and early May, **Hooded Crow** and **Red-rumped Swallow** during May and a **White-winged Black Tern** in October.

Two more Red Data Book invertebrates were added to the reserve list this year, bringing the total up to 104. These were the satellite fly *Mitogramma germari* (RDB2), collected by the Sussex Wildlife Trust Senior Ecologist Graeme Lyons on Castle Farm on 27th July, and the parasitic fly *Wagneria gagatea* (RDB2) found at Castle Water on 12th May. After flooding by the December 2013 surge tide, there was some concern over the status of the RDB1 jumping spider *Pellenes tripunctatus* at its single Rye Harbour site, so it was a relief when visiting naturalists Matt Prince and Nicola Bacciu found it in not one, but two places on 18th May. Other rare invertebrates recorded during 2014 included the horse fly *Hybomitra ciureai* (RDB3), the soldier fly *Stratiomys longicornis* (RDB2), the weevils *Limobius mixtus* (RDB1) and *Lixus scabricollis* (RDBK) and the jumping spider *Phlegra fasciata* (RDB3).

Moth trapping at Lime Kiln Cottage turned up several notables, including the BAP **Barred Tooth-striped** on 1st April, a first for the reserve, and the RDB3 geometrid **Bright Wave** on 6th July, the second reserve record. Other Red Data Book moths recorded during 2014 included *Ethmia bipunctella* (RDB2), *Cynaeda dentalis* (RDB3) and **Pigmy Footman** (RDB3).

Pitfall trap monitoring of the new shingle and saltmarsh continues to turn up some interesting species, including the money-spider *Mermessus trilobatus*, a North American species first recorded in the UK in 2007. This year pitfall trapping was also carried out in the grassland near Camber Castle and turned up several notable species including the beetles *Orthocerus clavicornis* and *Crypticus quisquilius* (the latter new to the reserve), the planthopper *Oliarus panzeri* and the flesh-fly *Sarcophila latifrons*.

SUSSEX WETLANDS

by Fran Southgate, Sussex Wetland Landscapes Officer

Wetland species

Otters

Otter activity in Sussex remains negligible. There were no reports of resident **Otters** in the county, nor of significant otter activity, although there have been a few sightings on the Eastern Rother.

Water vole

Water Voles remain threatened and vulnerable in Sussex, although our three core populations appear to remain stable. The Arun valley population is expanding into the Western Rother and Upper Arun, but no new **Water Vole** populations have been discovered. The Chichester and Manhood population is supported by the Manhood Peninsular Partnership; the Arun Valley population is supported by the Arun and Rother Connections (ARC) project; and the Brede / Romney populations are supported by landscape partnerships based in the High Weald AONB and Kent Wildlife Trust.

A PhD thesis by Rowenna Baker on Sussex and South East **Water Vole** genetics will be published in early 2015.

Black poplars

Sussex is host to 38 mature **Black Poplar** trees, comprising five genetic clones (3 male, 2 female). Around 7,250 young **Black Poplar** trees have been planted throughout the County from the Kew gardens clone stock, including a number in restored floodplain woodlands. We hope to have all planted poplars mapped on GIS soon.

Non-native invasive aquatic plants

As digital recording in iRecord and PlantTracker become more popular, it is increasingly obvious that the majority of non-native aquatic plant species are common, widespread, and causing damage to a wide range of (wetland) environments in Sussex. These include **Floating Pennywort**, **Giant Hogweed**, **Parrot's Feather**, **Australian Swamp Stoncrop**, **Water fern**, **Himalayan Balsam**, **American Skunk cabbage** and more. New regulations came into force in April 2014 to ban the sale of five invasive non-native aquatic plants under Section 14Z(a) of the Wildlife and Countryside Act.

Floating Water Primrose (*Ludwigia grandiflora*, *Ludwigia uruguayensis* and *Ludwigia peploides*)

Floating Pennywort (*Hydrocotyle ranunculoides*)
Parrot's Feather (*Myriophyllum aquaticum*)
Australian Swamp Stone-crop (*Crassula helmsii*)
Water Fern (*Azolla filiculoides*)

Further legislation will come into force in 2015 to enable official access to sites where landowners refuse to deal with notifiable species

We would be grateful for the submission of any records of invasive species to the Sussex Biodiversity Record Centre. In particular there appears to be some under-recording of non-native species in ponds. A non-native species project officer is now employed until August 2016 to help remove invasive species on the Arun & Western Rother catchments (sarah.mcintyre@rspb.org.uk), and the South Downs National Park Authority are also developing a non-native species strategy. The Non Native Invasive Species Secretariat (NNISS) host a website with a useful picture database and up-to-date information on non-native invasive species.

<https://secure.fera.defra.gov.uk/nonnativespecies/home/index.cfm>

Sussex Wetland Habitats

Sussex has lost a large proportion of its natural wetlands, and much of the remaining habitat is fragmented, degraded and in some cases, at risk of extinction. The county nonetheless hosts some unique and fascinating wetland habitats. There were no major updates in 2014 on the known extent of the following habitats (according to SxBRC GIS layers) :-

Lowland fen and swamp communities – 320.1 ha.

(Definitely fen = 63.6 ha, Definitely but unmapped = 155.7 ha, Possibly fen = 100.8 ha)

Pure reedbed – 194.4 ha

(Definitely reedbed = 132.7 ha, Definitely but unmapped = 23.4 ha, Possibly reedbed = 38.4 ha)

Coastal and Floodplain Grazing marsh – 14,609.6 ha (grassland element often poor quality)

Ancient floodplain woodlands – less than 200 ha

Wet heathlands – Not currently separately mapped. Over 30 ha recorded.

Ponds – 18,477 mapped on the Sussex pond inventory

Saline lagoons – 35 recorded, around one third of which are not man made

Rivers in Good Ecological Condition – 15% of surface water bodies such as rivers and lakes are thought to achieve a good or high ecological status under the Water Framework Directive.

Chalk streams – 135.6 km (Some streams remain unmapped)

Saltmarsh - Area mapped for Sussex is 405.3ha

Mudflats – Area mapped for Sussex 2037.7ha

Other updates

Greensand Streams

Recent mapping shows that there are over 170 km of stream associated directly with greensand springs. We would appreciate any information from local ecologists on any unusual micro and macro flora / fauna which can be found in these streams.

OUSE & ADUR RIVERS TRUST

by J.E. "Sam" St.Pierre and Robin Pepper

For the last 12 years or so the Ouse & Adur Rivers Trust, formerly the Sussex Ouse Conservation Society, has carried out invertebrate monitoring on the River Ouse using the standard protocols of the Biological Monitoring Working Party (BMWP). These involve taking a three minute kick sample, identifying the captured organisms to at least Family level and scoring them according to their tolerance or intolerance to pollution. The scores for each Family range from 1 to 10, the higher the score the less the tolerance. The total score, (BMWP score), is then divided by the number of taxa giving an Average Score Per Taxon (ASPT). The BMWP score gives basic information on the health

or otherwise of the watercourse and the ASPT adds a refinement pointing to the ratio of high/low scoring organisms.

We monitor over 70 sites on the river and its tributaries and try to cover each one at least once every two years. Where we suspect there has been a pollution incident that may have impacted upon the invertebrate population, we endeavour to increase the frequency of our visits. Until recently our results have been submitted directly to the SxBRC, but we are now placing them on the iRecord database, which has the added advantage of expert verification and the records are internationally available on the web.

The Sussex River Ouse was heavily engineered in the late 18th and early 19th centuries to accommodate barge traffic from Newhaven upriver to the outskirts of Balcombe. This involved the construction of 19 locks upstream from Lewes. The coming of the railways signalled the demise of navigation on the Ouse and the structures fell in to disrepair. However, in many places their legacy remains causing impoundment with sluggish flow and consequent loss of biodiversity. Many of the tributaries were similarly modified to provide power for mills of various sorts. Today, the river is under even more pressure: heavy nutrient loads, particularly phosphate, enter the system from sewage treatment works and agricultural run off, with the added problem of pesticide leachate from arable land. There is a further danger from cryptic toxins, particularly oestrogenic and anti-androgenic compounds. These are found in sewage effluents and agricultural fungicides. We know that these two types of chemicals in conjunction can cause a total collapse of fish populations due to their feminising effect on what should be male fish. It is possible that invertebrates may also be affected.

The effects of these factors are readily observable from invertebrate assays. A healthy watercourse will give consistent BMWP scores well in excess of 100 and an ASPT of over 6. There are still some headwaters such as the River Uck upstream of Buxted where we find such conditions. The upper reaches of the Uck are bordered by mainly pasture and woodland and do not receive a significant effluent load. Conversely there are many sites that do not reach this standard for the reasons stated. Several are particularly poor, with BMWP scores below 50 and ASPT under 4. One particular location on the Bevern Stream downstream from the Ditchling sewage treatment works outfall has given consistently poor results. This is manifestly unsatisfactory as this is a chalk stream, a type of habitat that is rare and which should support a wide range of invertebrates.

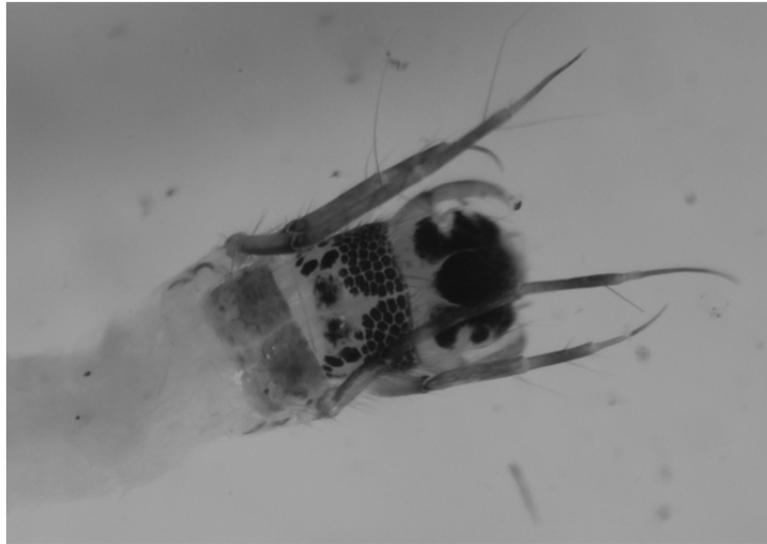
Nationally there has been a significant fall in river fly populations, which is causing some concern. Our findings in the Ouse catchment suggest that populations have been relatively stable up until this year, when we have found the nymphs of the flattened mayfly Family, Heptageniidae, absent from locations in the main river, Longford and Shortbridge Streams, where previously they have been present. Over the last few years there has been a lowering abundance of mayfly nymphs in general. This trend appears to be also affecting caddisflies, but we did find a single larva of *Beraoedes minutus* in the Longford Stream last September, a species that we have not encountered before.

Other notable finds have been larvae of the **Least water-snipe fly** *Atrichops crassipes*, a preserved sample of which has been sent to the Freshwater Biological Association laboratory at Windermere for their teaching archives, also *Asellus meridianus*, a species of water hoglouse less common than the usually found *Asellus aquaticus*.

Fortunately we have not come across any of the much publicised invasive species such as the **Killer Shrimp** *Dikerogammarus villosus*, or **Zebra Mussel** *Dreissena polymorpha*, or even the latest marauder *Dreissena bugensis*, the **Quagga Mussel**. However, we do find other non-native species, particularly the **Jenkins Spire Shell Snail** *Potamopyrgus antipodarum*, which as its name indicates is an import from New Zealand. It is present in most of the samples we collect, often in huge numbers, but does not appear to have any harmful effects on the watercourse ecology. Another stranger that we find occasionally is the freshwater shrimp *Crangonyx pseudogracilis*, which came from North

America. It is not yet widespread in the catchment but where it does occur, seems to co-exist quite happily with the ubiquitous native *Gammarus pulex* without displacing the latter.

We are keen to get some invertebrate monitoring established in the River Adur catchment, but so far have been unable to find any volunteers. If there are any readers living in that area who may be interested in participating, please contact us at info@oart.org.uk you would be most welcome.



Larva of *Beraoedes minutus*

SUSSEX GEODIVERSITY PARTNERSHIP

Underlying our lovely Sussex habitats and species is geodiversity. To learn more about the wealth of Local Geology Sites in Sussex, including access, interest features, photographs and site maps, check out this new website: <http://www.geodiversitysussex.org.uk/>

The website is a work in progress, but already there is enough information available to really learn about the great geodiversity we have here in Sussex.

BLOGS

There are various blogs and other sites on the Web that give a running picture of what is going in Sussex biodiversity and a selection of some is given below. If you would like to feature here next year, please get in touch with the editor.

Many organisations and groups do, of course, have their own web sites and weblogs and these are given after their names and addresses below.

Paul Lister has two sites:

This is a daily record (whenever the trap is run) of mothing in Mid-Sussex.
<http://www.sussexmothdiary.co.uk>

Photo galleries of butterflies, dragonflies, miscellaneous insects and a lot of other wildlife, both in Sussex and abroad. <http://www.thesussexwildlifer.co.uk>

Graeme Lyons is the SWT ecologist and this is his own wildlife blog:
<http://analternativenaturalhistoryofsussex.blogspot.com/>

Stephen Savage: has two blogs:

Sussex Urban Wildlife <http://urbanwildlifejottings.blogspot.com/>

Sussex Marine Wildlife Jottings <http://sussexmarinejottings.blogspot.com/>

Patrick Roper has five wildlife blogs:

One about Brede High Woods north of Hastings: <http://bredehighwoods.blogspot.com/>

One about the square metre nature reserve in his Sussex garden: <http://squaremetre1.blogspot.com/>

One about the wildlife of a Sussex window box: <http://windowboxwildlife.blogspot.com/>

One about trees of the genus *Sorbus*: <http://rowanswhitebeamsandservicetrees.blogspot.com/>

And a general one about wildlife, mainly in Sussex: <http://ramblingsofanaturalist.blogspot.com/>

SUSSEX COUNTY RECORDERS 2014/15

If you are not already sending your records to a particular local recording scheme or society, records of any plant or animal species can be sent to the Sussex Biodiversity Record Centre who will store them in their database and pass them on to the relevant groups listed below. Any record can be kept as confidential on request.

Sussex Biodiversity Record Centre (SxBRC)

Woods Mill, Henfield,
West Sussex BN5 9SD
Tel: 01273 497570
Email: sxbrc@sussexwt.org.uk

Fungi

MARTIN ALLISON (mainly E. Sussex)
Email:
martin.allison@sylvanconsultancy.co.uk

Microfungi

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

Lichens

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

Sussex Lichen Recording Group

Jacqui Middleton
Email: jacquiandbruce@tiscali.co.uk

Bryophytes

TOM OTTLEY
13 Cleve Close, Framfield
East Sussex, TN22 5PQ
Email: tom@ottleyland.com

Marine algae (seaweeds)

IAN TITTLE
Email: mmit@waitrose.com

Charophytes (Stoneworts)

FRANCES ABRAHAM
Old School House, Ebernoe, nr Petworth,
West Sussex GU28 9LD
Email: fab@inmycloud.net

Vascular plants

PAUL HARMES
(Sussex Botanical Recording Society
East Sussex)
Flat 7, Park View, 5 Offham Terrace,
Lewes, East Sussex BN7 2QP
Tel: 01273 474797 Mob: 07740 438306
Email: pharmes@btinternet.com

MIKE SHAW

(Sussex Botanical Recording Society
West Sussex) Email: mshaw@doctors.org.uk

Sussex Botanical Recording Society

website: www.sussexflora.org.uk

Orchids

DAVID LANG
1 Oaktree, Barcombe, Lewes,
East Sussex BN8 5DP
Tel: 01273 400446
Email: davidlang446@btinternet.com

Molluscs

MARTIN WILLING
14 Goodwood Close, Midhurst,
West Sussex GU29 9JG
Email: martinjwilling@gmail.com
Tel: 01730 814790

Dragonflies

Ben Rainbow
British Dragonfly Society – Sussex branch
C/O Sussex Biodiversity Record Centre
Woods Mill, Henfield, W. Sussex, BN5 9SD
Email: ben.rainbow@ntlworld.com
Website: www.webjam.com/bdssx

Psocoptera (Bark lice and book lice)

MARCUS OLDFIELD
moldbug5@hotmail.co.uk
Tel: 01273 552586

Orthoptera & related orders

JOHN PAUL
Downsflint, High Street, Upper Beeding,
West Sussex BN44 3WN
Email: turbots@btinternet.com

Heteroptera (plant bugs)

Graeme Lyons
Woods Mill, Henfield, W. Sussex, BN5 9SD
Tel: 01273 497506
Email: graemelyons@sussexwt.org.uk

Auchenorrhyncha: Leafhoppers & planthoppers

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

Coleoptera (beetles)

PETER HODGE
8 Harvard Road, Ringmer,
East Sussex BN8 5HJ
Tel: 01273 812047
Email: peter.hodge@mypostoffice.co.uk

Moths and butterflies

COLIN PRATT
Sussex Moth Group Recorder
Oleander, 5 View Road,
Peacehaven, East Sussex.
Tel: 01273 586780
Email: colin.pratt@talk21.com

WENDY ALEXANDER
Moth Group Secretary
Tel: 01424 212894
Email: wkalexander@btinternet.com

Sussex Moth Group website:
www.sussexmothgroup.org.uk

Butterfly Conservation (Sussex)

CLARE BLENCOWE
Butterfly Conservation recorder
Email: recording@sussex-butterflies.org.uk

Butterfly Conservation, Sussex Branch
website: www.sussex-butterflies.org.uk

Diptera (two-winged flies)

PATRICK ROPER
South View, Churchland Lane,
Sedlescombe, East Sussex TN33 0PF
Tel: 01424 870993
Email: 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

Hymenoptera Aculeata: Ants, Bees & Wasps

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

Spiders

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

Pseudo-scorpions

GERALD LEGG (National Recorder)
Email: chelifer2004@yahoo.co.uk

River Fish

DAMON BLOCK
Environment Agency, Southern Regional
Office, Guildbourne House, Chatsworth
Road, Worthing, West Sussex, BN11 1LD.
Tel: 01903 703976
Email: damon.block@environment-agency.gov.uk

Amphibians & Reptiles

Records should be sent to
Sussex Biodiversity Record Centre (SxBRC)

Woods Mill, Henfield,
West Sussex BN5 9SD
Tel: 01273 497521
Email: sxbrc@sussexwt.org.uk

Birds

Sussex Ornithological Society (SOS)

Recorder

DH Howey, 2 Portobello Cottages,
South Coast Road, Telscombe Cliffs,
East Sussex, BN10 7BD.
Email: Recorder@sos.org.uk

Bird conservation enquiries:

Email: conservation@sos.org.uk

All other SOS enquiries:

Secretary

VAL BENTLEY,
Chetsford, London Road,
Henfield, West Sussex BN5 9JJ
Tel: 01273 494723,
Email: secretary@sos.org.uk

Mammals (see below for bats, badgers & cetaceans)

Records should be sent to the
Sussex Mammal Group
C/O Bob Foreman, Woods Mill, Henfield,
West Sussex BN5 9SD
Tel: 01273 497521
Email: bobforeman@sussexwt.org.uk

Bats

Sussex Biodiversity Record Centre (See
above).

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
Email: stephen.savage@ntlworld.com
www.seawatchfoundation.org.uk

Otters and Water Voles

FRAN SOUTHGATE
Sussex Wetland Landscapes Officer
Sussex Wildlife Trust, Woods Mill
Henfield, West Sussex BN5 9SD
Tel: 01273 497555
Email: fransouthgate@sussexwt.org.uk

Marine Records - (see also Cetaceans)

Gerald Legg
Email: chelifer2004@yahoo.co.uk

Geology

Sussex Biodiversity Record Centre
Woods Mill, Henfield,
West Sussex BN5 9SD
Tel: 01273 497553
Email: sxbrc@sussexwt.org.uk
Website: www.geodiversitysussex.org.uk

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;
Website: www.ashdownforest.org

East Sussex County Council

KATE COLE
County ecologist
Tel: 01273 481621
Email: kate.cole@eastsussex.gov.uk

Natural England (formerly English Nature)

Guildbourne House, Chatsworth Road,
Worthing, West Sussex, BN11 1LD.
Tel: 0300 060 2514
Email: enquiries@naturalengland.org.uk

Environment Agency

Southern Regional Office,
Guildbourne House, Chatsworth Road,
Worthing, West Sussex, BN11 1LD.
Tel: 08708 506506
Email: enquiries@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
Email: info@highweald.org

National Trust

South East Region, Polesden Lacey,
Dorking, Surrey RH5 6BD
Tel: 01372 458203
Email: polesdenlacey@nationaltrust.org.uk

Ouse & Adur Rivers Trust

Oakwood House
Barcombe
Lewes BN8 5BW.
Tel. 01273 400093
www.oart.org.uk

RSPB

South East England Regional Office
Pavilion View, 19 New Road, Brighton, BN1
1UF
Tel: 01273 775333

South Downs National Park Authority

South Downs Centre, North Street,
Midhurst, West Sussex GU29 9DH
Tel: 0300 303 1053
Email: info@southdowns.gov.uk
Web: <http://www.southdowns.gov.uk/>

South East Water

Snodland, Kent ME6 5AH
Tel: 0845 301 084
Web: www.southeastwater.co.uk/contact

Southern Water

Environment & Product Quality
Southern House, Lewes Road
Falmer, Brighton BN1 9PY
Tel: 0845 272 0845
customerservices@southernwater.co.uk

Sussex Bat Group

www.sussexbatgroup.org.uk
Email: contact@sussexbatgroup.org.uk

Sussex Wildlife Trust

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

Weald Meadows Initiative

High Weald Landscape Trust
meadows@highwealdlandscapetrust.org
www.highwealdlandscapetrust.org and
www.highweald.org

West Sussex County Council

Environment and Heritage Team, First
Floor, Northleigh, County Hall, Chichester,
PO19 1RH
Tel: 01243 777273
env.dev@westsussex.gov.uk

Woodland Trust

The Woodland Trust, Kempton Way,
Grantham, Lincolnshire, NG31 6LL
Tel: 01476 581111
enquiries@woodlandtrust.org.uk

**PUBLICATIONS FROM THE
SUSSEX BIODIVERSITY RECORD
CENTRE**

The Sussex Biodiversity Record Centre has a growing library of publications, papers and reports available as hard copies or on line from: <http://sxbrc.org.uk/documents/> Copies of this Adastral Review from 2001 are also available on line.

The Record Centre has paper copies of the following: The Dragonflies of Sussex and Sussex Rare Plant Register.

**OCCASIONAL PAPERS AVAILABLE ON-
LINE**

**OP01 *Geranium x monacense* nothovar
anglicum. The Sussex cranesbill.**

G. x monacense nothovar anglicum was described from a plant found growing in a hedgebank in East Sussex and this paper gives an account of the species and its varieties.

OP02 Bat flies and fleas at Ebernoe.

A brief note on some of the ectoparasites of bats at Ebernoe Common in West Sussex.

OP03 Anophelic mosquitoes in Sussex.

A brief note on malaria-bearing mosquitoes in modern Sussex. This account may have to be expanded if climate change exacerbates the problem.

OP04 The polecat in Sussex.

After many years of absence due to persecution by gamekeepers and others, the polecat *Mustela putorius* is now returning to Sussex. This paper covers the story so far.

**OP05 The ivy bee, *Colletes hederæ* in
Sussex.**

An account of an attractive, late-flying solitary bee that has colonised much of Sussex along the coast in recent years.

**OP06 Japanese knotweed, *Fallopia
japonica*.**

An account of this problematic invasive alien plant and the legislation that applies to it.

**OP07 Green seafingers, *Codium fragile*, in
Sussex.**

Information regarding the seaweed *Codium fragile* ssp. *tomentosoides*. It is found on the Priority List of Problem

Species in Need of Control and is one of several taxa known as **green seafingers**. Other vernacular names are dead man's fingers, green fleece, oyster thief and Sputnik weed.

OP08 Sussex stoneflies (Plecoptera).

An account of the stoneflies (Plecoptera) recorded in Sussex.

OP09 Sussex lacewings and their allies.

An account of the Neuroptera, Mecoptera and Megaloptera recorded in Sussex.

OP10 Blackflies (Diptera: Simuliidae) in Sussex. An account of the blackflies so far recorded in Sussex based mainly on the work of Roger Crosskey and Rory Post.

OP11 Species with a Sussex dimension.

Short descriptions of species that have a particular Sussex dimension.

OP12 Extinct or formerly extinct species in

Sussex. Species in Sussex that are extinct, almost extinct, thought to be extinct, or formerly extinct.

OP13 Ticks and mites of Sussex. An account of all species of ticks and mites known by the author of the paper to have been recorded in Sussex.