ADASTRA

2001

An annual review
of wildlife recording in Sussex

Published by the Sussex Biodiversity Record Centre

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Sussex Biodiversity Record Centre
Woods Mill
Henfield
West Sussex
BN5 9SD

Tel: 01273 497553/554
Fax: 01273 494500
E-mail: sxbrc@sussexwt.org.uk

Editor: Patrick Roper
South View
Churchland Lane
Sedlescombe
East Sussex
TN33 0PF

Tel: 01424 870208
Fax: 01424 871050
E-mail: patrick@prassociates.co.uk

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From the editor

This is the first in what we hope will be a series of annual reviews giving some idea of the vast amount of biodiversity recording work that takes places in Sussex each year. We have chosen the name ADASTRA partly because it is the name of the hall in Hassocks where we all meet each February and therefore something that might be fairly easy to remember. The word, we imagine, comes from Latin *ad astra* meaning 'to the stars' and this review is, indeed, dedicated to 'the stars' – all the recorders and the members of the Sussex Biodiversity Record Centre team.

Inevitably we have not been able to include as much material as we would like. However, any groups with an active recording scheme which we have left out will be very welcome to a place in future editions.

My general plan as editor is to send out requests for contributions at the beginning of October with a copy 'deadline' early in the New Year. I then have the month of January to edit and lay out the material before it goes to SxBRC for copying and collating for distribution at Adastra Hall towards the end of February.

The main aim is to inform recorders of things that have been going on outside their groups and, in particular, to solicit help where cross-group efforts can be of benefit. As well as species groups, we hope annually to cover work on selected habitats (this year we have chosen ghylls) and one or two profiles of particular areas where there has been a concentration of recording work.

This is a publication primarily for Sussex biodiversity recorders, so if you have any ideas, suggestions, complaints or other views please get in touch.

My thanks are due to all the many people who have helped with this publication, especially Henri Brocklebank and Nadine Russell at the SxBRC. We are also indebted to English Nature for the line drawings which we have used to enliven the text.

Patrick Roper, editor.
South View, Churchland Lane, Sedlescombe, East Sussex TN33 0PF
Tel: 01424 870208 e-mail: patrick@prassociates.co.uk

Why this publication?

by Henri Brocklebank

To an outsider biological recording must seem an unusual pass-time. Butterfly nets, pooters and recording cards are not everyday items in most people's lives! However, to those involved both directly, like the contributors to this review, and indirectly, like myself (who, sadly, can't tell a chrysomelid from a psocid[1]) it is a fascinating subject that can be experienced on so many different levels.

There is recording for the 'love' of it, where individuals embrace a taxonomic group and go out to understand, see and experience the whole range and diversity of their chosen group. There is the fascination of 'natural history'. Why is this particular species only found in certain habitats at certain times? What makes these species tick? There is the 'ecological' aspect, understanding the interactions of communities, bringing recording into '3D' and finally the 'conservation' aspect of using biological recording as a tool for understanding our environment so that we are in a better position to manage, enhance and preserve it.

The Record Centre is extremely grateful to those naturalists that choose to share their biological data and expertise with us. The support of the recording community in Sussex to the Record Centre has been overwhelming in the past year and has enabled us to provide high quality data to over 400 enquiries and inform numerous decisions by our partners. We hope that seeing your data being put to good use is a reassuring justification for supporting our work. We hope, in turn, that we are providing support to Sussex naturalists. We want to help put records into computer systems, to help towards publications of Sussex atlases and provide information to you wherever possible. Nadine Russell, myself and our office volunteers can hopefully take some of the drudgery and confusion away from the often controversial interface between records and computers.

This new publication is an opportunity to find out what people in Sussex have been doing over the past year, including finding species new to Sussex, experimenting with new recording techniques, looking at changes in population dynamics. We tend only to be exposed to information on groups that we are personally interested in, so it is a great opportunity to see what 'everyone else' has been up to. I hope you enjoy this new publication and well done to Patrick Roper for co-ordinating the whole report.

Henri Brocklebank, Biodiversity Records Officer, Sussex Biodiversity Record Centre

[1] Something we aim to attend to in 2002. Ed.

RECORDER 2000

During October 2001 a number of training sessions were held across the county to help people get started on the new RECORDER 2000 software. Several are already getting into their stride with what often appeared to be a dauntingly difficult programme. Others are continuing with earlier versions of RECORDER, or using MapMate, BioBase and other systems from which data can be transferred to RECORDER 2000. The Record Centre hopes to take on RECORDER 2000 as its primary database some time in 2002, but it is a complicated system with several glitches and the transfer of 500,000 records is a tricky procedure!

The last thing the Sussex Biodiversity Record Centre team want to do is to discourage those with the essential skills in finding and identifying our flora and fauna from working out in the field and doing what they are best at - getting new records. If you feel either overwhelmed or underwhelmed by computerisation issues and you are worrying about the best way of keeping and passing on your records, do talk to Henri Brocklebank or Nadine Russell at the Record Centre.

THE SUSSEX RARE SPECIES INVENTORY (RSI) AND THE SUSSEX PROTECTED SPECIES REGISTER (PSR)

Harry Montgomery continues to do sterling work in compiling the *Sussex Rare Species Inventory*. This essentially lists all species with a national 'RDB' status in the two counties, plus some other special taxa - e.g. those that have only just been recorded as British and have not yet been given a rarity rating. This list covers around 3,500 species found in Sussex and records of these species are given special attention in the Record Centre.

However, as we all know, just because something is rare does not mean to say that it protected and likewise, not all protected species are rare. With this in mind the Record Centre, with the help of Harry Montgomery, have now compiled the *Sussex Protected Species Register*. This lists all species (other than birds) that are protected in Sussex (106 species). Again, like RSI records, PSR species records are given special treatment in the Record Centre.

If you do come across any records of either rare or protected species in places you think Harry might not have heard about, please get in touch with him at the Record Centre at the earliest opportunity. He is, of course, the first to appreciate that some of these records may be sensitive and confidential and great care is taken in regard to access to the RSI and PSR (as it is to all our records).

Updated RSI and PSR species lists are available from the Record Centre on request.

SITE FOCUS

Many sites have concentrated recording work taking place on them, either for a specific project, or in the longer term. Each year we plan to focus on one, or a few, of these and have chosen Rye Bay on this occasion.

Rye Bay: The *Two Bays, One Environment* project

*by **Barry Yates**, project manager and manager of the Rye Harbour Nature Reserve*

This Anglo/French INTERREG II project has been run for nearly five years by the lead partner, East Sussex County Council, and has involved several other organisations. The funding has now ended, but we hope the work and the links we have made will continue.

The Two Bays are Rye Bay in East Sussex and the Baie de Somme in Picardy – separated by just 90km. of the Channel. They share much wildlife because they have similar habitats of vegetated shingle, sand dunes, saline lagoons, wet grassland, reedbeds, saltmarsh and estuary. The broad aims of the project were to study the habitats and species, and to help people manage and appreciate the biodiversity.

Rye Bay includes Pett Level and the low-lying land towards the Kent border, as well as the river valleys of the Rother, Tillingham and Brede. In Rye Bay there are eight SSSIs, several of which are within the Dungeness to Pett Level Special Protection Area. Part of the Rye Harbour SSSI is also within the Dungeness Special Area of Conservation. Rye Bay has 15km. of undeveloped coastline and a network of three rivers, 500 km. of ditches and many gravel pits that link the designated sites. A further reason for its great biodiversity is that to the west lies the cliffs of Fairlight and Hastings Country Park and to the east is the great expanse of the Romney Marsh.

Collating the available historical records, encouraging more surveys and general recording has built up a large wildlife database on RECORDER 3.3 that is useful and available for study. There are currently more than 172,000 records of 6,332 species (including 1196 local, 558 notable and 187 Red Data Book species - according to the status in RECORDER).

Reports on some of the larger groups have been written, using the expertise of local specialists and they can be accessed on the web site (below):

Coleoptera of Rye Bay by Peter Hodge
Lepidoptera of Rye Bay by Colin Pratt
Diptera of Rye Bay by Patrick Roper
Aculeate Hymenoptera of Rye Bay by Andrew Grace
Aranea of Rye Bay by Andrew Phillips

During the project it became clear that gathering old photographs of the countryside was a vital part of understanding the changes that have taken place. Encouraging the public to search out these useful images will continue.

A very enjoyable and stimulating aspect of the project was the recording trips to France by specialists. These have helped our partners in the Baie de Somme to understand better the biodiversity of the sites they manage.

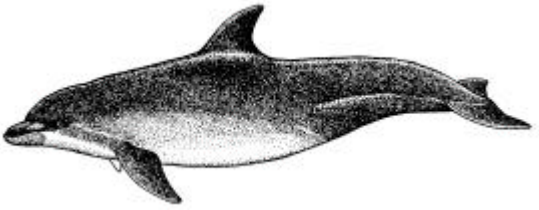
Please contact the project at the address below if you;

- have any wildlife records, old or new, for either of the Two Bays,
- have any old (before 1980) photographs of the Rye Bay countryside,
- would like information on particular species.

Information on the *Two Bays, One Environment* project is available from:

Rye Harbour Nature Reserve, 2 Watch Cottages, Winchelsea, East Sussex TN36 4LU, or the web site: www.naturereserve.ryeharbour.org

CETACEANS AND OTHER MARINE MAMMALS



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

Monitoring of cetaceans along the Sussex coast continued throughout the year, although most systematic monitoring only occurs between Worthing and Brighton. The Sussex Regional group has been recording annual cetacean sightings since it was formed in 1991 and I have recently completed a preliminary analysis of sightings to date.

Most information comes via trained volunteers with some data coming from casual sources, which is assessed for reliability. We started a dolphin hotline (07773 610036) to help follow dolphin movements along the coast. A 3-part volunteer training workshop led to the setting up of three new satellite watch sites each with a head volunteer. This has also allowed us to provide continuous support and increases the dissemination of information to the volunteers. We hope to build up on these groups through 2002. The workshop was funded by English Nature, Adur District Council and Worthing Borough Council. Data collected by the regional group is used as part of a study of Sussex cetaceans and part of a nation-wide study of all UK cetaceans started by the Sea Watch Foundation in 1973. Data is exchanged with other interested groups including the Sussex Biological Records Centre.

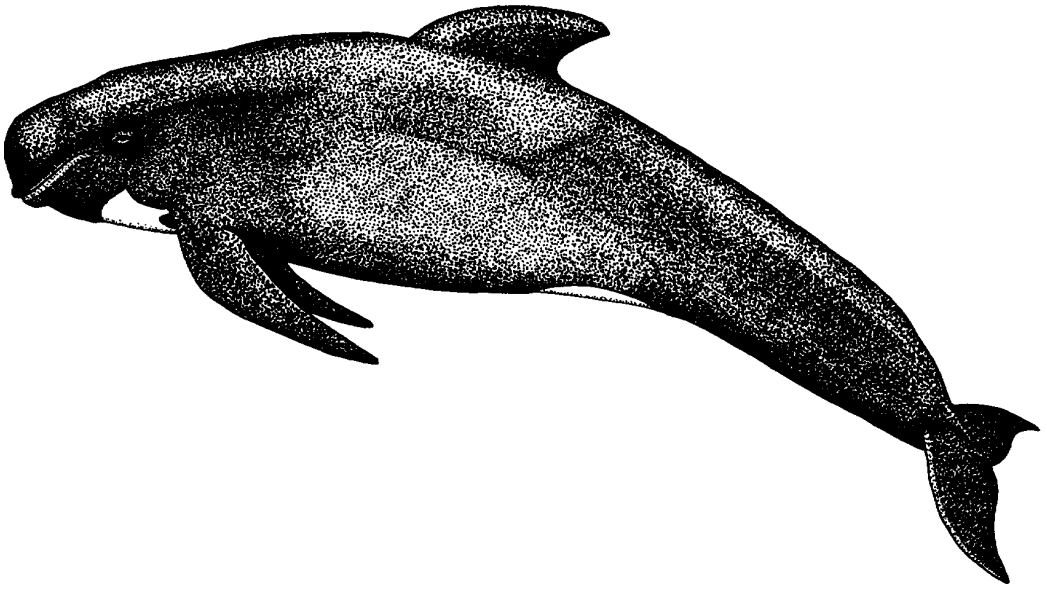
The above funding has also allowed us to implement the Sussex group's new education programme (development was funded last year by Transco Grassroots project), which is based around data collected by the Sea Watch Foundation and the Sussex regional group. Children take the role of scientists and analyse data, problem solve, plot data and use real observational techniques. The programme also contains other activities allowing children to learn through science, math, English, geography and art. Similar activities are now part of our display used to pass information to the public at events.

Compared with other Sea Watch Foundation regional groups, we have a relatively low number of annual cetacean sightings, largely transient bottlenose dolphins, *Tursiops truncatus*, that appear to migrate along the English Channel with peak sightings between March and July. Many sightings are made between 100 and 200 metres from the shoreline. During 2001 we recorded 19 separate confirmed bottlenose dolphin sightings (and numerous anecdotal accounts). We also had a cluster of sightings in July of what appeared to be a solitary bottlenose dolphin that took up temporary residence off Brighton for two and a half weeks.

On the 3 July I observed this solitary dolphin heading east past my watch site adjacent to the West Pier (Brighton) and it is highly likely that the dolphin I observed two hours later, swimming from the east was the same animal. A dolphin was sighted at this position 5 times on that day. On the 5 July, I spotted a single dolphin at the same site and followed it along the shore until it reached the Brighton Marina where it turned around and headed in a westerly direction at which time I had to end my watch. The majority of sightings over the last 10 years are of dolphins heading east, rarely are dolphins seen swimming west. Many of the observations of this solitary dolphin reported the dolphin swimming in a westerly direction. Scientifically, it is difficult to be certain that the dolphin sightings were of the same animal, however the sightings followed a distinctive pattern, which was different from the usual swimming patterns observed.

Dolphin sightings range from solitary animals to groups of 10 or 12. Analysis of data collected over the last ten years suggest that groups containing between 2 to 4 dolphins are most common. Off shore sightings are reported from about 1 mile to 15

miles from the shore. These dolphins often appear playful and ride the bow wave and swim alongside the vessel, sometimes following it for several miles. Sightings of dolphin groups containing one or two calves have been recorded in previous years, however this is often difficult to judge hence the low number of confirmed juveniles. Several sightings each year are recorded where dolphins are actively feeding, this includes inshore and offshore sightings. On several occasions the solitary dolphin mentioned earlier was seen feeding and it is possible that a localised food source was the reason this particular dolphin stayed in the area.



Other species are occasionally reported off Sussex, including long-finned pilot whales *Globicephala melas*, common porpoises *Phocoena phocoena* and common dolphins *Delphinus delphis*. This is reflected by the dead stranding of cetaceans that occur on Sussex beaches. A higher number of such strandings occurred at the end of 2000 and early 2001, possibly due to prolonged stormy weather. Signs of by-catch[2] were recorded on some dead animals. We have set up a network of organisations (in conjunction with the Natural History Museum of London) that allow us to respond to dead strandings and collect vital data before the animal is washed back out to sea or disposed of. In my joint role of East Sussex regional rescue co-ordinator for Southern Marine Life Rescue we are also able to respond to live 'strandings', usually seals. Occasional seal sightings are reported, both grey and common. A sighting reporting three large rorquals near Hastings, possibly humpback whales *Megaptera novaeangliae*, created a lot of excitement in June and several sightings of large whales (possibly minke *Balaenoptera acutorostrata*) seen off Hampshire in the summer (heading east) may have passed Sussex.

Stephen Savage, Sea Watch Foundation, Sussex Regional Co-ordinator,
51 Eastbrook Road, Portslade, East Sussex BN41 1LN Tel. 01273 424339
E-mail ALLSAVS@aol.com Web: www.Seawatchfoundation.org.uk

[2] 'By-catch' is non-target species caught in fishing nets.

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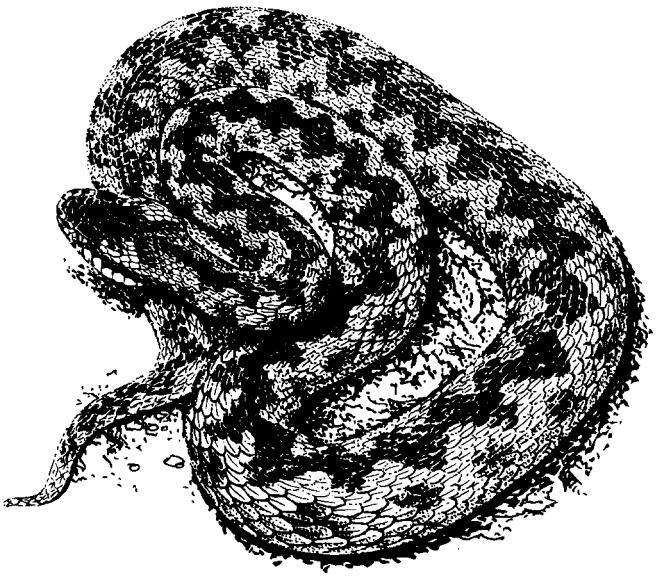
AMPHIBIANS & REPTILES

By ***Dennis Dey***, recorder for the Sussex Amphibian & Reptile Group,
26 Manor Avenue, Hassocks, West Sussex BN6 8AG

As well as being Sussex recorder for amphibians and reptiles, I run a helpline, which is a very good source of records for us (all records however "common" are always welcome). In 2000 and 2001 calls were down in number, possibly due to the Sussex Wildlife Trust running its own Careline. I had 78 calls in 2001 when previously the number has been over 200. There may well be other factors affecting this too. The Trust does, however, pass the information on to me at the end of the year.

Another problem is the Data Protection Act on computer-held records. Various organisations have sent me their records but with a covering letter saying I can't use them due to the Act. All those wasted records!

As with every year, snakes seem to dominate the calls. In particular, grass snakes, *Natrix natrix*, which seem to turn up anywhere – conservatories, sheds, living rooms, kitchens and offices. Most people's concern is that the snake isn't dangerous as they have pets and children around. Often callers think they have an adder, *Vipera berus*, in their garden. It is not until I ask them for a description that it turns out to be a grass snake. Even slow worms, *Anguis fragilis*, are "snakes" and are not welcome in some instances.



Snake rescues during 2001 included one in a store-room in a pub at Chailey, one in a swimming pool pump-house at Balcombe and another in a kitchen at Street. All were called in as adders, all were grass snakes. I had one call from Findon that really was an adder - caught in nylon garden netting (I've rescued many snakes from that over the years). When I got there I found a lovely male snake well and truly caught and he was angry. I cut him free, leaving the crucial strands to last – the ones that freed the head. He was released on the Downs on my way home. Gardens are no places for adders.

On the amphibian side common frogs, *Rana temporaria*, had a good year at least in my garden and they and their spawn seem to dominate my calls during spring. (My first spawn appeared on 2 February and a week later I had 7 clumps). I have had many calls over the years, about "coloured" frogs, from yellow through pink and even

red to all black ones (one woman described one of the latter as "like a shiny wellie boot with legs.").

Common toads, *Bufo bufo,* don't seem to be as common as when our group first started in the 80s. I have had, in the past, calls from people wanting rid of them. Many people have a toad or two in their greenhouse or shed but not in their ponds, even though the ponds sound suitable.

Newts are widespread across both halves of the county with the smooth newt, *Triturus vulgaris,* being the more common. The males are quite often mistaken for great crested newts, *Triturus cristatus*. The latter are not as scarce in Sussex as first thought. Palmate newts, *Triturus helveticus,* seem to be more common in East Sussex though.

Over the years I have visited Hickstead show-jumping course, as great crested newts have turned up in the water jumps each year. These first came to light when the jumps needed draining and cleaning out ready for the season. We never found out exactly where the newts originally came from though.

As a group, we have had a number of calls about exotic pets. North American bullfrogs, *Rana catesbiana,* feature frequently having been bought as tadpoles from garden centres and illegally released into garden ponds in contravention of the Wildlife & Countryside Act. Red-eared terrapins, *Trachemys scripta elegans*[3] are now to be found almost anywhere from garden ponds to lakes. I saw two large examples in the pond by the church in Ditchling last year (2001). Occasionally snapping turtles, *Chelydra serpentina,* turn up in ponds. These creatures, when large enough, are capable of taking a finger off without batting an eyelid!

Alien snakes are out there too – either as escapes or deliberate releases – corn snakes, garter snakes, rat snakes, king snakes and even pythons – yes, pythons, and they are big ones too. I've had calls about them all, but I refer any requests about exotics to others as I do not deal with them at all. My concern and interest lies with our native species. As I have already mentioned, any records are welcome, be it from a garden pond or out in the field – they are all useful to us, as a group, in obtaining an overall picture of Sussex herps.

[3] *Chrysemys scripta elegans* prior to 1992.

MAMMALS (AND THE BLACK POPLAR)

*by **Fran Southgate**, Sussex Otters & Rivers Partnership*

The Sussex Otters & Rivers Partnership (SORP) has, like most projects, had a disjointed year due to flooding and foot and mouth, followed by the departure of the partnership officer in May. The new SORP officer (myself) took up post in August charged with the job of encouraging river and wetland habitat restoration by conserving the flagship species of otters, *Lutra lutra*, water voles, *Arvicola terrestris*, and native black poplars, *Populus nigra* ssp. *betulifolia*, across Sussex. For each of these species a Species Action Plan is being finalised and should be published in the near future.

Although most projects are just getting off the ground, there are a few exciting initiatives being undertaken. The Chichester Coastal Plain Sustainable Farmland Partnership has now been running for over two years. Sussex FWAG and WildCRU, working in partnership with a number of local bodies have thus far surveyed 2400 ha of farmland on the Chichester coastal plain, with the aim of improving habitats for the water vole in particular. Water vole numbers in Sussex are dangerously low and the Chichester coastal plain holds one of the largest populations but estimated at a mere 100 individuals. (The only other large population of water voles is at Rye). Each farm surveyed has had a whole farm conservation plan written and a number of conservation measures suggested/implemented through a combination of good will, agri-environment scheme funding and direct project funding.
A mink trapper has also been employed for a six month contract.

In order to enable the SORP to take a more strategic approach to the restoration of viable habitat corridors on Sussex rivers, we are currently supporting two detailed surveys of the catchments where it is felt that otters in particular may be returning. The Western Rother catchment survey is currently underway. We know that otters are venturing into the county through this catchment due to the unfortunate road death of an animal on the Hampshire/Sussex border earlier this year. We are now seeking funding for an identical survey to be carried out on the Upper Ouse and Upper Medway catchments started in December 2001. These surveys will provide us with detailed information on the gaps in habitat where conservation measures are needed, and a 'shopping list' of projects for habitat corridor improvement measures next year.

An intrinsic part of the project involves work with local landowners. In particular this year, despite delays, the National Otter Survey is being carried out; the results of which we should know by the end of the year. The SORP is continuing to work with

landowners, principally through Countryside Stewardship Schemes to help build otter holts and otter sanctuaries along watercourses. One isolated population of water voles has been discovered in East Sussex and it is hoped that a detailed survey of the surrounding floodplain will help to establish how the population can be protected and helped to expand.

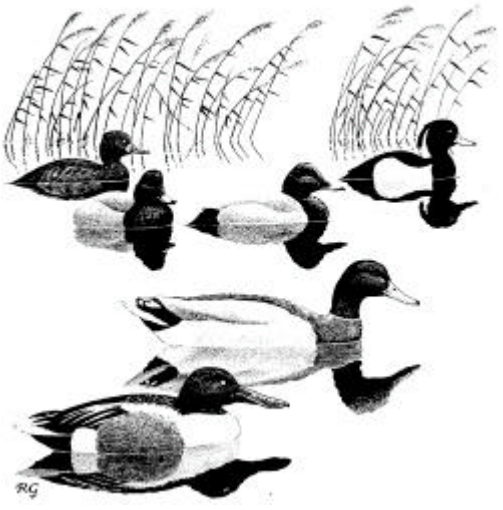
The project is making a big push to try and get all sightings of otters, water voles and mink reported to either the SORP or to the Sussex Biodiversity Record Centre (SxBRC). This is one of the project's most valuable ways of discovering where otters and water voles are active across the county, so we would be glad to hear from anyone who has a sighting. In the last year we have received around 40 potential otter and water vole sightings from various catchments (Rye, Pett, Pevensey, Western and Eastern Rother, Arun, Ouse, Medway etc.), some of which have since been confirmed. So we are optimistic that in the next few years we may be able to encourage more stable populations in Sussex.

The Sussex Black Poplar Working Group is now well established. Although one of our old parent trees was sadly lost from the Sheffield Park site, the planting programme is developing well. Cuttings taken from the 33 remaining genetically pure black poplar trees in Sussex have been grown on at Wakehurst Place in stool beds and are now producing annual crops of young whips to plant. Each year we consider requests for trees and deliver the cuttings. This year the group is taking a more strategic approach to black poplar plantings, and is looking for opportunities for more extensive planting of black poplar trees in wet woodland re-creation/restoration schemes. The group is focusing on searching for appropriate restoration sites and on updating all the records of plantings to date with the SxBRC.

The SORP officer, Fran Southgate, can be contacted at Sussex Otters and Rivers Partnership, The Lodge, Arlington Reservoir, Berwick, nr Polegate BN26 6TF. Tel 01323 870810. E-mail: Fsouthgate@southeastwater.co.uk

BIRDS

*by **Robin Pepper** and **John Hobson**, Sussex Ornithological Society*



The Sussex Ornithological Society's Recorder receives records for the whole of Sussex, currently in excess of 50,000 annually, from four different sources. They are entered into a database called CoBRA (County Bird Recording Application).

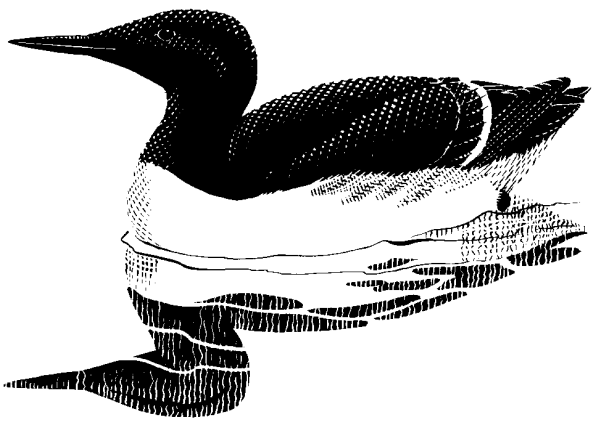
- Members send in their casual records of observations made on field trips and during other activities either on forms provided or, increasingly, on disc in a form that can be read directly into

the database. A significant proportion of these are of unusual species, unusually high numbers, or very early or late dates of migrants. Records of species scarce in the county are considered by the society's six-man Records Committee whilst nationally scarce species are forwarded for consideration to the British Birds Records Committee before acceptance for publication. In 2000, 391 records were considered in this way of which 86% were accepted and included many exotic rarities such as great white egret, squacco heron, purple heron, bee-eater and golden oriole.

- Records from some of the important areas in the county are collected and collated, often by a warden for that area, before forwarding to the recorder at the end of the year. These include, from west to east, the Chichester Harbour complex, Pagham Harbour, Pulborough Brooks RSPB Reserve, Weir Wood Reservoir, Ashdown Forest, Bewl Water, Pett Level and Pools and Rye Harbour Local Nature Reserve. These reserves generate a large number of records each year, which provide valuable information on the fluctuating fortunes of different species.

- Surveys are carried out each year, either of a specified area or of one or more species. Area surveys are usually conducted by a single person to identify individual breeding territories and are repeated annually. Species surveys may be organised by the society on an *ad hoc* basis, or in cooperation with the British Trust for Ornithology and are repeated at longer time intervals. Nightingales were surveyed in this way in 1999 (as part of a national survey) when an attempt was made to record every singing male in the county. A total of 692 was found indicating that the population in Sussex is stable and only exceeded by two other counties (Kent and Suffolk). Members of the society also take part in the national Wetlands Birds Survey (WeBS), making monthly counts at the major estuaries and other large bodies of water. All such surveys provide valuable information on changes in population numbers.

- The last group of records come from a dedicated band of sea-watchers who, in 2000, put in a remarkable 2,677 hours at five main coastal observation points from Selsey Bill to Bexhill. They provide information on migration and coastal movements of seabirds. Of particular note in 2000 was the unprecedented number of auks seen, especially early in the year. The year's total for guillemots exceeded the aggregate for the last six years, and for razorbills that for the last five years.

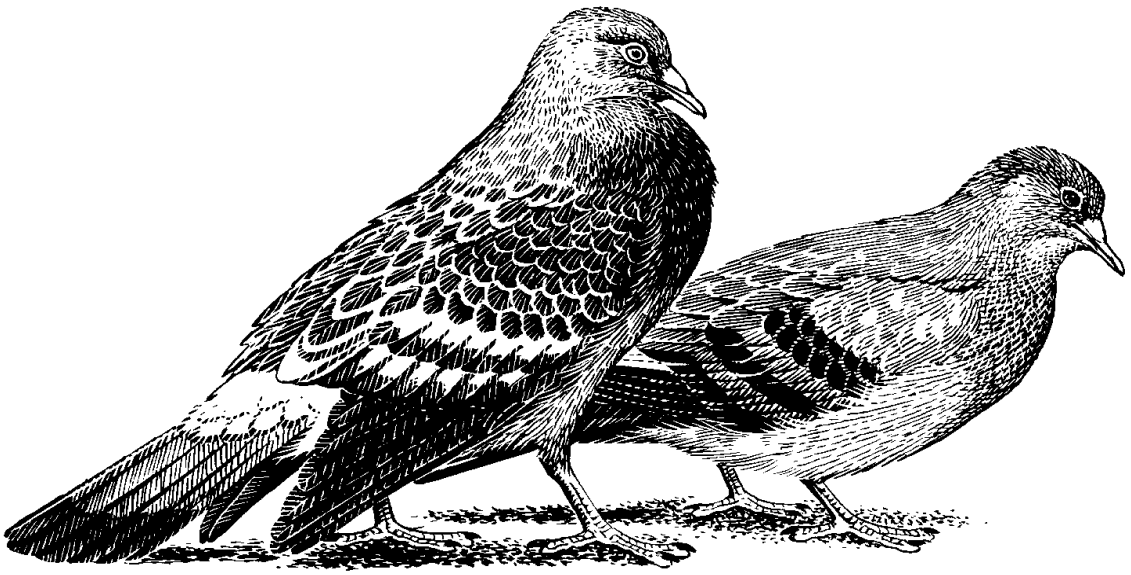


All records are collected as early as possible and are analysed the following year by a team who write a detailed summary and description of the status of every species for the annual report. Also included are a chronological review of the year, summary tables of migration dates and breeding records, a ringing report and various special articles. The 2000 report, which will run to over 220 pages, will include articles on:

- **The influx of Honey Buzzards and other raptors in Sussex during autumn 2000** (an account of the movement of birds of prey through the county in unprecedented numbers when 488 honey buzzards were seen between 22 September and 8 October compared with only eight recorded during the autumn migration period in 1999).
- **The distribution and status of the Hobby in Sussex in 2000** (which reports the results of a survey revealing increasing numbers of this species).
- **A county review of the Hen Harrier with special reference to roost sites found on river valleys and downland** (which discusses the factors affecting the availability of roost sites and possible reasons for fluctuations in the numbers of this species overwintering in the county)
- **The 1995-2000 Sussex breeding Swift survey, comparison with the 1968-70 survey and conservation implications/issues** (which gives the results of the latest survey of this declining species)
- **The Little Egret roost at Thorney Deeps** (which charts the expansion of this colony since its inception in 1991).

The Report also contains a section on 'Escaped and Feral Birds' seen during the year. Twenty-two species were recorded including white pelican, sacred ibis and red-tailed hawk.

Robin Pepper, Scobells Farm, Barcombe, Lewes BN8 5DY
John Hobson, 23 Hillside Road, Storrington RH20 3LZ



ARACHNIDA (SPIDERS AND RELATED INVERTEBRATES)

*by **Andrew Phillips***

By far the most exciting record of the year was a sighting of a male ladybird spider, *Eresus sandaliatus* from Hastings cliffs in October. This record will need confirming especially as male ladybird spiders are usually only seen for a very small length of time in late spring. If further records of this species are confirmed from the site this would be a very important discovery and the first record of the species in Sussex.

The strange looking orb-web spider *Uloborus plumipes* continues it spread across the country. This spider which is believed to have been introduced into the country on garden plants from mainland Europe is turning up in garden centres all over England, presumably due to movements of plants between nurseries and garden centres. It is worth looking out for this bizarre looking spider in garden centres and greenhouses in Sussex.

The jumping spider new to Britain first found at Rye Harbour Nature Reserve in 1998, which was previously identified as *Neon levis* has currently been re-identified as *Neon pictus*. This spider, which was previously only known from Eastern Europe has also been more recently found in similar vegetated shingle habitat at Dungeness, Kent.

The two British ant-mimic jumping spiders have both been found recently in Sussex. *Myrmarachne formicaria* has been found on sandy grassland near the sea at Ecclesbourne Glen, Hastings Country Park. The smaller *Synageles venator* has been found on dune grassland adjacent to Rye golf course on Camber Dunes. Both these spiders are difficult to find due to their small size and uncanny likeness to ants. *Myrmarachne formicaria* is one of the weirdest looking spiders in Britain as it hunts amongst ants waving its two front legs around mimicking ant antennae.

The distribution of *Dolomedes plantarius* at Pevensey Levels continues to grow with further records coming from freshwater ditches in the extreme east of Cooden Beach golf course. A joint study of the Pevensey population and the Norfolk/Suffolk population of this species will be carried out this year. This study has been commissioned by English Nature and will establish the differences in population size and habitat type between the two populations, information that will hopefully contribute to the habitat management for this species.

Another rare spider, *Araniella inconspicua*, was found at Pevensey Levels last year. This scarce spider, which is confined to southern England, was found on a mature species rich hedgerow within a central area of the levels.

As the northward progress of the wasp spider *Argiope bruennichi* continues into southern Scotland, the density of southern populations of this species increases. Over a thousand were counted from Choice allotments in Hastings. The allotment society here actively manage the habitat with Hastings Borough Council to protect the

species, by leaving some allotments untenanted and by leaving some allotment plots uncut for a few years to allow the spiders to complete their annual reproductive cycle uninterrupted.

The diversity of spiders and importance of this group for ecological and conservation study continues to grow due to the increasing popularity of this group by invertebrate naturalists and nature conservationists. Spiders are a relatively easy group to learn and there is still a large potential for discovering species new to Britain and science, and new information on the ecology of these invertebrates.

SPRINGTAILS (COLLEMBOLA)

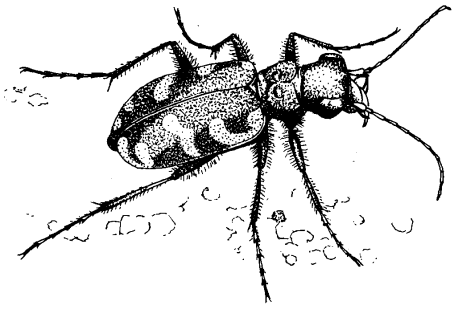
This group of some 270 indigenous insects has been very much neglected in Britain since Sir Henry Lubbock published his monograph in 1873. However, Steve Hopkin (2001) at Reading University is producing a new AIDGAP guide, *A Key to the Springtails of Britain and Ireland*, to be published by The Field Studies Council PROBABLY in 2003, so records should increase rapidly.

Some Sussex entomologists have been using the test version of the key and their work shows just how much there is to be done. The British species live in soil, moss, the seashore and many other habitats. Identification is not easy and access to a high power microscope is essential, but for those in a position to make a study of these insects there is much to be discovered.

To learn more visit Steve Hopkin's web site at: www.ams.rdg.ac.uk/zoology/hopkin/

He has an 'all records' map here which indicates that the Weald in both East and West Sussex apparently has (or had) no springtails at all!

BEETLES (COLEOPTERA)



*by **Peter J. Hodge**, Sussex Coleoptera Recorder*

Having studied insects in Sussex for more than 30 years I have accumulated a vast quantity of information, mainly as lists of assorted insect records in field notebooks.

For many years I have had a burning ambition to compile a new list of Coleoptera for the county, but was this achievable? The Rev. W. W. Fowler's 1905 list of over 2,060 species was published in the Sussex Victoria County History (VCH) Volume 1. This must have been a huge undertaking for one person in his spare time, especially as there were no computers to help sort species into the correct but ever changing taxonomic sequence.

For many years I have struggled to maintain ordered species lists and at one stage I attempted to construct a comprehensive card index. This failed miserably because of the sheer number of cards that needed to be constantly updated (there are almost 50% more recorded species than in Fowler's day) and I made relatively little progress. Then computer databases arrived and I thought this was the answer to all my dreams. However, with a huge backlog of data, and new survey information being added faster than I can enter them, I am still swimming in a sea of several thousand relatively inaccessible hand written records.

However, the good news is that, for the past 25 years, I have maintained a check list of all beetles recorded from East and West Sussex, so that I am at least able to state how many species there are! The number of species has grown substantially since 1905, to well over 2,900 at the present time, representing about 75% of the British Coleoptera fauna. Whilst it was always my intention to let the number of species grow to 3,000 before publishing '*The beetles of Sussex*', adding another 80 species to an already quite impressive list will take many more years.

Is the county Coleoptera list likely to be the longest in Britain? Well, the answer is 'perhaps'. The rich variety of habitats in Sussex means that the county has a very diverse beetle fauna, but it is also apparent that active recorders in the neighbouring counties of Kent and Surrey are also aiming at the same goal. Yes, there is an element of competition amongst entomologists, because that is partly what motivates us. However, the resulting set of records is now actively being used to conserve an ever-increasing number of threatened habitats, so I do not criticise this way of thinking.

Logically, Kent, being the closest county to mainland Europe, should support the highest number of British insect species, although I have no figures to support this theory. Surrey, with beetle recorder Dr Jonty Denton, currently has a list almost equalling that of East and West Sussex, even though it is scarcely more than half the area, has no coastline and contains large areas of urban jungle. I have no comparative information for Hampshire, which has only recently set up a biological records centre. So, in East and West Sussex three quarters of the 4,000 British beetles have been recorded and species continue to be added at perhaps five to ten per year. Furthermore, I still have a long list of possible additions to the county list, so there are plenty of reasons for competent recorders to go into the field and do their recording.

It is tempting to dismiss some 'unlikely' Victorian records as mistakes, or even hoaxes, especially when there are no specimens available as confirmation. Some old records are indeed likely to be the result of misidentifications or confusion of names, but others should be viewed more seriously. The following example is an illustration of the problem. The reed beetle *Donacia obscura* is a 'northern' species, inhabiting lakes, especially in Scotland, but extending southwards into England and Wales. An old record for 'Arundel' published in the Sussex VCH list has been doubted by some entomologists, but Jonty Denton's recent discovery at Thursley Common Hammer Pond, Surrey indicates that perhaps the Sussex record should not be discarded.

Four seemingly unlikely riverside ground beetles are recorded by Fowler in the 1905 Sussex VCH list, but there are no recent sightings in the county. These are *Bembidion fluviatile*, *B. prasinum*, *B. semipunctatum* (as *B. adustum*) and *B. testaceum*. They are all well outside their normal British range (in the north and west), but so was the tiny scarab beetle *Aegialia sabuleti* when it was discovered on the sandy banks of the river Rother near Midhurst in 1988. More research is needed here.

The tiny, but prettily patterned, wetland ground beetle *Bembidion octomaculatum* was recorded (as *B. sturmii*) from St Leonard's Forest by the Rev. H. S. Gorham in the early 1870's, but it apparently became extinct in Britain during the late 1880's. Then, in June 1992, Richard Jones discovered a colony at Powdermill Reservoir near Brede, and it has since occurred on the Kentish side of Bewl Water. Does this species occasionally extend its geographical range northwards across the Channel into the south of England, only to die out again a few years later?

Previously unknown historical records are still occasionally 'discovered' in museum collections. For example, a specimen of *Mordellistena nanuloides* was recently found by Brian Levey in the A. E. Gardner collection at the National Museum of Wales, Cardiff, labelled West Wittering, 14th July 1971. This tiny 'tumbling-flower beetle' is a Red Data Book species whose larvae develop inside old woody stems of Sea Wormwood *Seriphidium maritimum* and is currently known to breed in Britain only on the Isle of Grain, Kent.

Although we are always reading about declining species, and blaming things on man's misuse of the environment, several Sussex insects are in fact spreading. Some are new arrivals to the county, having only recently colonised the British Isles from continental Europe. For example, the clover seed associated 'pea-weevil' *Bruchidius varius*, first found in the British Isles at Ditchling Beacon on 9th October 1994 is now well established over much of south-east England. Is this the result of 'global warming'? Another clover-associated weevil *Hypera meles* was formerly regarded as very rare in Britain, but this species is now relatively frequent in many parts of England. The reasons for these changes in status are often puzzling, even to specialists, but although we do not always understand why faunas change, it is important to realise that some species will inevitably become locally extinct, whilst others will establish new colonies as a result of having recently extended their range.

Peter J. Hodge, 8 Harvard Road, Ringmer, East Sussex BN8 5HJ

BUTTERFLIES

*by **Joyce Gay**, recorder for the Sussex Branch of Butterfly Conservation*

As with other groups, foot and mouth disease caused many problems for recorders with restrictions running, as they did, across the main spring and summer flight periods. A compensation was the autumn arrival of monarchs, *Danaus plexippus*, along the coast from Pagham to Peacehaven with at least 5 sightings in Sussex.

Monarch butterflies are now seen regularly on the western fringes of Europe, including Britain, but their origin remains uncertain. Their ability to cross the Atlantic unaided from their North American strongholds is often doubted and the alternatives are islands like Madeira, or southern Spain where they now breed – still a considerable journey, especially as the butterflies often seem fresh on arrival.

The probability of monarchs being able to breed here is virtually nil due to the lack of their milkweed (*Asclepias*) foodplant, though females have been known to locate the occasional cultivated plant.

Another butterfly that had an exceptionally good year in 2001 was the red admiral, *Vanessa atalanta.* This is still regarded as a migrant capable of producing a summer generation in Britain, but there is some evidence that the larvae now regularly survive the winter on sheltered, south-facing patches of stinging nettles near the Sussex coast. Wood whites, *Leptidea sinapis*, also had a good season in their few locations in north west Sussex and it is hoped that, with management help from the Forestry Commission, the future of this species, which has declined drastically over the last 100 years, will be more secure in the county.

Another woodland butterfly that has been increasing is the silver-washed fritillary, *Argynnis paphia*, and it would be wonderful if they return to some of our woods and forests in the numbers they are capable of reaching.

Many people remarked on the lack of small tortoiseshells, *Aglais urticae*, but this is a species that fluctuates naturally and, though very scarce in most places, they were

abundant on the Rye Harbour Nature Reserve in autumn. This raises the question of why the butterflies were so successful at Rye while they had a bad year elsewhere. One possibility is that winter rainfall in the Rye area in 2000/1 was lower than most other places, which may have helped overwintering stages avoid fungal infections, but it could equally have been due to factors affecting their predators and parasites, or much else. Like the wall brown, *Lasiommata megera*, and some other species, the small tortoiseshell seems to do better close to the coast as its numbers fall.

With the change in grazing patterns during 2001, 2002 will be an interesting season in the butterfly world and am I always happy to receive records of any species, common or rare, migrant or resident, for the county and national databases. As with other groups, it is not just a question of seeing how many records one can collect: the information that builds up is essential in helping to evolve better conservation and management strategies for them. The publication of the national *Millennium Atlas of Butterflies* is a splendid example of how co-operative recording work can produce a very detailed picture of what is happening to wildlife in particular groups and in general as well as being an invaluable tool for those involved in butterfly conservation.

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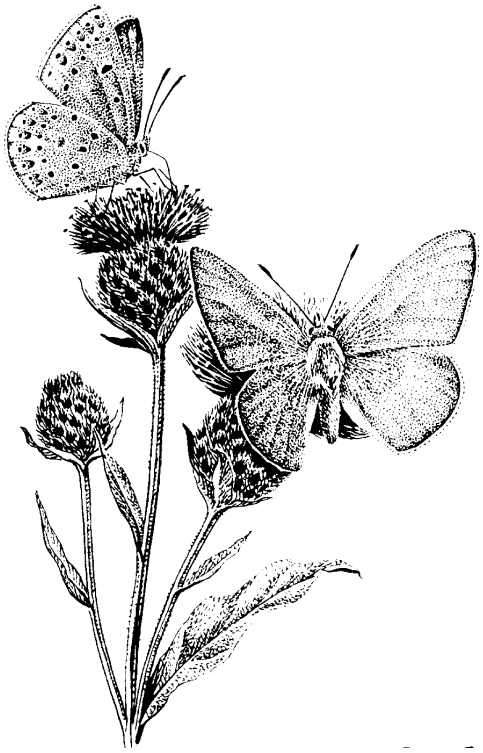
Joyce Gay, Wellbrook, High Street, Henfield, West Sussex BN5 9DD
Telephone: 01273 492279



DIPTERA (TWO-WINGED FLIES)

*By **Patrick Roper**, Sussex diptera recorder*

Two important recent developments have been the publication of the provisional national hoverfly atlas in 2000 and, in 2001, a splendid 512-page book on the larger Brachycera, *British soldierflies and their allies.* The former shows the richness of the hoverfly fauna in Sussex with 193 out of the 266 British species recorded (though some a very long time ago). Many of these records were submitted directly to the Hoverfly Recording Scheme and are not held by the Sussex Biodiversity Record Centre, illustrating how much remains to be done to get totally joined up records across the country.

The maps in the hoverfly atlas show that East Sussex is a national stronghold for the RDB3 *Rhingia rostrata* and, while generally declining across Europe, it seems to flourish in the east of our area and is often quite common. No one has yet discovered where its early stages live (probably dung or carrion), so there is still much to find out.

The larger Brachycera book, with its coloured illustrations, makes it very much easier to identify members of this group which contains some of our largest and most colourful species including soldier flies, robber flies and horse flies and thus we can expect an influx of new records over the next few years.

Highlights of 2001 in Sussex included confirmation that the tiger cranefly, *Nephrotoma sullingtonensis*, is still present at its only known British location on Sullington Common and the second British record, from the golf course behind Camber dunes, of the Anthomyiid *Delia lavata.* The first record was of one example recently 'found' in the Natural History Museum and labelled "Camber, sand dunes, 2.viii.1935, O. W. Richards." The species is widely distributed on the coasts of Western Europe from Sweden to the Netherlands. It has also been recorded from Tibet and Mongolia. It is a distinctive insect, about the size and shape of a yellow dung fly, and it seems unlikely that it has been overlooked and is therefore probably genuinely rare and restricted in its range.

The most remarkable event of the year came with the discovery that a Phorid fly new to science had been found near Rye. These tiny flies were 'brought to light', by Barry Yates from up to a metre below the surface of the shingle just inland from the beach at the Rye Harbour Nature Reserve, where they seem quite abundant. They are members of the large genus *Megaselia*. Specimens were sent to Henry Disney, the world expert on this group, for identification and the formal description of this new species has been accepted and now awaits publication. The spaces between the shingle stones create a moist, even-temperature environment similar to a micro-cave system and it seems probable that the species is able to complete its full life-cycle in this subterranean habitat. As techniques for trapping invertebrates living in such places improve and are more widely taken up, other new species may well come to light.

There is good news and bad news in regard to two of our largest BAP flies. The hornet robberfly, *Asilus crabroniformis*, is doing well at several of its South Down colonies, though it also occurs on heathland. The spectacular wasp-mimic hoverfly *Doros profuges*, however, is as elusive as its specific name (Latin for 'fugitive') suggests. There are several older Sussex records – the last that I know of being 1995 - from the chalk downs right across our area where it occurs in scrub, often at bramble flowers, and it has also been recorded from Pevensey Levels and the Heathfield area. Colin Plant,[4] who is putting together the Species Recovery Programme for *Doros* would be most grateful for any 2002 sightings as the specific requirements of this enigmatic insect are still poorly known and it is hard to locate colonies so that they can be studied in detail.

Far from fugitive were the vast quantities of marmalade flies, *Episyrphus balteatus*, that made their appearance in late July and early August. The Brighton Morning Argus contacted the SxBRC and these positively benign (from an anthropocentric point of view) aphid-eating, flower-pollinating creatures were roundly condemned, on the front page of the newspaper, as marauding invaders with the engaging habit of pestering SxBRC staff. Generally though it was good publicity for the Sussex Wildlife Trust and it is important that the press should consult us over such episodes.

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HYMENOPTERA (BEES, WASPS, ANTS, SAWFLIES, ICHNEUMONS, GALL WASPS ETC.)

A 'sizeable concentration' of hornets, *Vespa crabro*, was reported from the Horsham area by James Havers[5] who saw further examples at Christ's Hospital and Copsale.

The ram's horn gall, *Andricus aries*.

On 11 December 2001 a few ram's horn galls were found in Cottage Lane Wood on the Pestalozzi Estate in Sedlescombe growing on some scrubby, knee-high oak. They are distinctive, bright-green galls a couple of centimetres long caused by a small cynipid wasp and very obvious in winter woodland.

[4] Colin W. Plant, 14 West Road, Bishops Stortford, Hertfordshire CM23 3QP
Tel/fax:01279 – 507697 E-mail: colinwplant@ntlworld.com
[5] Bulletin of the Amateur Entomologists' Society **60** (December 2001): 246

Andricus aries (it is still not absolutely confirmed that it is this species) was first recorded in Britain from Parliament Hill, London in 1998 and has since been seen in Kent, Surrey, Essex and Berkshire, so it appears to be spreading rapidly. Elsewhere it occurs in mainland Europe, but does not seem all that common.

In the next few years there will, no doubt, be many asking what these distinctive objects are. There is a drawing of the Sussex examples on the cover of this review and on the Internet at: www.patrickroper.co.uk/andricus-aries

ORTHOPTERA, DICTYOPTERA AND DERMAPTERA (GRASSHOPPERS, CRICKETS, COCKROACHES AND EARWIGS)

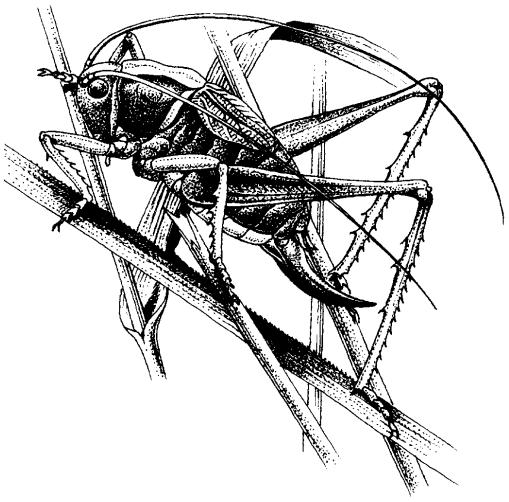
by **John Paul**, Sussex recorder for these groups

Most of the British Orthoptera occur in Sussex, including many which are nationally scarce. Sussex has the last remaining natural colony of the field cricket, *Gryllus campestris*, in mainland Britain and strongest British colony of the rare, spectacular and elusive wartbiter, *Decticus verrucivorus* is at Castle Hill National Nature Reserve.

Most orthopteroids are relatively large and with practice may be identified in the field by their morphology or by their songs. An excellent identification guide is available (Marshall, J.A. and Haes, E.C.M., 1988, *Grasshoppers and allied insects of Great Britain and Ireland*. Colchester: Harley). General naturalists and entomologists who specialise in other groups are encouraged to take an interest in Orthoptera. These are exciting times, with several species showing significant expansions in their ranges since the last comprehensive county survey (Haes, E.C.M., 1976, Orthoptera in Sussex. *Entomologist¹s Gazette* **27:** 181-202). At the same time, vulnerable species should be monitored. Readers who do not already submit Orthoptera records locally or to the national recording scheme are encouraged to visit the Sussex Orthoptera Atlas website [http://homepages.pavilion.co.uk/turbots] and to help update the maps for the current millennium.

Bush-crickets (Orthoptera: Tettigoniidae)

The long-winged conehead, *Conocephalus discolor*, which was a great rarity twenty years ago, is now the most common bush-cricket in some areas. A late record for short-winged conehead, *Conocephalus dorsalis*, was 10 November at Saltings Field, Upper Beeding. Roesel's bush-cricket, *Metrioptera roeselii*, continues to show signs of spread. Macropterous examples of this normally short-winged insect were recorded at Lynchmere Common (S. Curson) and the species appears well-established



in the Crawley area (N. Havers). The speckled bush-cricket, *Leptophyes punctatissima* was especially abundant in 2001. Being a common garden insect, this plump green species probably came to the attention of many general naturalists during the year. The bog bush-cricket, *Metrioptera brachyptera*, is more or less confined to heathland and is vulnerable to loss of habitat. Therefore, it was good to record it from the peat bog at Hurston Warren. An unusual record of oak bush-cricket, *Meconema thalassinum*, was of one caught in a mist net (B. Watson).

Crickets (Orthoptera: Gryllidae)

The field cricket, *Gryllus campestris*, was heard at Coates in the spring and later in the season, while searching for Coleoptera, a nymph was found under an old post. The reintroduced colony at Arundel continues to survive in small numbers (M. Edwards).

Groundhoppers (Orthoptera: Tetrigidae)

All three British groundhoppers occur in the county. Following the extremely wet autumn of 2000, the slender groundhopper, *Tetrix subulata*, (which favours exposed patches of damp, mossy ground) flourished in 2001. It was recorded easily in known localities, such as in the Cuckmere, Arun and Adur valleys and was also found at Faygate (per J. Havers), Shoreham Cement Works, Ditchling Common, Powdermill Reservoir and Lavington Common. A record from a garden in the Brede valley (ZP. Roper), provides evidence of dispersal.

Grasshoppers (Orthoptera: Acrididae)

Most grasshoppers generally favour dry sunny conditions and were not especially abundant in 2001. The common green grasshopper, *Omocestus viridulus*, however, seems to require lush humid permanent grassland, as may occur on the downs, in open woodland and damp heathland. There have been anecdotal reports of a decline in numbers in southern England in recent years and it is interesting to note that this species is actually rare in Normandy. *O. viridulus* seems to have done well after the winter deluge. Good numbers were recorded, for example, at Whitehawk. The lesser marsh grasshopper, *Chorthippus albomarginatus*, readily tolerates winter flooding and thrives during hot dry summers. This species has long been known from the coast and the main river valleys and now appears to be established in the Crawley area. An unusually late record was 10 November at Upper Beeding. Common field grasshopper, *Chorthippus brunneus* survived until 14 December at Whitehawk Hill and 9 December at Fishersgate.

Cockroaches (Dictyoptera)

All three native cockroach species occur in Sussex, although, they vary in abundance and may be remarkably difficult to find. 2001 was unusually favourable for the lesser cockroach, *Ectobius panzeri.* Most pre-2001 records have been from the extreme east of the county (Rye Saltings, Camber Sands and Midrips). The few other known localities were also coastal or on chalk grassland (East Head, Castle Hill, High and Over, Fairlight). In June 2001, numbers of the distinctive grey and black nymphs were found on the undercliff at Fairlight. In late summer, adult males were collected by sweeping chalk grassland at a new locality (Beeding Hill) and at Cissbury Ring (where E.C.M. Haes had made a doubtful sighting in the 1980's).

Earwigs (Dermaptera)

Three species are recorded from Sussex; the lesser earwig, *Labia minor* (which lives in dung heaps), the well-known common earwig, *Forficula auricularia* and Lesne's earwig, *Forficula lesnei*. Lesne's earwig has a patchy distribution and is easily overlooked but is readily identified by its smaller size, reduced wings, shape of the male forceps and reddish colour. As a result of deliberate searches started in 1999, this insect has been recorded from ten 10km squares in Sussex from the South Downs and the coast. New localities for 2001 were Warningcamp, Chanctonbury and Litlington.

John Paul, Downsflint, High Street, Upper Beeding, West Sussex BN44 3WN

OTHER INVERTEBRATES

Many of the smaller groups of invertebrates are neglected because of a scarcity of recorders. Some people, however, tack one or more of these smaller groups on to the main part of their work, or records may emerge from a specific research project.

Keith Alexander from the National Trust, who quite often visits Sussex, has, for example, been trying to orchestrate interest in the Psocoptera, (psocids or book lice), a group for which there are few SxBRC records. Some of the lacewings (Neuroptera) are not only attractive and distinctive insects, but useful indicators of environmental quality. Caddis flies (Trichoptera) are similar and there are whole armies of fleas and thrips, tardigrades and tunicates that seldom get the attention they deserve (unless it be from hungry predators).

Information on interesting records from any of these under-worked groups is particularly welcome and it would be good if some of these could be featured in the next edition of this publication. The following are some more of the groups that do not currently have a Sussex recorder: Ephemeroptera (Mayflies), Neuroptera, Mecoptera and Megaloptera (Lacewings, Scorpion-flies, Alderflies and Snake-flies), Coelenterata, Nemertea (Nematode worms), Oligochaeta (Oligochaete worms), Bryozoa (Sponges), Annelida (Flatworms), Myriapoda (Millipedes), Crustacea.

FLORA - VASCULAR PLANTS

*by **Paul Harmes** and **Alan Knapp**, of the Botanical Society of the British Isles and the Sussex Botanical Recording Society.*

The Sussex Botanical Recording Society (SBRS) is the focus for plant recording in Sussex and is linked to the Botanical Society of the British Isles (BSBI), the Institute of Terrestrial Ecology (ITE) and the Sussex Biodiversity Record Centre (SxBRC). Our aim is to make plant recording in Sussex systematic, well documented and focused on appropriate priorities.

An important driver has been projects initiated by the BSBI. Recent examples include the Monitoring scheme for selected 10km squares and tetrads, the Scarce Plant Atlas Project and, most recently, the Atlas 2000 Project. In addition the Society has an ongoing programme of recording aimed at improving our knowledge of the status and distribution of rare, scarce and threatened species as well as species undergoing significant decline or increasing.

Habitat monitoring is important and wetlands are high on the list of priorities. With international recognition, Pevensey Levels and Amberley Wild Brooks have been regularly monitored for some years. Their botanical value is illustrated by the fact that these two locations now account for a very high percentage of the British population of the Red Data book species *Potamogeton acutifolius* (sharp-leaved pondweed) [C. D. Preston, pers.com.].

One of our main tasks is to monitor change. Systematic recording continues to highlight many changes. Some species are increasing their range. For example, *Polygonum maritimum* (sea knotgrass), known only from Cornwall for many years has been moving eastwards and was recorded in Brighton in 1992 where it remained until lost to a storm in 1996 but it is still in Sussex, having been found recently at East Head. Even more vigorous is the spread *Poa infirma* (early meadow-grass). This species, until very recently confined to Devon and Cornwall, was first recognised in Sussex in 1998 and has now been recorded in twelve localities, mainly close to the sea. It is tempting to suggest that global warming is the explanation for these changes and for the rapid spread of alien species such *Conyza sumatrensis* (Guernsey fleabane), but we need more data gathered over longer periods from around the country before we can be sure. The recent spread of aquatic invaders such as *Crassula helmsii (*New Zealand pigmy- weed*), Myriophyllum aquaticum* (parrot's-feather) and *Hydrocotyle ranunculoides* (floating pennywort) has another cause - they are bought as ornamental pond plants but are so invasive that they are dumped and, as there are no natural predators, they have rapidly become serious pests.

Unfortunately many species are declining and in Sussex, as in other counties, some of the fastest declining species are arable weeds. Species such as *Anthemis arvensis* (corn chamomile) have drastically reduced since the 1960's. The same is true of *Ranunculus arvensis* (corn buttercup), although road works near Burgess Hill produced a short-term explosion in 1997, when thousands of plants appeared on disturbed verges, but this revival was short lived and no plants could be found in 2001. Declines in species other than cornfield weeds have also been observed. One example is *Aira caryophyllea* (silver hair-grass) which has vanished from many of its former locations and now appears most commonly on cliff edges in the east of the county. Changes in farming practices clearly account for the decline in arable weeds but, for the moment, the reduction in the *Aira* populations remains a mystery.

Good news comes in the form of renaissance species which were believed lost, or drastically reduced, but have re-appeared. *Rumex palustris* (marsh dock) had been searched for, unsuccessfully, and was thought lost but was re-discovered on the margin of a disused gravel-pit near Chichester in the early 1990's where it still persists, although in very small numbers. *Polygonum rurivagum* (cornfield knotgrass) has also re-appeared in several places. This species is very similar to other *Polygonum* species and may have been overlooked, even by experienced botanists. Some apparent increases are almost certainly the result of increased vigilance by recorders rather than any real change. The most obvious example is *Chamaemelum nobile* (chamomile). In the 1980's this plant was thought to be very scarce but recent searches have revealed many sites in West Sussex, most being on cricket and football pitches on village greens and commons. Sadly it is still very scarce in East Sussex with only two known populations.

The highlight of 2001 was the publication of the Sussex Rare Plant Register, a joint effort by the SBRS and SxBRC published by the Sussex Wildlife Trust. It records the current status of the rarest vascular plants, charophytes, bryophytes and lichens occurring within the two Watsonian vice-counties of Sussex. This document is designed to be a 'live document' which will hopefully promote further investigation and recording, leading to regular updates. The work on the register has drawn our attention to the fact that there are over 80 vascular plant species in Sussex which, although they do not currently qualify for inclusion in the register, are in danger of becoming rare if there is any further decline in their numbers.

Although vascular plants are one of our most widely recorded groups there is still, as we have illustrated, an enormous amount to be learned by careful observation of change and by improving the quality of our recording. Our aim is to provide an accurate and comprehensive picture of the status of vascular plants in Sussex which can be used as a basis for future scientific studies and decisions on conservation.

Paul Harmes & Alan Knapp

A highlight of the year was the publication of the **Sussex Rare Plant Register of Scarce & Threatened Vascular Plants, Bryophytes, Charophytes & Lichens** edited by Mary Briggs MBE and compiled by members of the Sussex Botanical Recording Society. The primary aim was to provide a list of the rarest wild plants currently known in Sussex. As pointed out in the introduction, many Sussex species are decreasing and over 40 vascular plants have become extinct in the last 60 years so the publication highlights the sense of urgency of work to protect our threatened flora.

The main body of the text is a species by species account in alphabetical order by scientific name and gives some useful notes on the history and ecology of each species in Sussex as well as details of the locations where they still, or have recently, occurred.

This 127 page, A4 publication is available from the Sussex Wildlife Trust at a price of £10 including postage and packing.

ORCHIDS

by ***David C. Lang***

Following the widespread floods of autumn 2000, and the unusually wet winter of 2000/01, the current flowering season was awaited with interest. However, movement restrictions due to the catastrophic outbreak of foot and mouth disease the main orchid season had to go largely unrecorded.

Subsequently, dry weather in the later part of the summer greatly reduced the numbers particularly of the downland species, so the recording picture is confused and incomplete.

Green-flowered helleborine, *Epipactis phyllanthes*. There was evidence of a substantial spread of the colonies at Thakeham along roads near Rocks Road and to the south along Hampers Lane. Most of the flowering plants at Swanbourne Lakes, Arundel were chopped off by the local authority strimming the site to a billiard table texture.

Autumn lady's-tresses, *Spiranthes spiralis*. There have been widespread reports of large numbers of flowering plants, some appearing in profusion in sites away from the chalk where they had not previously been recorded.

Fragrant orchid, *Gymnadenia conopsea.* This species serves as a good example of the effects both of grazing and of the abnormal restrictions on the movement of stock in 2001.

One site near Beddingham, which usually carries in excess of 30,000 flowering plants, had scarcely 100. The farmer usually moves his pregnant ewes off the downs to the Laughton levels in October after a grazing period of two months, but could not

because of the floods. When these subsided, the ewes could not be moved because of foot and mouth restrictions and remained at Beddingham until mid-June..

Conversely, a north-facing scarp between Bopeep and Alciston was grazed from October to April by Exmoor ponies under the aegis of English Nature to control false-brome grass, *Brachypodium sylvaticum*. In most previous years about 500 flowering plants could be found with difficulty. In 2001 they and the common spotted-orchid, *Dactylorhiza fuchsii*, were so numerous as to be uncountable.

Bee orchid, *Ophrys apifera*. A completely new variety, var. *atro-fuscus*, with a dark chocolate coloured, unmarked labellum was found at Warnham. This would appear to be the first published record for this variety in Europe, although I was told of a single plant, which may have been this, flowering at Tring, Herts. (v/c 20) in 1983. Sadly, the initial suggestion of the varietal name var. *bournevillei* could not be adopted.

Following publication of site details of the rare hybrid of the bee orchid with the fly orchid, *Ophrys apifera* x *O. insectifera*, the spike was removed, apparently picked, from its only known location in Great Britain.

Burnt orchid, *Orchis ustulata.* No records were possible for the early-flowering form. The late-flowering form flowered sparingly in the dry conditions current at the time.

Early-purple orchid, *Orchis mascula*. A form with spotted flowers, previously recorded in Gloucestershire, Wiltshire and Kent, was recorded for the first time in Sussex near Beachy Head.

Marsh-orchids (*Dactylorhiza* spp.). Marsh-orchids, as might be expected following the wet autumn and winter, had an unusually good season, with impressive flowering populations of early marsh-orchid, *Dactylorhiza incarnata*, and southern marsh-orchid, *D. praetermissa*, at Ferring Rife. Twenty *D. incarnata* ssp. *pulchella* were recorded at the usual site on Ashdown Forest.

Pyramidal orchid, *Anacamptis pyramidalis*. Numbers were down generally, probably in response to the dry conditions, although there was a fine display north of Bury Hill beside the A29 in those places where they had not been mowed off by overzealous council workers. Among them were several var. *emarginata*, a new location for this unusual form.

David C. Lang,[6] 1 Oaktree, Barcombe, Lewes, East Sussex BN8 5DP

[6] David Lang is author of *Wild Orchids of Sussex* (2001), published by Pomegranate Press, Lewes, Sussex. ISBN 09533493-3-0 at £14.95

Editor's note: The work Mike Hutchings at the University of Sussex has been doing for over 25 years monitoring the early spider orchid, *Ophrys sphegodes*, at Castle Hill, near Lewes, was called off in 2001 due to foot and mouth disease but will be taken up again in 2002.

Information from Mike at 01273 606755 or e-mail: m.j.hutchings@sussex.ac.uk

FUNGI

Fungi in the west Weald

by Peter Russell

The West Weald Fungus Recording Group (WWFRG) held a number of forays in Sussex throughout 2001. One main activity was the revisiting of a number of sites that have been forayed since 1994. Such sites represent a range of different habitats in the Weald, and the ultimate intention is to build up a detailed picture of their mycota. The sites in Sussex are Ebernoe Common, Iping and Stedham Common, and Houghton Forest.

Other sites have also been forayed including St. Dunstan's Farm, Crawley Down Monastery, and Herstmonceux Castle. Eleven forays were held throughout the year with a total number of records being 793. The foray with most species recorded was at the Crawley Down Monastery in October (192) including only the second British record for *Inocybe cryptocystis*.

The WWFRG was invited to visit Herstmonceux Castle in September. A good day's foraying resulted in 188 species being recorded including the second British record for *Russula purpurata.*

Some of the more interesting finds have, as ever, been made outside of our regular forays. The British Mycological Society (BMS) held a *Russula* workshop at Pulborough in August and visited Houghton Forest to collect specimens. Amongst those collected was the first British record for *Russula pseudoaeruginea*.

In September a visit was made to Ebernoe Common to see the oak polypore, *Piptoporus quercinus*, found by Alf Simpson. This is a BAP species that grows on old, mature oak trees and at the time of writing has 35 records in the BMS database. During the visit, the second British record for *Lactarius rostratus* was made, and the tenth record for *Hygrocybe radiata.*

The WWFRG has continued its survey of those fungi that tend to be found only in old undisturbed, unfertilised grassland (commonly called 'waxcap grasslands' by mycologists after the brightly coloured *Hygrocybe* species that are found on them). Although the presence of unimproved meadow plants also indicates an unimproved meadow mycota; many of the 70 waxcap grasslands so far recorded do not have a

particularly rich flora. Most of these sites are old churchyards or cemeteries, with very few old meadows having been recorded. Of the new sites added in 2001, Turners Hill churchyard was a very rich site including the first Sussex record for *Hygrocybe colemanniana*. A further visit to Herstmonceux Castle in October revealed a very rich waxcap site.

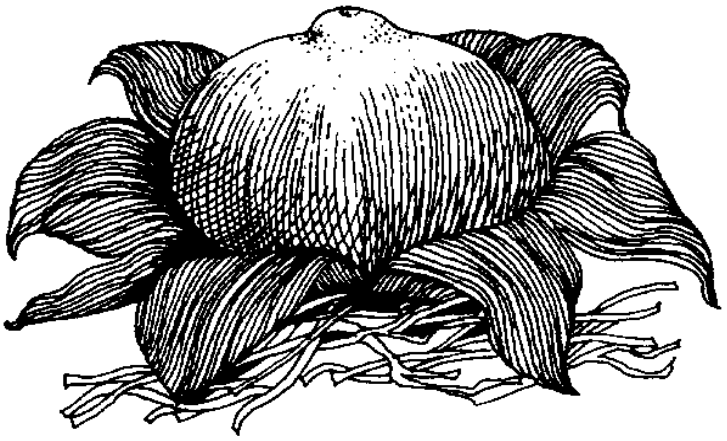
The WWFRG has been helping the Friends of Bedelands Farm to record the mycota of their nature reserve. Some good records have been obtained along the old hedgerows (eg *Boletus satanoides*) and pleasingly a wide range of waxcaps and associated mycota in the fields.

Certainly the mild autumn and lack of frosts led to an extended fruiting season, but whether the above summary indicates an exceptional year for recording fungi is difficult to say. Most fungi are only visible when fruiting, so their presence can go unrecorded for some length of time as they may fruit sporadically, and may not be in fruit at the time of foraying. The consequence is we are far from having a good view of the mycota in Sussex. For example even in a site such as Houghton Forest where we have been recording for seven years, each year 50% of the fungi we find have not been recorded there before.

Every season there are examples of species that seem to be abundant that year, but rare in others. This season the most obvious was *Pseudocraterellus cinereus* which seemed to be everywhere. Another example was the abundance of *Geoglossum umbratile* at St. Dunstan's Farm in a field in which it had not previously been recorded despite being heavily surveyed.

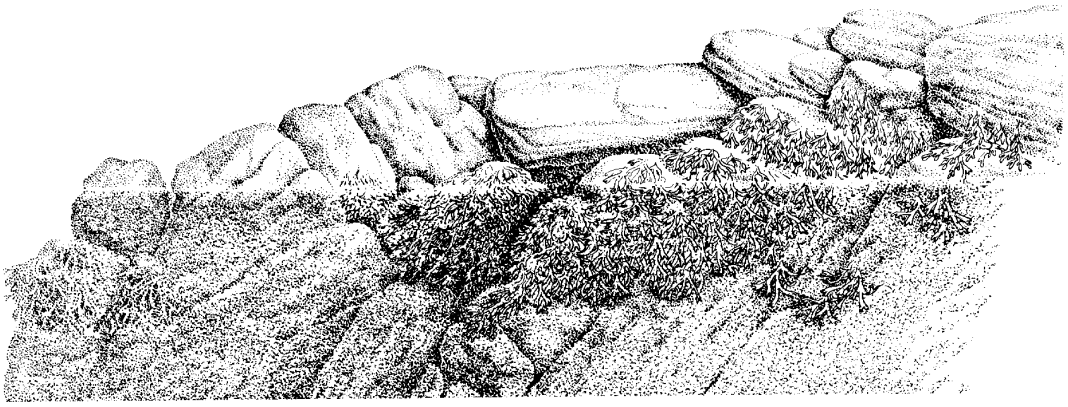
Lastly a puzzling record from Ebernoe Common churchyard in October of *Cordyceps militaris*. This is a parasitic fungi which grows on buried insect larvae. Usually we find only an occasional fruiting body, but here there were about thirty specimens all along the base of a gravestone. The question is why would there be such a concentration of larvae in such a location?

Peter Russell, Sussex fungus recorder, 64 Graham Avenue, Patcham, Brighton BN1 8HD



LICHENS

*by **Simon Davey***



Most of the progress during the year has been related to the vast amount of data which results from Francis Rose's notebooks and from his record cards.

Judith Church continues to work through the notebooks, and it is reported that this enormous task is nearing completion. At the same time, data from a set of over 400 record cards related to the churchyards of East Sussex is being transferred to Biobase, the preferred database software of the British Lichen Society. This should occupy a considerable amount of time, and then West Sussex will also be added. During the year, a number of churchyards in Sussex have been revisited. For example, Francis Rose recorded 80 lichen species in Wivelsfield Churchyard. Since his visit in 1991, lichenology has progressed considerably, and a visit this year increased the score to 105 species. This gives Wivelsfield Churchyard the second highest total for any churchyard in East Sussex. Similar increases have been achieved in other churchyards, and it shows that there is still a great deal of work to do before a comprehensive knowledge of the Sussex churchyards is achieved.

Apart from churchyards, there has been a fairly limited amount of lichenological fieldwork during the year. It is good to report that a group under the leadership of Jacqui Foskett has been studying the lichens in a variety of habitats in the neighbourhood of Chichester Harbour. Apart from that, a study of lichens on the shingle at Pagham Harbour proved just how important this habitat can be. Four new species were added to the County List, and several species which had only previously been found in one Sussex site were also found. It is very much hoped that further study on the Pagham Harbour shingle will be possible in 2002. Now that the Crumbles at Eastbourne has been destroyed, Pagham Harbour is easily the best shingle site for lichens in Sussex, and one of the best in the whole of the British Isles.

I continue to add records to Biobase, and the following records are held for the ten kilometre squares in the county. It should be added that Biobase is compatible with RECORDER, and that all records will be added to the county database at Woods Mill in due course.

The table below shows the number of lichen records from Sussex 10k grid squares in October 2001, compared with the number at the time of writing a couple of months later.

10k square	Oct 2001	Now	10k square	Oct 2001	Now	10k square	Oct 2001	Now
SZ89	129		TQ20	15		TQ53	275	281
SU80	5		TQ21	180	185	TV69	0	
SU81	137		TQ22	162		TQ60	79	152
SU82	117		TQ23	51		TQ61	239	249
SZ99	0		TQ30	146	153	TQ62	127	
SU90	56		TQ31	143		TQ63	112	
SU91	186	193	TQ32	134	155	TQ70	21	69
SU92	211		TQ33	110		TQ71	195	199
SU93	21		TV49	46		TQ72	49	104
TV09	0		TQ40	184		TQ73	0	
TQ00	136		TQ41	139	153	TQ80	0	
TQ01	267		TQ42	156	189	TQ81	164	229
TQ02	83		TQ43	165	179	TQ82	0	106
TQ03	58		TQ44	0		TQ91	103	107
TQ10	51		TV59	60		TQ92	95	101
TQ11	187		TQ50	127	155	TR01	0	
TQ12	81		TQ51	93	119	TR02	0	
TQ13	25		TQ52	90				

THE GHYLL WOODLAND CHARACTERISATION PROJECT 2001

*by **Colin Reader**, of The Habitat Management Service*

The aim of this project was to characterise the ghyll woodlands of the Weald via the production and application of a suitable survey method. The results of the survey are still being processed therefore I will not comment at this stage on our findings (these will be published in due course by East Sussex County Council) but focus on the methodology used.

The Ghyll Woodland Characterisation Project was initiated under the Woodnet/Filière Fôret-Bois project, which is partly funded by the European programme INTERREG II. East Sussex County Council is the lead partner for this project. The project was managed by a steering committee comprising English Nature, The Sussex Wildlife Trust, Wakehurst Place and ESCC.

Due to the number of ghylls that exist within the Weald and the financial implications of surveying them, a detailed botanical and zoological approach was not pertinent and indeed our remit was to produce a survey form that could be completed in half a day for each ghyll woodland site.

In order to fit in with the remit for this project and its objectives we considered it important to produce a 'walk through' survey form rather than a spot data, quadrat approach to gathering information. We believed this would more accurately present the character of the sites, which are intrinsically non-homogeneous, and be ultimately more useful to the landowner/manager who will most likely relate to and be interested in their ghyll in its totality, rather than in representative sections of it.

In assessing content and layout of our survey form we found the Environment Agency's River Habitat Survey particularly interesting and helpful as they had already dealt with several of the difficult issues of riparian surveying.

During the compilation of a new survey there are inevitably many parties interested in having inclusions for their own particular fields of interest. Unfortunately due to the restrictions mentioned previously this could not become a detailed botanical, zoological or archaeological survey. With this in mind our research and discussions led us to consider exploring a method by which the resulting characterisation might also provide information to guide the application of more specialised follow up survey approaches to a site, which would subsequently enable the assignment of conservation priorities. These could then be used during assessments such as Forestry Commission felling licence considerations and Environmental Impact Analysis issues.

With the assistance of expert opinion we subsequently compiled five important meso-habitats/features often present individually or together within the macro-ghyll woodland habitat. These were waterfalls within basins, sandrock outcrops, water flow, seepage areas (including flushes) and coarse woody debris. The occurrence of these can suggest potential species richness across several biological groups, these

being bryophytes, invertebrates and other specialised flora. Sourced from existing data these biological groups are considered indisputable components of the Weald ghyll ecosystem, however that is not to say that some other groups could not also be considered in a similar way.

The inclusion of these indicators was derived from known specialist requirements, for example, four important features to influence invertebrate potential within ghylls are:

1) Permanent running cold water (ghyll not prone to seasonal drying out).
2) Permanent shade (to reduce desiccation, keep water cold and oxygen levels high).
3) Seepage areas (springs etc.).
4) Waterfalls within basins & steep rocky sides with bryophytes.

These features are likely also to be pertinent for bryophyte potential and some, particularly seepage areas (including flushes), for other specialised flora.

A system using indicator meso-**habitats** and features for ghyll woodlands was thought to be far quicker for an average ecological surveyor to record and perhaps more effective than a number of indicator **species** which may only be seasonally present and require several visits and more specialist knowledge to obtain. It should also negate the need for excessive compartmentalisation, being one of the potential difficulties when recording small non-homogeneous habitats.

Along with the inclusion of other important physical and biological information, such as geology, vegetation, past and present management etc., the resulting survey form provides for characterisation as well as indications of potential floristic/faunal/conservation value within the ghyll woodland.

Following a trial on a sample of 10 ghyll woodlands the survey form was applied to 45 sites within the Weald.

The results of the survey are being analysed and will be available from East Sussex County Council in 2002.

Colin Reader, The Habitat Management Service, 2 Woodside Cottages, Bewlbridge Lane, Lamberhurst, Kent TN3 8JH. Tel: 01892 891384 E-mail: colinreader@onetel.net.uk

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SUSSEX COUNTY RECORDERS 2001/2002

Any records of any plant or animal can be sent either to the Record Centre or to the relevant recorder listed below.

Sussex Biodiversity Record Centre

Woods Mill, Henfield, West Sussex BN5 9SD
sxbrc@sussexwt.org.uk Tel: 01273 497553/554

FLORA

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

PAUL HARMES
(Sussex Botanical Recording Society East Sussex)
10 Hillcroft, Mile Oak Road, Portslade BN4 2QD
Paulharmes@netscape.net Tel. 01273 880258

Bryophytes
HOWARD MATCHAM (British Bryological Society
www.britishbryologicalsociety.org.uk)
21 Temple Bar, Strettington, near Chichester, West Sussex
PO18 0LB

Lichens
SIMON DAVEY
Stable Flat, Downsland Court, 115 East End Lane, Ditchling,
West Sussex BN6 8UR
srdavey@globalnet.co.uk Tel: 01273 843375

British Lichen Society www.argonet.co.uk/users/jmgray

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

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

VERTEBRATES RECORDERS

Amphibians & Reptiles
GLYNAN BARHAM (Sussex Amphibian & Reptile Group) 7
High Trees, Hunston, Chichester, W.Sussex PO21 1PG.

River Fish
RICHARD HORSFIELD The Area Fisheries Officer,
Environment Agency, Rivers House, 3 Liverpool Gardens,
Worthing, West Sussex BN11 1TF

Birds

JOHN HOBSON County Recorder - Sussex
Ornithological Society
23 Hillside Road, Storrington, Pulborough,
West Sussex RH20 3LZ
recorder@susos.org.uk Tel. 01903 740155

Sussex Ornithological Society: www.susos.org.uk

Robin Pepper
East Sussex County Conservation Officer
Scobells Farm, Barcombe, Lewes,
East Sussex BN8 5DY
conservation@susos.org.uk Tel. 01273 400393

Alan Perry West Sussex County Conservation Officer
Edgehill Barn, Byworth, Petworth GU28 0HR
aperry@grayswood.co.uk

Mammals
SIMON CURSON (Please send all records to the
Sussex Biodiversity Record Centre)
Tapners Barn, Merston, Chichester,
West Sussex PO20 6DZ
scurson@yahoo.com Mobile tel: 07813 139440

Cetaceans and Seals
STEPHEN SAVAGE (Seawatch)
www.seawatchfoundation.org.uk
51 Eastbrook Road, Portslade, East Sussex BN41 1LN
ALLSAVS@aol.com Tel. 01273 424339

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

Badgers
SOUTHDOWN BADGER PROTECTION GROUP
Area covered: Brighton pier - Ditchling -
Herstmonceux - Pevensey.
Recorder: Mr. Carr, 7 Bowden Rise, Seaford,
East Sussex BN25 2HZ Tel. 01323 895742

HASTINGS BADGER PROTECTION GROUP
Area covered: Hastings Borough - Rother District.
Recorder: Don Wise, 304 Bexhill Road,
St. Leonard's-on-sea, East Sussex TN38 8AL
Tel. 01424 439168

WEST SUSSEX BADGER PROTECTION GROUP
Area covered: Hampshire border - Surrey border -
Rudgwick - Billingshurst - Pulborough -
Littlehampton. Recorder: Jaine Wild, 1 Sutton Close,
Felpham, Bognor Regis PO22 8EY
Tel. 01243 82580

MID SUSSEX BADGER PROTECTION GROUP
Area covered: Littlehampton - Storrington - Henfield - Ditchling Beacon - Kemptown. Rudgwick - Pulborough - Ditchling Beacon - Golden Cross - Cowbeech - Heathfield - Bewl Bridge - Kent border - Surrey border - Rudgwick.
Recorder: Jan Spooner, 4 The Marts, Rudgwick, West Sussex RH12 3HH Tel. 01444 417822

WEALD AND DOWNLAND BADGER PROTECTION GROUP
Area covered: Horsham - Burgess Hill - Rudgwick.
Recorder: Bob Darting, 55 Nightingale Lane, Burgess Hill, West Sussex Tel. 01444 454085

INVERTEBRATES RECORDERS

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

JOYCE GAY (British Butterfly Conservation Society - Sussex Branch) Wellbrook, High Street, Henfield, West Sussex BN5 9DD Tel. 01273 492279
www.butterfly-conservation.org

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

Spiders
EVAN JONES
6 Mortain Road, Westham, Pevensey, East Sussex BN24 5HL

Or Andrew Phillips encore01@genie.co.uk

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

Dragonflies
JOHN KNIGHT
(British Dragonfly Society - Sussex branch)
8 Downview Close, Yapton, West Sussex BN18 0LD
john.r.knight@talk21.com Tel. 01243 552030
www.dragonflysoc.org.uk

Beetles & Heteroptera (plant bugs)
PETER HODGE
8 Harvard Road, Ringmer, East Sussex BN8 5HJ
Peter.J.Hodge@tesco.net Tel. 01273 812047

Ants, Bees & Wasps
MIKE EDWARDS
Lea-side, Carron Lane, Midhurst, West Sussex GU29 9LB Tel. 01730 813785

Diptera (two-winged flies)
PATRICK ROPER
South View, Churchland Lane, Sedlescombe, Battle, East Sussex TN33 0PE
patrick@prassociates.co.uk Tel. 01424 870208

Hoverflies
ROGER MORRIS (National Recorder).
English Nature. Bullring House, Northgate, Wakefield, West Yorkshire
humber.pennines@english-nature.org.uk Tel: 01924 334500

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

Molluscs
MARTIN WILLING
14 Goodwood Close, Midhurst,
West Sussex GU29 9JG
Molluscs@willing.fsbusiness.co.uk
Tel. 01730 814790
or
Sean Ashworth
seanashworth@hotmail.com

Pseudo-scorpions
GERALD LEGG (National Recorder).
Booth Museum of Natural History, 194 Dyke Road, Brighton, East Sussex BN15AA
boothmus@pavilion.co.uk Tel. 01273 292777

Geology
JOHN COOPER
Booth Museum of Natural History, 194 Dyke Road, Brighton, East Sussex BN15AA
boothmus@pavilion.co.uk Tel. 01273 552586

Marine Records- (see also Cetaceans)
GERALD LEGG
Booth Museum of Natural History, 194 Dyke Road, Brighton, East Sussex BN15AA
boothmus@pavilion.co.uk Tel. 01273 292777

SOME VACANT GROUPS

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

If anyone is interested in becoming county recorder for any of these, or any other vacant group, please contact Henri Brocklebank at the Sussex Biodiversity Record Centre.