

THE SUSSEX RECORDER

**Proceedings from the
Biological Recorders' Seminar
held at
the Adastra Hall, Hassocks
February 1996.**

Compiled and edited by
Simon Curson

Sussex Wildlife Trust

Woods Mill

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Introduction

Tony Whitbread

It is a great pleasure, once again, to introduce the Proceedings of the Biological Recorders' Seminar, now firmly established as a regular feature of the biological year in Sussex. These meetings have proven their value in enabling recorders to meet and share their common interests, and in keeping people abreast of developments in the conservation scene.

The data collected by recorders is acquiring ever increasing importance as conservation moves higher up the national agenda. Effective conservation is critically dependant on good data and I am pleased that two of our papers deal with the recording of animal groups (mammals and amphibians). River monitoring and marine surveys are two other subjects which will be new to many readers of the proceedings.

At next years Seminar, to be held on February 22nd, we intend to introduce exciting developments related to the national Biodiversity Action Plan and its implications for biological recording and data handling in Sussex.

I would like to thank everyone who gave time to help with this years Seminar, especially Denise Budd who played a key part in organising the event.

Finally I should like to apologise for the late appearance of these proceedings, which was due to circumstances beyond our control.

The Environmental Survey Directory - an update

Simon Curson (Sussex Wildlife Trust).

A Few Facts and Figures.

- No. of Surveys to date = 945
- No. of Sites to date = c.4,000
- No. of Volunteer Days in 1995= 42
- All Surveys at EN, ESxCC, WxSCC, Chichester Harbour Conservancy, habitat surveys at SxWT.
- Maps of West Sussex have been digitised onto a GIS at WxSCC.

Usage.

There have been 38 enquiries to the ESD from outside bodies in the past year including enquiries from NRA, some District Councils and National Trust.

The ESD has also been used to help in the following:-

- The Biodiversity Area project,
- SNCIs
- Student projects
- Walberton Parish Survey (initiated with help from Susan Wilson)
- East Hoathly Parish Survey (initiated with help from Susan Wilson)

The ESD is also used at least twice a month by its steering group members.

Interesting or unusual surveys.

- Pollen analysis.....we have plant records going back 10,000 years! - A student study of pollen deposits from some ponds in Sussex.
- A study to overcome the problem of large scale seaweed deposits on Worthing beach. Physical aspects of the sea, beach and seaweed were measured for Worthing Borough Council.
- A study on the feeding ecology of three waders in the Adur estuary.
- A study on the recolonisation of plants after a large fire on Iping Common.
- Pollution monitoring e.g. Boreholes in Eastbourne Park; Accumulation of pollutants in marine algae and molluscs; NRA's annual monitoring of bathing beaches for micro-organisms.
- The distribution of *Potentilla erecta* along rides in Wilmington Forest - a student project.
- Single species surveys : - Lime trees, Black Poplar trees, Wood White butterflies, Marsh Mallow, Camomile, Early Gentian, Purple Sandpiper.
- Little surveyed habitats:- Caves, ice-houses and tunnels have been surveyed for their bats; Road Verges; Hedgerows.

Future.

This year the Wildlife Trusts of Britain have put in a bid to the Millennium Commission to set up a national network of local record centres. This has got through the first round and we are waiting for the next round and support from English Nature. If successful it would enable us in Sussex to set up a Records Centre linking RECORDER , ESD and a GIS.

How Data could be used.

If the ESD was combined with Recorder and a GIS system it could show us such things as:-

- the frequency of scarce species within protected areas. e.g. what proportion of the area supporting scarce arable annual plants lies within protected areas.
- how clustered surveys are and in what habitat they are clustered.
- what proportion of surveys carried out outside the clusters are not reactive surveys.
- whether certain areas or habitats are severely lacking in surveys and if so why?
- what proportion of surveys have been carried out by organisations and what proportion by interested individuals.

The SNCI Project - Wealden And Rother Districts

Louise Clark and Joanne Hodgkins (Sussex Wildlife Trust).

The SNCI Project has now completed its third year in Rother and Wealden Districts. The project was originally conceived as a three year venture, however so much valuable habitat has been found requiring survey, that it has now been extended for an additional year.

The Project team of two field ecologists comprised Louise Clark and Marion Finch, for the first two years of the Project. However, Marion took maternity absence in April '95 and has been replaced by Joanne Hodgkins.

During the field seasons (April to October) the SNCI Team have carried out Phase II surveys of many habitats in the Districts. To date, a total of 172 sites in Wealden and Rother Districts, have been surveyed by the Team. It is important to note that a single site might be a small meadow, a large woodland complex, or even an extensive river plain. Numbers of sites is, therefore, rather a spurious statistic and is not directly linked with effort. The area of land covered would be a more meaningful measure. which will become available once all the sites have been digitally mapped. Grassland sites include unimproved and wet meadows and the category "miscellaneous" is anything which cannot be regarded as woodland or grassland, and includes lakes, ponds, beach, cemeteries etc.. Surveys are only carried out after the ownership of a site has been discovered and their permission sought. This can be a time-consuming process.

Some wonderful sites have been surveyed by the team. Extensive wooded ghyll systems on the edge of Ashdown Forest, have been found replete with ancient woodland indicator species. Also, many superb, atmospheric, ancient and neglected Hornbeam coppices, carpeted with Bluebells, have been discovered. Some of these have recently been brought back into management, so their wildlife value should improve. Even a number of the Forestry Enterprise commercial woods have turned up interesting ghylls, supporting many notable mosses and ferns.

A number of reservoirs visited this year are of significance for their large populations of both resident and visiting birds. One or two also have interesting associated habitats, including areas of ancient woodland and unimproved meadows.

The project is unearthing many more unimproved meadows in East Sussex than was originally thought might exist. They have turned up in long forgotten pockets and corners of the countryside, tucked away hitherto unknown by the conservation world. They often come to light when land changes hands. Typically an old farmer or landowner passes away, and the new owners seek help or advice to manage their recent acquisition, or simply want to show "some-one in the know". As well as isolated remnants of small farms/holdings, there are also a few large complexes of fields on old estates that have been traditionally managed for many years. A large

close to the Kent-Sussex border, for example, boasted carpets of Green-winged Orchid and Adder's-tongue Fern, in all of the fields.

Other finds of note include the Brede Valley. This is now being considered for SSSI designation as a result of the survey work undertaken by the SNCI Team there.

The Team have continued to monitor the break-up of estates and farms into smaller lots or land holdings. This means that ownership of sites is more complex, and thus, seeking permission for survey is that much more difficult. However the new owners often warmly welcome wildlife surveys of their land and advice regarding its significance and appropriate management.

The vast majority of land-owners are agreeable to the Team visiting and surveying their land, and welcome the advice given regarding management. Most are keen to be seen to be environmentally-friendly and are very anxious to do the right thing. Many of the new owners of small-holdings are former city dwellers with no previous experience of land management and are, in fact, keen for advice. Often they can afford not to run their farm for the maximum profit. This situation can be good news for nature conservation, as these land-owners can afford to tinker with meadow management and coppicing with conservation in the forefront of their minds.

In addition to fieldwork, all known up-to-date habitat surveys have been consulted, and the Team have identified and collated information on a further 86 sites so far, which will also be considered for SNCI selection. This comprises a grand total of 258 sites which have been analysed to date.

The winter months are spent writing reports on all the surveys undertaken during the field season, identifying and collating information on sites surveyed by others, sending completed site reports to landowners and dealing with various queries. In addition, recommendations of potential, new sites are logged for future survey, survey permissions are sought and meetings are held to formally select sites to classify as SNCI's. So far, 43 sites have been confirmed as SNCI's in Rother district, and 56 in Wealden district.

At present, a further 74 sites have been identified for future survey in Rother District and 102 in Wealden district. These will be prioritised according to the availability of ownership information and their likely significance for wildlife and will be surveyed during the 1996 field season.

The Sussex Rare Species Inventory

Harry Montgomery

Since the inception of the Inventory in 1993 the number of potential applications has increased to seven:-

Selecting species for special conservation measures

Identifying areas of prime biodiversity

Defense of habitats

Understanding local ecology

Advice on management

Monitoring long-term changes in species

Raising public awareness

The first of the above applications requires the completion of the Inventory in its "baseline" form by 1999.

Other developments since the speaker reported at the 1994 Seminar include the adoption of the RECORDER system for storing the Inventory on computer. About 1250 species and twice that number of records have been put on the Trust's computer, comprising about two thirds flora and one third fauna. Birds, mammals, fish, many invertebrate groups, and all marine species, are still to be tackled.

In view of the difficulty of identifying which species are county rarities, and the sheer size of the project, species in the Red Data Book, Notable, and Scarce lists were, for some groups, being given priority over county rarities (though the latter had, in fact, been completed for the lower plants because of the availability of an up-to-date Atlas).

Even in its present incomplete form, the Inventory has been used to help answer a questionnaire about the occurrence in Sussex of species named in the national Biodiversity Program. Another application involved mapping to try and identify areas of high biodiversity but this exercise was only partially successful because of the lack of detail on locations of many of the rare species. It is imperative that this defect be remedied as the Inventory is updated, if the objectives listed above are to be fulfilled.

I would like to thank the experts who have supplied data and Mike Thurner, Louise Clark, and Paula Walkinshaw who have helped with the computer. Finally I can reassure everyone that the rare snail *Vertigo moulinsiana*, of Newbury by-pass fame, occurs at three sites in West Sussex.

Recording Mammals

Alison Tutt (Surrey Wildlife Trust).

The problem with recording mammals is that they tend to be elusive and rarely seen. Many are nocturnal such as the dormouse, or small and rarely seen like the bank vole, and of others, such as deer, you normally get only a fleeting glance. The mammals you are most likely to see are grey squirrels and rabbits which tend to be under-recorded, being dismissed as common.

Sightings

Hedgehogs can commonly be seen in gardens at night, and can be encouraged in by putting out dog food. If you mark the hedgehogs you may be surprised how many are using your garden. Foxes are often seen raiding dustbins, and deer are becoming increasingly common in gardens. Mammals may also be found under tins put out for reptiles and wood mice have been found under roofing felt squares put down on one of the Surrey Trust reserves.

Trapping

Small mammals can be trapped using Longworth traps. Care must be taken however if shrews are present in the area and the traps must be set to trip only when animals over eight grams enter, or a small hole must be cut in the back of the trap so that shrews can escape. If you are intending to trap shrews a licence is required from English Nature. The most commonly caught mammal in Longworth traps is the wood mouse. Yellow necked mice may also be caught. They look similar to wood mice but tend to be larger and have a yellow collar. Bank voles and short tailed voles are also common depending on the habitat.

Mammal traps can be quite expensive and to make trapping meaningful a good number are needed. Plastic traps are cheaper, but do not last as long. The Mammal Society operates a trap loan scheme for members.

Real enthusiasts may wish to become involved in radio-tracking studies but these are usually undertaken in association with a research establishment.

Recording mammals from signs

Many species of mammals can be recorded from their signs, you just need to be a bit of a detective. Moles are one of the easiest to record, as molehills are unmistakable, though their tracks can be more difficult to identify. Deer slots can be identified as deer, but it is more difficult to identify them down to species. Taking plaster casts and measurements is an invaluable aid. Badger footprints are very distinctive and clear ones show five pads and claws. In areas where otters are present

their prints may be found in sand or silt. In cold weather prints of many species may also be found in snow.

Mammal paths should be looked for together with other clues such as hair, which may be found on barbed wire, or foot prints or holes. The entrance holes to badger setts are about 25cm across and are of a domed shape. They tend to have a large spoil heap outside. Fox holes are smaller and smell unpleasant and bones may be found outside them. Badger setts have been used in a national survey to calculate the number of badgers in the UK.

Small mammal nests can be very useful. The summer nests of harvest mice are about the size of a grapefruit, round with a small entrance hole and are most easily found later in the year when the vegetation has died back. Dormouse nests are often woven from honeysuckle bark, but leaves and moss may also be included. Harvest mice can be encouraged to nest by putting tennis balls with holes cut in them of a size that only harvest mice can enter, on stakes amongst suitable vegetation such as reeds. Surrey Mammal Group are to carry out a survey in this way in conjunction with the Thames Valley Mammal Group during 1996. Dormouse Nest Boxes can also be put up in suitable woodland and they look like back to front bird boxes. Nest box checks are a good activity for local mammal groups to get involved with, although a licence is needed from English Nature if dormice are known to be present.

Other species, particularly riparian mammals, can be monitored from their droppings. The national otter survey was carried out by recording otter spraints which smell of freshly mown grass. Mink and water vole can be recorded at the same time. Mink droppings are more twisted and smell unpleasant, whereas those of water vole are smaller and cylindrical with blunt ends.

Road kills should also be recorded. Dr Pat Morris at Royal Holloway College has been collating data on hedgehog road kills for the last five years, as a possible method for monitoring population trends. Even moles are killed on roads when the young are looking for new territories. Cats also bring in mammal remains, which can be identified and recorded.

Owl pellets can also provide records as they can be dissected and the bones within them identified. The Mammal Society provides an excellent key for this. Small mammals are often attracted to discarded bottles, from which they can not escape. The remains from bottles can be identified in a similar way to owl pellets. The record from one bottle is 27 animals and remains have also been found in a bottle at the top of Ben Nevis. Mammalaction, the youth group of the Mammal Society, are using this as their recording project for the year having surveyed road casualties last year.

Feeding remains also provide useful information, nibbled hazel nuts being used to survey for dormice, which open nuts to leave a smooth inner edge. English Nature used this technique in their "Great Nut Hunt" in 1992, to get members of the public to send in nuts. Pine cones eaten by squirrels can be differentiated from those eaten by birds and other mammals but you cannot tell which species of squirrel.

Washed up seals or cetacean remains may be found on the coast.

Mammal groups.

Most counties, including Sussex, have active badger and bat groups which record and monitor setts and roosts respectively. The other species however are often under recorded.

The Mammal Society through its "Look out for Mammals" project is hoping to produce resources for mammal recorders encouraging them to record all species and is also encouraging the formation of local Mammal Groups.

When I started at Surrey Trust there were 13 records for wood mice on the Trusts database, mostly from Trust reserves. There were only 50 records of moles, mainly from SNCI's. It was obvious that we needed to encourage mammal recording, so I set up a mammal group. To start it up I sent out a questionnaire to all Mammal Society members in Surrey, rangers, badger group and bat group members and any one I knew who had an interest in mammals. From the questionnaire I found that a lot of people were interested in forming a group, and that they wanted a group which surveyed, monitored and carried out practical tasks, although many asked for training. We called a meeting to which 60 people attended and are currently running training days.

If anyone in Sussex is currently recording mammals I'm sure Simon Curson would like to hear from them and if anyone wishes to start up a Sussex Group Gillie Sargent who runs the "Look out for Mammals Project" would be pleased to help. I would be grateful for any Mammal Records from Surrey.

(Note - we have now got a Sussex mammal recorder, Mike Funnel at Buchan Country Park. Please send any mammal records for Sussex that you have to him. See appendix for the address - Eds)

Local Habitat Surveys - How You Can Help!

Susan Wilson (Sussex Wildlife Trust).

Introduction

The role of the Trust's Community Wildlife Officer is to advise and support community based groups throughout Sussex involved in local environmental projects. Since 1988 the Community Wildlife Officer has helped over 70 projects with a variety of schemes such as setting up and managing local wildlife areas or Pocket Parks. Recently the emphasis of the work has shifted to encourage local groups to carry out a broader survey of a parish or neighbourhood area to help plan future work.

Several years ago, the Trust helped parish groups with surveys of Slinfold and Nuthurst Parishes in West Sussex. and is currently supporting environmental groups in Walberton, Burgess Hill and East Hoathly to carry out local surveys. In November 1995 the Trust published a booklet called "A Guide to Conducting a Local Habitat Survey" which outlines some of the key steps involved.

Why survey?

It is a vital question to ask before you start to survey! The reasons for collecting the information will influence the type of survey.

The Walberton Action Group identified 4 reasons for undertaking a habitat survey of their parish:

- to help local people get to know the Parish,
- to share knowledge which already exists amongst local people and of any specialist surveys,
- to provide local information for the Parish Council and school as well as other organisations and
- to provide an up to date record of the Parish to compare with past maps and help plan for the future.

In short - it is best to find out what is there before planning what to do in the future.

Types of habitat surveys:

English Nature (formerly Nature Conservancy Council) devised a national system for surveying habitats based on maps and using colours to highlight different types of habitats. There are 3 different levels of habitat surveys. Phase 1 involves a broad habitat survey, looking at land use and identifying dominant species. Phase 2 includes maps of vegetation communities with lists of the plant species and information on the

abundance and distribution of species and Phase 3 is a more detailed survey examining ecological processes for long-term monitoring.

The advantage of carrying out a map based survey is to be able to add extra information as and when it is available. Large scale maps of an area are used, usually at a scale of 1:10000 or 6" to 1 mile. Brief written target notes should be added to the map to further describe the areas.

A guide to the levels of expertise for different elements of a survey.

Survey elements	All	Amateur Naturalist	Specialist	Conservation professional	Research scientist
Habitat descriptions	✓	✓	✓	✓	✓
Dominant species	✓	✓	✓	✓	✓
Community maps and descriptions	✓	✓	✓	✓	✓
Species list in communities		✓	✓	✓	✓
Full species lists			✓	✓	✓
Ecological Interpretation: e.g. Value of the site, management options, position in ecological unit				✓	✓
Research into: Species range and distribution, & ecological processes					✓

The Trust's involvement.

The Trust has helped with training courses for volunteer surveyors in Slinfold, Walberton, Burgess Hill and East Hoathly to augment the information in the survey booklet and provide a field exercise. The local groups organised the venue and circulated details of the courses. In most cases, grant aid from Rural Action has supported the local work. Rural Action grants are available for community environmental projects in settlements with a population of less than 10,000 people. Further details available from Sussex Wildlife Trust or Mike Griffin at Sussex Rural Community Council in Lewes.

Local support - how recorders could help.

There is a role for any interested biological recorder to give some practical assistance to local groups in their area. Most of the groups that the Trust has been helping are very enthusiastic about their local patch, although only a few of the participants would claim to have much general knowledge of natural history. It is also true to say that many people underestimate their own knowledge! So, it would be a boost for local groups to have the help of local experts to take the identification beyond Phase 1 level surveying.

During the question Peter Gay (Sussex Butterfly Conservation Society/SWT) suggested that a list of contacts for local environmental projects in the 2 counties be circulated to Biological Recording groups to let them know what is happening in their area. Susan Wilson agreed to start compiling a list. Susan also suggested that a list of

Biological Recorders could be circulated to the various community based groups to show the range of specialist groups and promote local networking.

The following table shows which parishes have been surveyed by local groups.

Current status of Parish Surveys in Sussex.

Parish Survey Completed	Parish Survey in progress
Slinfold	East Hoathly
Nuthurst	Burgess Hill
Walberton	

Biological Monitoring in Rivers

Jane Cecil & Shirley Medgett (National Rivers Authority)

There are three types of biological monitoring in rivers:-

- river corridors surveys
- river habitat surveys
- invertebrate monitoring.

River Corridor Surveys

A strategic conservation objective of the NRA is to monitor and assess the conservation value of water courses. To do this an old NCC survey method was adapted for NRA's purposes. A 500m stretch is walked and many features are recorded including the aquatic invertebrates in the channel, the marginal, emergent and submerged vegetation and details of the floodplain for 50m on either side of the river. They also include details of overhanging trees and river root systems. A set number of symbols are used for features and vegetation with both a cross-section and length being produced, accompanied by maps, photos and a description.

The above is used as a base line survey for almost all rivers in Sussex and the information can be referred to when dealing with abstraction enquiries, planning applications, flood defence works etc. The main uses of the survey are for flood defence maintenance work such as de-silting, dredging and reed cutting - drivers can be advised, in advance, how best to carry out the works. The main problem was that it is mostly descriptive, so River Habitat Surveys, which are a new technique, were developed.

River Habitat Surveys

These include the geology, physical structure of the river, accumulation of sediment and the adjacent land use for 50m on either side and are produced on a standard form. They also include flow forms, presence of debris dams, associated wetland features, notable nuisance species, % shading of the channel and a brief description.

3,500 sites across England, Wales, Scotland & Ireland are in this survey and 11 types of river have been identified. They are then classified as poor, fair, good or excellent, which is an objective assessment.

In 1998 the Environment Agency will be releasing a State of the Environment report including biological results, water quality and wildlife interest of sites in this survey. This will then be monitored on a 5 yearly programme.

River corridor surveys are still used especially for working plans for flood defence whilst river habitat surveys are a classification tool to assess river quality for wildlife.

Invertebrate Monitoring

Macro invertebrates are a direct measure of the health of a river and the effect of chemicals upon it. They are good indicators because:-

- They can detect intermittent pollution and can respond to pollutants which are not detected by monitoring of chemical water quality.
- They span the range of pollution tolerances.
- They are more or less ubiquitous and are therefore used for comparative purposes.
- They are usually present throughout the year.
- They are benthic(stay put).
- They are easy to identify and sample.

Thus they form an additional tool to detect water quality.

The main way of obtaining data is a 3 minute kick sweep sample, proportional to habitats. This produces a list of invertebrate taxa but a scoring system is needed to remove the subjectivity of the results.

The Biotic Score System is more readily understood as the larger the final number the more sensitive the habitat. The 'Biological Monitoring Working Party score' is divided by the 'average score per taxon' to give the sensitivity of the animals.

BMWP

There is a river invertebrate and classification system called RIVPACS on computer which gives the ideal for a system if it is not polluted and survey results can be compared to this.

Uses of Biological Data

Biological data can be used to identify trends over time, for the classification of rivers which can then be easily understood and compared, and for pollution investigations to indicate the degree of impact, extent of damage and to identify the extent of recovery.

Summary

Biology gives an additional perspective on river water quality to physical and chemical features. It is an effective tool to identify pollution. Biology can be used to detect recovery, to monitor and protect watercourses.

Monitoring of Amphibians

Alf Simpson (Sussex Amphibian and Reptile Group)

There is a problem with national records for amphibians and reptiles as the British Herpetological Society do not carry out monitoring. Herpetological Conservation International Limited organises it, but asks others to record. JNCC have a form which is very complex and comes with a book on how to fill it in! Most records are therefore from the general public and at best consist of "toad in a pond at TQ123456".

If you want to record amphibians here are some clues to help you.

A) Tailed Amphibians

Smooth Newt

The male has one crest from head to tail in the breeding season, whilst the females have a smaller one. The females are found between February and June in ponds, laying eggs and sealing a leaf around each one to protect them from predators. They lay about 40 eggs in total. The main predator of the adults is the pea mussel which holds the toes of newts sometimes causing them to get trapped below the surface and drown.

Palmate Newt

This is the smallest newt with webbed back feet and a pin out of the end of its tail in the breeding season.

Great Crested Newt

This species is fully protected by law. It has two crests, one on the body and one on the tail. It has white silvery flesh with yellow and black socks and is most active nocturnally. The female has white dots on a black surface.

The best way to record newts is by torchlight at about 9pm during the breeding season and just count what you see. Presence at a site and the numbers are needed: i.e. 0-10, 10-100, or more than 100.

B) Tailless Amphibians

Common Frog

Males have grey/blue throats in the breeding season whilst females become more pimply. When recording frogspawn it is useful to count the number of clumps of spawn and record as; 0 -10 clumps, 10 - 100 and 100 or more. Frogspawn develops into froglets by May or June.

Tadpoles are initially vegetarian but then become carnivorous. They then get their back legs, then their right front leg and lastly their left front leg. These come through where the gills were and they then have to surface to breathe. They then stop eating and absorb their tails and lastly they climb out of the pond.

Marsh Frog

In 1925 Marsh frogs were brought over to Romney Marsh and records are being sought on how far they have spread (or are they retreating?). They are large, bright green with black markings, have a pointed snout and are very, very noisy in the breeding season. Julia Wycherly from Surrey SARG is plotting their distribution along rivers.

Common Toad

They are warty (the warts have a poison which deters would be predators) and move by running and crawling. They have golden eyebrows and the female is three times the size of the male. Toads migrate en masse and they lay their spawn in strings, 2 to 3 eggs wide normally, under the surface around reeds.

Natterjack Toads

Natterjack toads lay their spawn in a haphazard string around pond weeds, 10 - 14" below the surface. They do not occur in Sussex.

Helping Amphibians

Many toads are killed migrating across roads to ponds. However a range of design features can be introduced to reduce this. Wiston pond has a toad tunnel designed by Tom Langton. It is made of a material which doesn't stick to the toads when they are dry and 5,000 toads have been recorded there. There is also a toad tunnel on the A283 Shoreham to Guildford road at Petworth. These are just two of 40 crossings across major roads in Sussex. Another solution is to stop toads getting onto roads with waterproof hardboard barriers and then to gather them together and carry them across the road. It is also beneficial to put wire grids over drains so they don't fall down if they do cross the road.

Around garden ponds it is useful to put sacks over paving stones to stop frogs and toads sticking to them.

Please send any records of amphibians that you see to the county recorder (see appendix).

The Sussex *Seasearch* Project

Robert Irving (Project Co-ordinator)

SEASEARCH is a nation-wide project initially devised by the Marine Conservation Society in conjunction with the Nature Conservancy Council's Marine Nature Conservation Review (which, since 1991, has been part of the Joint Nature Conservation Committee). As a 'Phase 1' ecological survey, it aims to describe the scenery, habitats and communities of the sea bed around the coast of the British Isles. The recording techniques allow this to be done by volunteer divers in a cost effective way.

The Sussex *SEASEARCH* project began its 5-year programme in 1992, as a partnership venture funded by a number of organisations*. Originally, it had been proposed to survey the stretch of near-shore waters between Chichester Harbour and Littlehampton over a period of two years. The success of this phase led the project's Steering Group to agree to the extension of the project, with the aim of covering the remainder of the near-shore sea bed off West Sussex and the whole of East Sussex, by the end of 1996. By the end of 1995, a total of 863 man-dives had been undertaken by 151 volunteers at over 250 sites between Chichester Harbour and Beachy Head.

As already stated, the project utilises the diving and recording skills of volunteer divers to record sea bed types and their associated marine animals and plants. This can involve the taking of photographs of habitats and species to help written descriptions. They are also asked to record the presence of any human activities and possible impacts these might be having at the site. The latter part of the recording process has probably been less comprehensive than other parts, yet it has been most useful in assessing potential threats to certain sites.

Volunteer divers are asked to record the type of sea bed they find themselves on (which may be anything from bedrock, boulders, cobbles, pebbles, gravel, sand, wreckage, or any mixture of these), together with the main (dominant) species present. By so doing, a picture of different biotopes is built up for each area, which can be related to other conditions such as depth, water movement, scouring and siltation. Different sea bed types will have different communities associated with them: thus soft chalk rock typically features species able to bore into it such as piddocks and certain polychaete worms; gravel areas, often showing high mobility as a result of wave action and tidal currents, are colonised by many ephemeral species; and sandy areas have few visible species on the surface but will feature several burrowing forms.

The project has already generated several 'end products'. A Biotope Manual for Sussex is being put together, at present in draft form, utilising the results of the survey. There is also to be a short video film to be released in the spring, which will be used to help promote *SEASEARCH* elsewhere in the country. A colour poster and booklet are also due to be published during 1996 which will highlight the variety of sea bed types and marine life to be found off Sussex. Leading on from this has been the decision to

identify a number of those sites of most interest from a nature conservation point of view as Sussex Marine Sites of Nature Conservation Importance. These will be non-statutory, but will serve to highlight those areas of greatest importance and/or vulnerability so that all seafarers are aware of their existence and can share in their protection.

* To date, the following organisations have contributed to funding the Sussex SEASEARCH project:-

- English Nature (Sussex and Surrey team);
- West Sussex County Council;
- East Sussex County Council;
- National Rivers Authority (Southern Region);
- Standing Conference on Problems Associated with the Coastline (SCOPAC);
- Arun District Council;
- Brighton Borough Council;
- Hastings Borough Council;
- Lewes District Council;
- Chichester Harbour Conservancy;
- Sussex Wildlife Trust.

Rye Harbour - Wildlife Monitoring

Barry Yates (Reserve warden).

Rye Harbour Nature Reserve is in the Rother District and lies on the coast to the south of the Cinque Port town of Rye. It has the following designations:- SSSI, candidate SPA, candidate Ramsar site, candidate SAC.

The Local Nature Reserve (LNR) at Rye Harbour was established in 1970 by East Sussex County Council (ESCC) and now extends to 334 hectares. It lies almost entirely within the Rye Harbour SSSI which is generally flat and low lying with no natural feature above 6m. The high points are the crests of shingle storm ridges built up over hundreds of years by the combined action of tides and storms. The low points are the sheltered areas between the ridges where saltmarsh developed on the regularly inundated land.

The influence of the sea has been greatly reduced during the last one hundred years by man made sea defences. In addition, the naturally high water table has been lowered by a drainage system emptying into the rivers. These two factors have enabled a traditional agriculture of grazing with some arable. The loss of wetland has been partly offset by the extraction of the largest shingle ridges, creating pits.

Within the Nature Reserve there are many habitats resulting from several main factors: a variety of soils; a gradient of salinity; varying degrees of exposure to wind and flooding by the sea; water level; and different management practices. The main habitats can be broadly described as: intertidal; saltmarsh; reclaimed saltmarsh; drainage ditches; shingle ridges; sand; marsh; pits; scrub and woodland. Consequently there is a great variety of species, including many that are considered rare and endangered.

By the end of 1995 there were 21,607 records of 2,506 species within the current boundaries of the Nature Reserve. These records are managed with the computer database 'RECORDER', which now contains all the wildlife records collated by the Wardens (except marine species and common bird data before 1993) in the Rye Bay Area.

It is not just the number of species recorded which is important, but also the large number which are considered to be local, notable, rare or endangered. The following tables show the number of species on each of the areas within first the Local Nature Reserve and ,second, the whole SSSI.

Number Of Species at Rye Harbour LNR Recorded By Status And Site

SITES	COMMON	LOCAL	NOTABLE	RDB	TOTAL
Beach Reserve	1200	220	95	23	1538
Castle Water	865	179	97	15	1156
Castle Farm	461	88	45	4	598
Davis' Field	21	0	0	0	21
All LNR	1860	410	195	43	2506

Number Of Species at Rye Harbour SSSI Recorded By Status And Site

SITES	COMMON	LOCAL	NOTABLE	RDB	TOTAL
Harbour Farm	427	71	36	11	543
Saunder's Land	48	0	2	1	51
Long/Narrow Pits	249	31	19	3	302
Long Pit Watts	37	2	4	0	43
Halls Ridges	179	38	16	5	238
Camber Castle	114	3	3	2	122
Beach Field	237	34	14	1	286
Aldred's Field	3	0	0	0	3
All SSSI	2019	462	221	64	2766

Status of species from Recorder 3.21b

The full list of species recorded within the Nature Reserve is available in a report - A Wildlife Inventory (£2). A shorter report - Species of Conservation Concern at Rye Harbour SSSI (£1)- summarises all of the information available on the Red Data Book species from the whole SSSI. Both are available from the address below.

It may appear that the area is well surveyed and perhaps there remains little to be discovered. However, every visit by a specialist reveals many "new" species and usually includes new rare ones. So if you are an active recorder PLEASE visit Rye

Harbour. Contact me first and I can supply you with maps, species lists and areas with access. If you have visited and have records tucked away in notebooks, please send them to me with the usual details. Thank you. (See appendix for address).