THE SUSSEX RECORDER

Proceedings from the Biological Recorders' Seminar held at the Adastra Hall, Hassocks February 1999

Compiled and edited by

Henri Brocklebank
& Clare Ferguson

Sussex Wildlife Trust
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SUSSEX BIOLOGICAL RECORDERS SEMINAR 1999

CONTENTS

INTRODUCTION

Dr Barrie Watson of the Sussex Ornithological Society and Sussex Wildlife Trust Council and Dr Tony Whitbread, Head of Conservation at the Sussex Wildlife Trust

At the beginning of the meeting Dr Tony Whitbread welcomed everybody to Adastra Hall and Dr Barrie Watson read out a quotation from the beginning of E.M.Nicholson's report on the first, 1928 census of heronries.

".....The want of satisfactory data regarding the numbers of animals in relation to space and time is an obstacle of which biology is become acutely aware. It is clear that until accurate statistics are secured on a sufficient scale research must be restricted, if not actually held up, at a great many points....."[1]

He said –

This seems to me to be what this meeting, and our activities as recorders, are all about.

(1) Nicholson E M, Report on the "British Birds" Census of Heronries, 1928. *British Birds* Vol. XXII p270

Sussex Biodiversity Record Centre - Update

Don Baker - Sussex Wildlife Trust

Introduction

Last year I was introduced at this seminar as temporary replacement for Louise Clark, filling in for Louise's maternity leave. My job has since turned into a permanent position with Louise declaring that running a small child is a little more rewarding than running a record centre!

In the beginning...

At the time of the Record Centre's inception everyone was faced with the fact that information was scattered all over Sussex in all sorts of formats: on card files; in notebooks; one or two computerised data-sets and often just in people's brains, a nightmare for any data trawl required for, say, an Environmental Impact Assessment.

In order to protect and enhance the Sussex environment, it is vital that we have access to comprehensive, up-to-date, and accurate information.

To that end **The Sussex Biodiversity Record Centre** was set up with the general aim of:

Locating and making accessible all available information on the Sussex environment.

A partnership project

The SxBRC is a partnership project between the SWT (Sussex Wildlife Trust), EA (Environment Agency), WSCC (West Sussex County Council), ESCC (East Sussex County Council), BHUA (Brighton and Hove Unitary Authority), SDCB (The Sussex Downs Conservation Board) and District Councils. Our main funding comes from these organisations. SWT has agreed to fund at a basic level but funding is still on a year-to-year basis.

Structure

Each Trust department is committee-orientated and we are no exception, working with no less than three advisory committees.

1. A **Steering Committee** made up of the partners, which help advise us on policy and funding matters.

2. The **Sussex Recorder User Group** - Made up of the actual people who deal with environmental data on a day-to-day basis. We sit there and thrash out the practical problems with software and data protocols.

3. A new **Committee for Biological Recording** whose remit will include advising on all matters relating to recording and the subsequent use of records in conservation.

Underpinning the project is a small army of volunteers collecting field data, collating them and entering data into computers all over Sussex.

What data do we hold?

The information that we hold includes:

1) A near comprehensive species data-set for SWT reserves.
2) Rare species records, which record the last recorded incidence of any rare species in any given area.
3) We also hold details of surveys; who's done what, where, and how can I lay my hands on them. This is the Sussex Environmental Survey Directory.

Where does the data come from?

- Amateur naturalists
- Natural History Societies
- Specialist organisations
- Local Authorities
- Professional ecologists

Who benefits?

Anyone connected with the Sussex environment, be they conservationists, planners, naturalists, developers, researchers or land managers.

Information on the environment past and present underpins all we are trying to achieve at the Sussex Wildlife Trust. We can also ensure that others know what information exists and where it can be found, so that decisions that will impact upon the Sussex countryside are better informed.

For instance

1. We provide the information that Tony Whitbread (Head of Conservation at SWT) needs in order to comment on strategic plans such as:

   Brighton and Hove waste plan
   West Sussex strategic plan
   Progress towards our Vision Targets

2. We've been able to supply information to university researchers on topics such as seasonal ponds [Oxford], wet grasslands in Rother [Royal Holloway], climate change [East Anglia] and even chalk grasslands to a college in Dresden!

3. We have provided data to English Nature, Local Authorities, Sussex Wildlife Trust and other Wildlife Trusts in order to work up Biodiversity Action Plans generally and Species Action Plans specifically.

4. Finally, we've been able to supply information to relevant parties concerning local Development Proposals so that all concerned are able to make informed decisions.

Current projects

Promotion

Objective:- To raise awareness and increase funding opportunities.
Prescription:- Talks to potential funders and volunteer regional groups. Press releases and radio interviews.

Identify and obtain available data-sets
Objective:- To become a reference archive for environmental data in Sussex.
Prescription:- Identify data holders and negotiate for access to available data-sets; such access will be reciprocal in some circumstances. Geology (Booth Museum) and Archaeology (E & WSCC) are two data-sets in question for ESD.

Establish and maintain security protocols
Objective:- To protect data-sets from abuse. (We don't own most of the data we hold, we are acting as a reference archive).
Prescription:- Maintaining existing protocols for accountability and confidentiality.

Monitoring Vision
Objective:- To measure progress towards SWT Vision Targets.
Prescription:- Provide the necessary data.

Manage Databases
Objective:- Ensure accuracy and completeness of our data-sets.
Prescription:- Updating and clearing backlogs for the Environmental Survey Directory (ESD), the Rare Species Inventory (RSI) and now the Geographical Information System (GIS). The RSI still needs expert advice for some taxa; please see the notice saying HELP at the back of the hall.

The future

Up until recently, the centre has been operating on a shoestring budget. With help from a dedicated team of volunteers we have got to a stage where the centre is considered a valuable resource for the future and is attracting better funding. This has allowed us to expand and improve facilities in order to run more efficiently. We've even now been able to purchase a Geographical Information System to help rationalise our work, which for an embryonic computer nerd like me is quite exciting.

We aim to either hold or have access to 1 million records in the year 2000. Through discussion and agreement we aim to have on-line links established between ourselves and other large data holders.

10,000 ecological survey records on the ESD are listed so far and we aim to more than double this by the end of 1999. Subject to agreements we aim to have a degree of non-sensitive data available on the internet.

Nationally

Sussex is not alone in the idea of a County Record Centre. Each county is trying to develop its own Record Centre and, invariably, progress relies again on volunteer help. Volunteers nationally have an important input into the realisation of these projects.

Another partnership project operating at a national level is the **National Biodiversity Network.** This will be discussed by Liz Halliwell later today.

Conclusion

More financial resources are now being allocated by funding partners. This will allow the Record Centre to grow into adulthood, being able to provide a detailed picture of the Sussex environments that we are committed to protect and improve into the next millennium.

The Little Whirlpool Ramshorn Snail – an Arun Valley Speciality

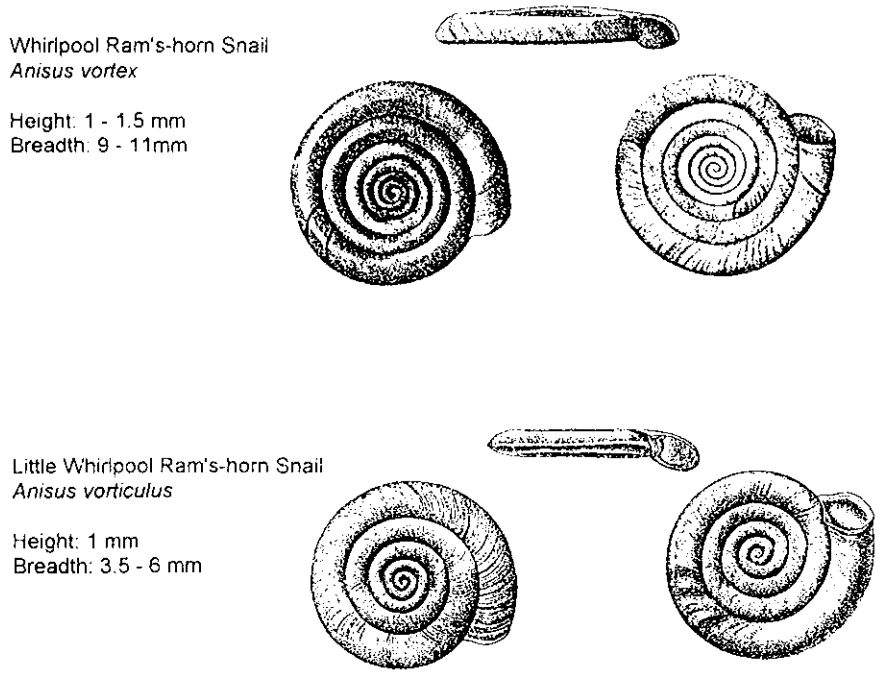
Dr. Martin Willing

Identification & Distribution:

The Little Whirlpool Ramshorn Snail, *Anisus vorticulus,* has a very small and thin-walled, flattened, biconcave shell that rarely exceeds 5mm in diameter (see fig. 1). It can be a little difficult to distinguish from a similar, but much commoner species, the larger and more robust Whirlpool Ramshorn Snail *Anisus vortex* (Macan, 1977). The central 'razor-blade'-like keel on the periphery of the Little Whirlpool Ramshorn Snail is, however, usually a clear distinguishing feature.

In Britain, *Anisus vorticulus* is largely restricted to 'traditional' grazing marshes. In such locations it lives in the clean, often calcareous waters of ditches with a rich aquatic flora. It has always been a very local species in Britain, being chiefly confined to Suffolk and Norfolk (mainly the 'Broads' area), the Pevensey and Lewes Levels in East Sussex and Amberley Wildbrooks in West Sussex, with one isolated location at a pond near to Staines (see distribution map fig.2). The scarcity of the snail, in both Britain and Europe, has resulted in its inclusion as a Red Data Book category 2 (vulnerable) species (Bratton 1991). It also appears on the Government Biodiversity Steering Group's Priority Species List (Anon., 1995 & 1998), whilst it is also a candidate Berne Convention species.

Fig.i *Anisus vorticulus* and *Anisus vortex* – two similar species



Recent survey work:

In 1996, a survey of ditches in East Anglia and South-Eastern England for both *Anisus vorticulus* and another species, the Shining Ramshorn Snail, *Segmentina nitida* (Killeen & Willing, 1997) revealed that *Anisus vorticulus* was declining in Britain. Although it was present at most historical sites in East Anglia, the species was in very low numbers on the Pevensey Levels and appeared to have gone from Staines and the Lewes Levels. One piece of good news was the re-discovery of the snail in three ditches on Amberley Wildbrooks, the first find in West Sussex since the 1960's.

In 1997 more detailed work took place on Amberley Wildbrooks (Willing & Killeen, 1998) and additionally as part of The Arun Valley Project (Abraham *et al.*, 1998) the drainage ditches in the Arun Valley between Pulborough and Climping on the coast were also investigated. Excitingly, these surveys showed that *Anisus vorticulus* was far more widespread in the Arun Valley than had been suspected. In addition to more than doubling the number of Amberley sites, the survey revealed the presence of good populations of the snail on the RSPB's Pulborough Brooks as well as populations further south in the Houghton Bridge / North Stoke area (fig. 3).

As well as searching for Mollusca, these 1997 surveys also looked at:

- ditch dimensions
- ditch and adjacent land management
- water chemistry
- associated aquatic vegetation.

Certain features seemed to emerge that were present in an *Anisus vorticulus* ditch. Optimum ditch conditions included:

X a **ditch management cycle** of between 5 - 10 years creating shallow weed-choked conditions.

X a **width** between 1.3 - 3m; **depth** 0.15 - 1m+ usually **shallow water** areas able to warm quickly.

X **adjacent land** of pasture with little/no fertiliser application.

X **unenriched water** with low conductivity & dissolved solids.

X both **hard but also slightly soft waters.**

X little or **no overhanging vegetation.**

X usually free **access for grazing animals.**

The mollusc survey work also ran in parallel with a survey of aquatic plants undertaken by Francis Abraham (Abraham, et al., 1998; Abraham 1998). It is noteworthy that ditches supporting 'good' populations of molluscs, including *Anisus vorticulus,* were also found to be ideal for a wide variety of aquatic plants including a number of rare and local species. This happy circumstance means that sound management practices for one

group of invertebrates also appear to maintain a wide diversity of aquatic and emergent flora as well! Management should ensure that ditches:

- allow free **access to grazing animals** (moderate stock levels) to maintain unshaded ditches and shallow poached margins.
- are **bordered by grazing (rather than arable) land** ideally receiving no fertiliser applications.
- are allowed to develop at least moderately **aquatic weed-choked conditions,** with little overhanging vegetation.
- are **weed-cleared on an infrequent**, often > 5 year basis.

When ditch clearance is necessary, it should only be in short lengths staggered over a period of two or three years to aid the post-clearance recovery of populations from connected, uncleared sections. When removing sediment it may be better to clear to mid-channel, leaving one ditch margin intact.

Many relatively isolated ditches both on Amberley Wildbrooks and elsewhere in the Arun Valley were found that appeared to be ideal for *Anisus vorticulus* and yet did not support the snail. Elsewhere low populations of the snail were sometimes found in regularly cleared ditches that had a direct connection to an infrequently cleared ditch supporting a strong population of *Anisus vorticulus.* This tends to suggest the species is a relatively poor ditch-to-ditch coloniser if there are no direct ditch connections. It was observed that rather more sub-optimal ditches on Pulborough Brooks were found to support low numbers of *Anisus vorticulus* than at Amberley. This may be that because the Pulborough system has experienced more regular flooding than has been allowed at Amberley and that this has allowed young snails to be carried to new ditches in the flood waters.

Life cycle:
As well as general survey work, ditches were selected at both Amberley and Pulborough for monthly sampling from April to late October in both 1997 and 1998. *Anisus vorticulus* were carefully removed from each sample and the snails counted and individually measured. Analysis of the results revealed what appears to be an annual lifecycle for the snail. Main features include:

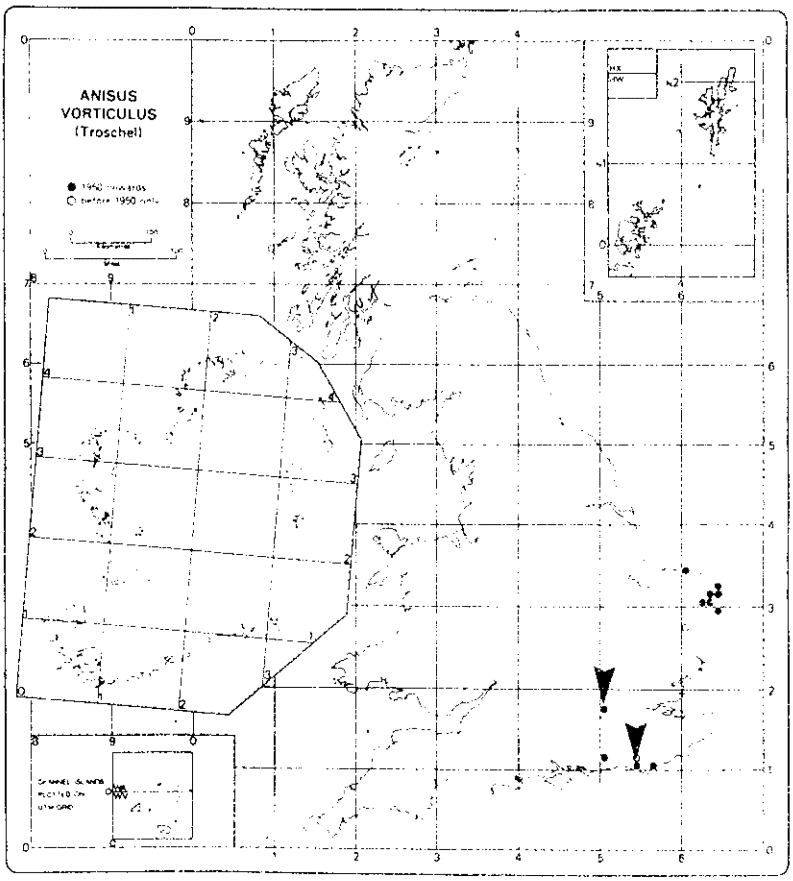
- ***late April/early May*** - low numbers of maturing adults.
- ***late May & June*** - population matures & may breed.
- ***July (Amberley)*** - mass mortality of adults (snails may seem absent).
- ***August - September*** - appearance of large numbers of young snails.
- ***October*** - slow growth of juveniles & moderate mortality.
- ***November - March*** - slow growth and continued population mortality assumed.

Further work in the Arun Valley:
In 1999 it is hoped to continue *Anisus vorticulus* work in the Arun Valley and possible projects include:

1. Surveys of drainage ditches upstream of Pulborough (the most northerly known populations of *Anisus vorticulus* at present) on the Arun and for a short distance up the Western River Rother.
2. A detailed ditch-by-ditch survey of the RSPB's Pulborough Brooks reserve.
3. Further monitoring of selected ditches on Sussex Wildlife Trust land at Amberley Wildbrooks.

It is fortunate indeed that the vast bulk of the ditches supporting *Anisus vorticulus* in the Arun Valley are found on land managed by The Sussex Wildlife Trust and the RSPB. With careful management there is therefore every reason to believe that the valley will long remain a secure stronghold for this rare and threatened species.

Fig. 2 National 10 Km square distribution of *Anisus vorticulus*
(Kerney, 1976)



▼ = Surveys suggest these populations may be extinct

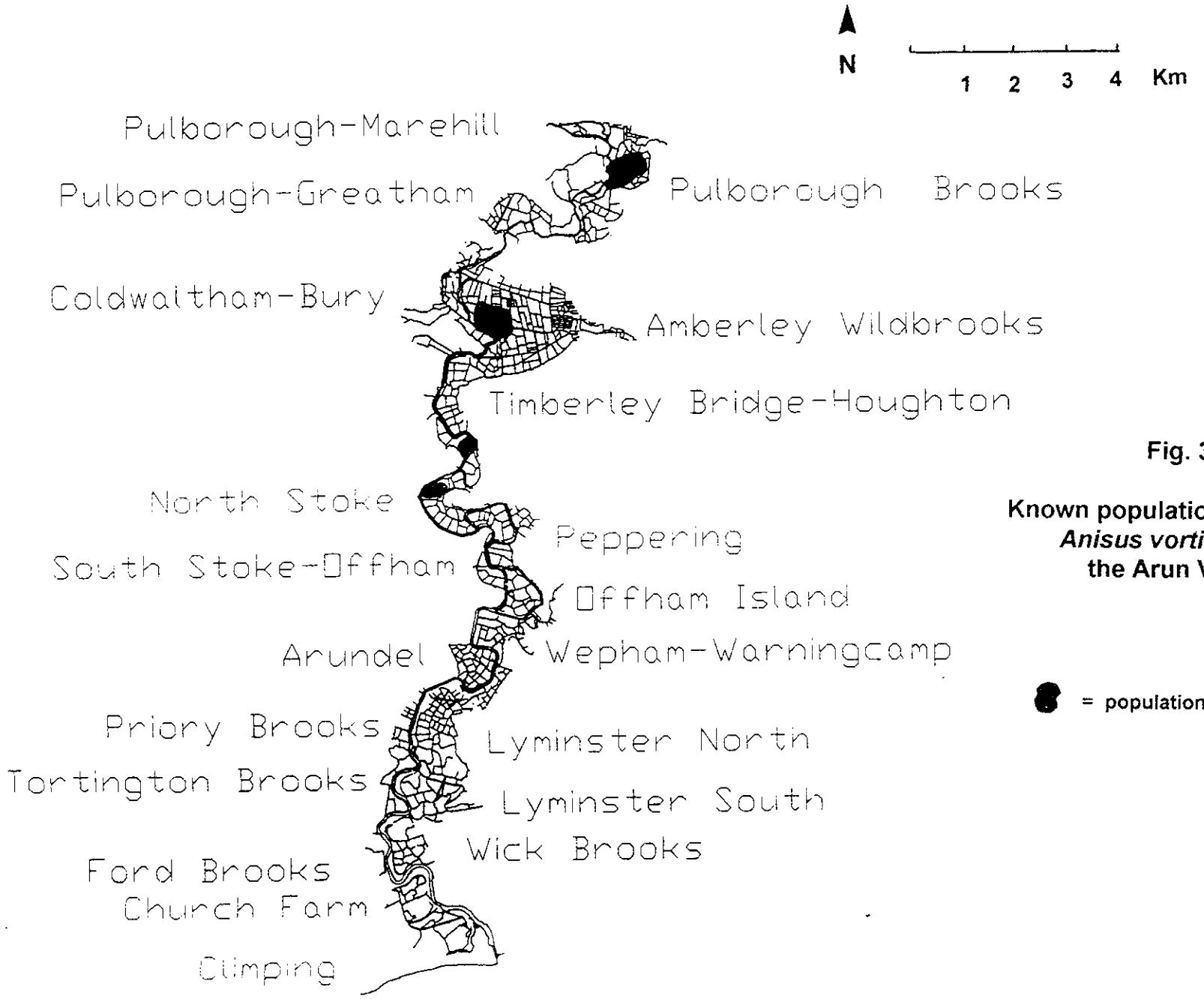


Fig. 3

Known population centres of *Anisus vorticulus* in the Arun Valley

= population centre

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Acknowledgements:

Project work (1996 - 1998) in the Arun Valley has been supported by English Nature (Species Recovery Programme), the Environment Agency, Arun District Council and the RSPB. Their interest and support is acknowledged with gratitude. I would particularly like to thank Mr. Simon Allen (Arun Valley Project Officer), Jane Cecil and Phil Griffiths (Environment Agency), Martin Drake (English Nature) and Tim Callaway, RSPB Pulborough Brooks Site Manager for their help, interest, support and advice. Frances Abraham is also thanked for help with field work, identification of ditch flora and for valuable discussions. Dr. Michael Kerney also gave useful advice.

Biodiversity Action Plans

Ann Griffiths, Senior Ecologist, West Sussex County Council

1. Recap

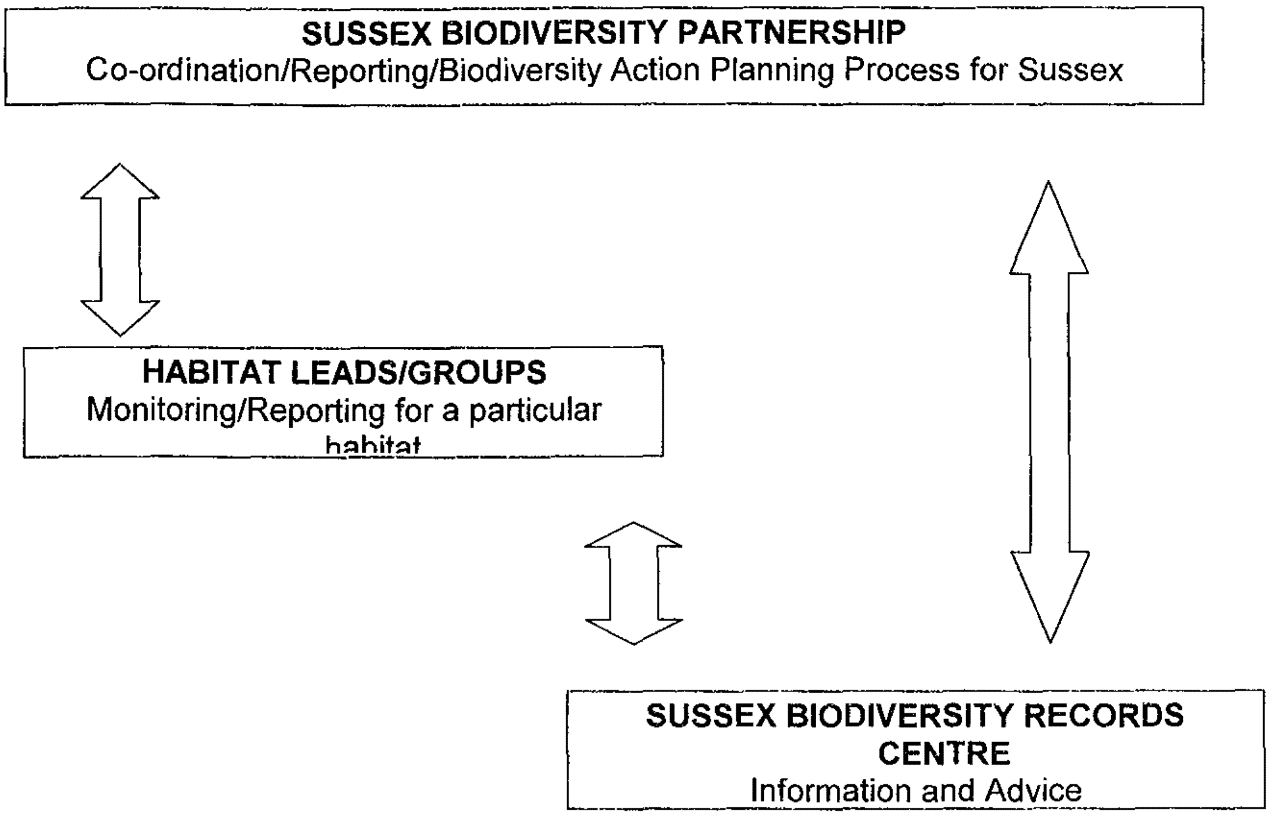
Firstly it is important to realise how far Biodiversity Action Planning has come in the last few years:

1992	RIO
1994	UK GOVERNMENT
1996	SUSSEX PARTNERSHIP
1997	LAUNCH
1998	ACTION PLAN FOLDER
1999	FURTHER HABITAT PLANS
	START OF SPECIES PLANS
	CONTINUING NEWSLETTER FROM NATIONAL AND LOCAL SOURCES

It might all seem a bit "tortoise like" – but its heartening to know we are getting there!

2. Sussex Biodiversity Partnership

The responsibility of the Partnership can be illustrated as follows:-



3. Sussex Biodiversity Action Plan – 1998

3.1 Update

National

NEW GUIDANCE – there are now 5 guidance documents produced by the Local Issues Advisory Group (ring – Biodiversity Secretariat 0 0117 987 8628)

1. An Introduction
2. Developing Partnerships
3. How Local Biodiversity Action Plans relate to other Plans
4. Evaluating priorities and setting targets for habitats and species
5. Incentives and advice for Biodiversity

REVISED HABITAT DEFINITIONS – UK Biodiversity Group Tranche 2 Action Plans – this publication contains the new Habitat Definitions.

BROAD HABITAT CATEGORIES – PRIORITY HABITATS – see appendix 1
SPECIES LISTS – SHORT/ MIDDLE / LONG
LONG = species of habitat concern
MIDDLE = priority species
SHORT = priority species

SUSSEX PARTNERSHIP

Publication of first 2 plans – Heathland and Reed Beds

Progress on first 2 plans – Heathland – West Sussex 500 hectares of heathland now under Countryside Stewardship, return of breeding woodlarks (1998 RSPB study – 70 breeding sites), funding from EN/WSCC for update of heathland inventory.

Reed Beds – EA and Water Companies pursuing reed bed creation schemes, reed bed management given higher priorities in management plans – e.g. Pagham Harbour.

Near completion of others – launch planned in June of Hedgerows, Meadows and Flood Plain Grasslands.

Progress on others - Coastal Vegetated Shingle, Chalk Grasslands, Arable, Standing Open Water, Rivers and Streams, Minerals, Marine, Road Verges, Saline Lagoons, Woodlands, Other Coastal Urban – are all started to a greater or lesser extent – for update position, refer to the Sussex Biodiversity Newsletter – if you do not receive a copy ring Claire Burwood on 01273 476595.

Species - guidelines for the production of Sussex Species Action Plans have been drawn up. Again the expanded details are available in the Sx Newsletter, but Appendix 2 gives a summary.

3.2 Monitoring

Aim – to establish a simple, yet effective monitoring and reporting system for the Biodiversity Action Plan for Sussex

There are two tiers of monitoring:

A. Habitats

1. Monitor against actions – actions are specified – have they been carried out – yes/no!

2. Habitat extent – use existing mechanism where possible – e.g. – air photo interpretation , implementation of agri-environment schemes.

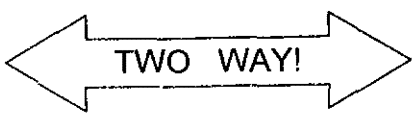
B. Monitor associated biodiversity

Indicator species – use existing mechanism where possible – e.g. – existing species monitoring programmes.

3.3 Communication

Communication is vital! Today is one example of how this is being achieved. The whole process depends on CASCADING – Partnership representatives have a role to inform their sectors, and those in the next tier should then pass on their information – today for example – those here representing an organisation should convey the information to the contacts !

IDEAS – communication must be



LET US KNOW YOUR VIEWS

3.4 Other progress

Specialist groups working at the national level - British Butterfly Conservation Society, Plantlife.

District plans – in West Sussex, Arun and Chichester District are developing local plans in East Sussex, so is Hastings.

Parish plans – Fernhurst Parish is beginning to look at a Parish Level Plan.

Organisation/individual action programmes and implementation – West Sussex County Council will be developing its plan over the next year -- We are considering which aspects of the Habitat and Species Plans are its responsibility and how these are going to be implemented and by when. Other organisations are similarly looking at Action Programmes.

Garden plans – Biodiversity starts at home!

Local Agenda 21 – This wider initiative encompasses biodiversity, and individuals can do much indirectly to help, by simply living more sustainably.

3.5 NOW LET'S DO IT !

Appendix 1 –

REVISED BROAD HABITAT TYPES	NATIONAL LEAD AGENCY	SUSSEX LEAD AGENCY	PRIORITY (Formerly KEY) HABITATS NEW NATIONAL COSTED ACTION PLANS
BROAD LEAVED, MIXED AND YEW WOODLAND	EN	SWT	LOWLAND WOOD-PASTURE AND PARKLAND
	FC	SWT	WET WOODLAND
	FC	N/A	UPLAND MIXED ASH WOODLAND
	FC	SWT	LOWLAND BEECH AND YEW WOODLAND
NEUTRAL GRASSLAND	CCW	FWAG	LOWLAND MEADOWS
	MAFF	N/A	UPLAND HAY MEADOWS
CALCAREOUS GRASSLAND	EN	SDCB	LOWLAND CALCAREOUS GRASSLAND
ACID GRASSLAND	EN	FWAG	LOWLAND DRY ACID GRASSLAND
STANDING OPEN WATER AND CANALS	EA	VARIOUS	EUTROPHIC STANDING WATERS
	EA	VARIOUS	AQUIFER-FED NATURALLY FLUCTUATING WATER BODIES

Appendix 2

Guidelines for selecting species for Sussex species action plans

The species is in national decline

The species is in decline in Sussex

The species has a stronghold in Sussex

The species has a national species action plan

The species is not covered by a Sussex habitat action plan

There is already action underway for this species (existing scheme/initiative)

The species has very specific requirements

The species is an indicator of wider environmental benefit

The species has popular appeal

There is data available on the species (includes ease of monitoring)

Species need not satisfy all these criteria in order to qualify for inclusion

There will be several lists for species action

Guidelines for the production of species action plans

Standard format

Introduction

Current factors causing loss or decline

National species action plan

The action plan objective and targets

Proposed action

Policy and legislation

Site safeguard and management

Advisory

Future research and monitoring

Communications and publicity

Links with other action plans

References

Consultation

The National Biodiversity Network and the Linking Local Record Centres Project.

Liz Halliwell, LRC Support Officer, The Wildlife Trusts

The National Biodiversity Network

The National Biodiversity Network (NBN) being developed by a partnership of organisations is an initiative that aims to improve the accessibility of *relevant* wildlife information to those who need it. Currently there is a growing demand for wildlife information, for example, to support local and national biodiversity action planning, meet EC directives and to enable better decision-making for land management and development control.

Despite the fact that the UK is probably one of the most intensively recorded countries, there are currently few links between those that own or hold data and potential users. Data is widely dispersed and held in a wide range of often incompatible formats and there is no overview of what data is available or how to access it. As a result, much valuable information is currently not being used.

The aim of the NBN is to establish by 2010 a network of local and national data centres across the UK. Data will be managed in these centres and made available for others to use through an electronic index and gateway and in line with a framework of data standards and access terms. A range of projects will deliver this through three phases (foundation, demonstration and expansion) with work currently concentrating on the demonstration phase. The demonstration projects include 'linking' projects, which will make information available and *standards* projects, which will ensure that data is compatible and accessible (Figure 1). Together they will work towards establishing a mechanism for managing data within a common set of standards.

The Linking Local Record Centres Project

The Linking Local Record Centres (LRCs) Project, led by The Wildlife Trusts, aims to establish a UK wide network of LRCs. When linked to other data holders through the NBN, this will provide a more complete local and national picture of biodiversity information.

To achieve this work, we have been focussing on developing a structured approach for the establishment of effective LRCs. This is based on the preparation of a development plan which is underpinned by a careful analysis of the needs of potential users. These users include a wide range of organisations and other groups such as local authorities, statutory conservation agencies, voluntary conservation bodies and recorders. The activities needed to run the LRC to meet those needs are then determined together with a framework for the LRC status, management and operation and funding mechanisms. This approach is being tested through three pilot LRCs and guidance on establishing an LRC was published in April 1999.

A range of demonstration projects is addressing issues relating to maintaining and running an LRC. This work is using existing LRCs to review their current working

practices, build on known practice elsewhere and improve the way they are working. As they do, so they will document their work and this will be used as guidance for other LRCs. There are three projects:

- Working with National Schemes and Societies -- which aims to improve the flow of information between recorders, LRCs and national recording schemes and societies.

- Developing Partnerships – within which there are two main strands:-

  (a) establishing wider and stronger local partnerships for an LRC by making better links with organisations already using the LRC and then approaching other organisations less usually associated with LRCs.
  (b) integrating the work of two existing LRCs in one region by bringing together a wide range of partners and using the development plan process.

- Developing and Documenting Policies and Procedures – covering a wide range of issues relating to the day-to-day running of an LRC:-

  - information management needs
  - data collection and recording policies
  - data management and processing
  - data products/services
  - data providers

Overall, the aim is to close the loop between those who gather data and those who need to use it. This will ensure that there is more data available of an improved quality and ultimately a better future for wildlife and people.

If you would like to know more about the NBN or the Linking LRCs project, please visit the NBN website (http://www.nbn.org.uk) or contact:

Rachel Hackett,
Biodiversity Information Officer,
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Nottingham.
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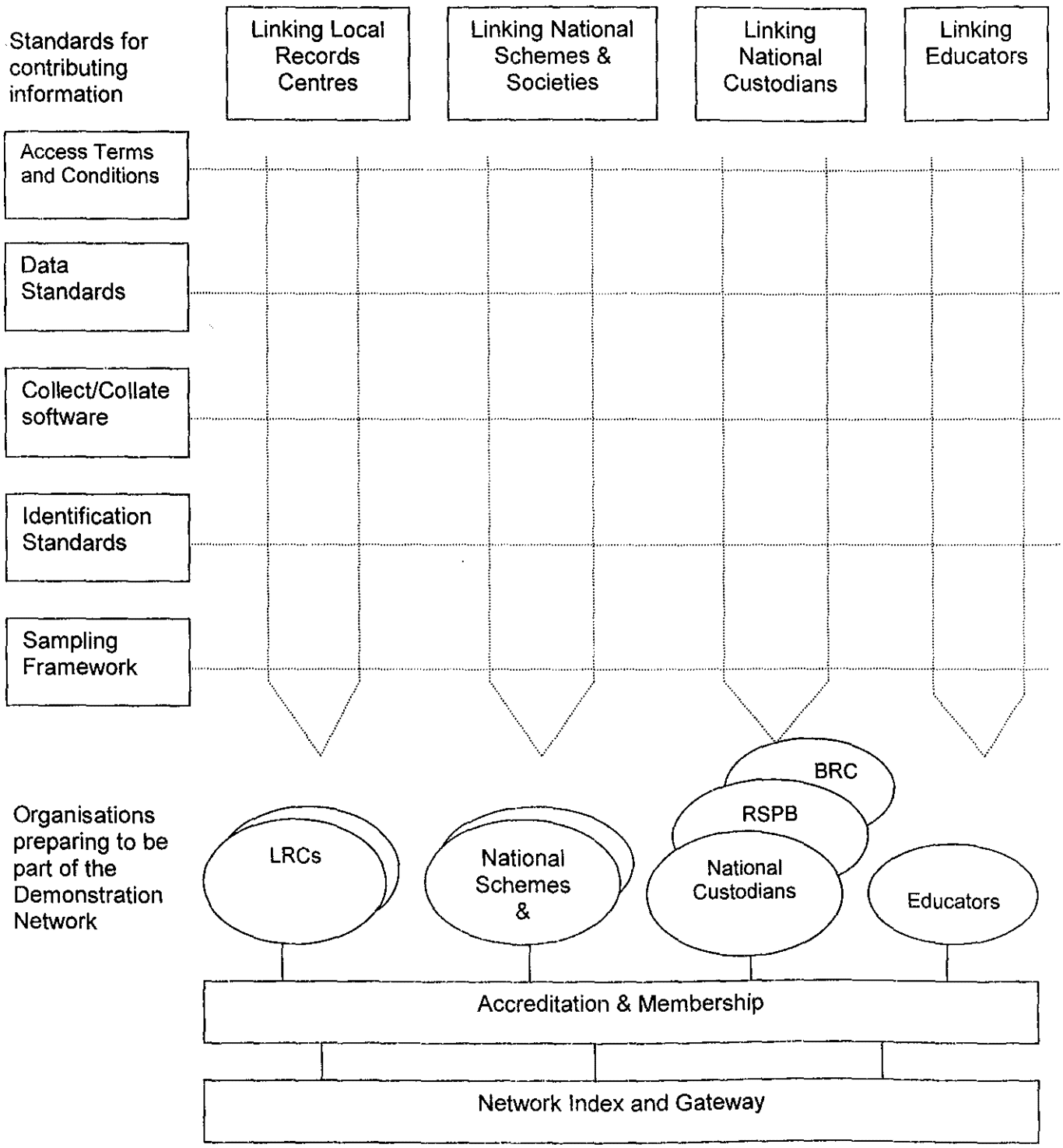
Tel.: 01636 677711

Figure 1 Relationship between Projects in the Demonstration Phase of the National Biodiversity Network



The BTO Annual Census of Heronries

Dr. Barrie Watson

The BTO annual census of heronries in Britain is the longest continuous run of data in the world on a single species, only the Christmas Bird Count in the USA has been running for longer and is bigger.

There is a long tradition of recording heronries, details of which may be found in the old estate books. Thus in Sussex we know of a heronry at Iden in 1297 and there were 150 nests at Herstmonceux in 1550. In 1866, 400 nests were recorded in Great Sowdens Wood in East Sussex. Yarrell published a list in 1843 but with little detail, and in 1851 J McIntosh listed 32 sites in Vol 1 of The Naturalist. Morris recorded 71 sites in England and Wales in his *British Birds*, published in 1855. In the early 1900's various county publications started to mention heronries. However many sites were destroyed by tree felling during the Great War.

In 1907 H F Witherby first published the journal *British Birds* and in it proposed a series of systematic investigations. In 1928 E M Nicholson, then at Oxford and a keen member of the Oxford Ornithological Society, proposed a national census of heronries "with Witherby's backing". What was meant by that is that Witherby agreed to support the idea and to publish the results in *British Birds* provided that Max Nicholson did all the work of organising the counts – it had become clear that Witherby could not himself organise the investigations he had proposed and at the same time deal with publication.

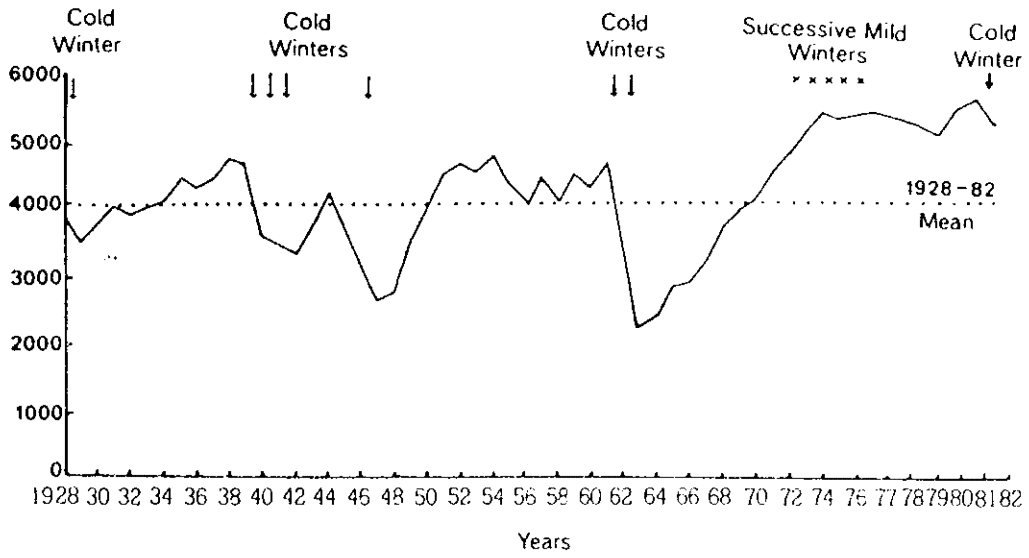
Most herons first breed at two years of age, some at one year, so that at any time there are a number of non-breeding birds which disperse widely and are not amenable to counting. The count was to be of occupied nests, which would give the number of adult breeding pairs in the population. Herons in Britain nest mainly in trees with a tendency towards deciduous trees in the south and coniferous trees in the north, while a few pairs nest on cliffs and in reed beds. Observers were recruited through *British Birds*, the census made and in the same year a remarkably detailed report published. All records were listed, with the names of the observers, and the number for each site and totals for each county tabulated. Details were given for both currently occupied and extinct heronries, and "rumours" of heronries investigated, many of which proved ill founded.

The 1928 census was followed up with sample counts over the next few years.

In 1933 Nicholson and others founded the British Trust for Ornithology. It had become clear that the journal British Birds could not cope with an ongoing survey, and the annual Heronries census was transferred to the BTO and the results from then on published in the BTO journals.

From that time onwards sample counts have been made in every year. A population index was calculated by comparing all sites counted in two successive years and also taking an average of all counties in which it was considered a complete count had been made. The results were compared with a series of what were considered to be "standard years" to detect changes in the population. Nowadays the data are recorded on a standard data recording card and the index calculated from a large number of sites recorded each year.

fig. i. Graph of results 1929 to present day.



The graph gives an indication of population fluctuations over the years with the line ranging above and below the 4000 pairs level. The big drops coincide with hard winters – Herons can survive extreme cold for short periods, but when the ponds and streams are frozen solid for long periods they starve. There are drops due to the cold winters in the late 1930's and in 1947. The biggest dip is due to the long freeze of the winter of 1962-63. The population took six or seven years to recover from that set back but we then had a succession of mild winters and the graph has climbed steadily. The population is now high.

Heronries become extinct for various reasons, and new ones are formed while others remain remarkably stable over long periods. The field work for *the Atlas of Breeding Birds* turned up a few new ones. You would think that a bird as large as a Grey Heron, building a great big nest in bare branches of trees early in the year, would be easy to quantify, but we are still finding new heronries in Sussex which have been in existence for years, but unknown to bird-watchers – one such was found in a recent survey of Rookeries!

So? What is the use of all this work? It has shown clearly how the population is affected by cold weather. The data have on occasion been used to advise planners – in Sussex the proposed Bognor/Felpham By-pass road would have passed very close to a large heronry. Grey heron is at the top of the food chain (almost, only something as large as a Goshawk would take it) and up to date knowledge of the population level would give warning of some environmental catastrophes such as pollution leading to shell thinning.

ATLAS 2000 PROJECT

Arthur G. Hoare – (Sussex Botanical Recording Society)

Introduction

The *Atlas of the British Flora* (Perring & Waters 1962) with its *Critical Supplement* (Perring & Sell 1968) is still the standard reference on the distribution of the British Native and Naturalised Plants.

In recent years it has become apparent that it is now seriously out of date. The distribution of many species has changed for a number of reasons: -

Agricultural practices – The loss of permanent pastures and the intensification of farming regimes.
Other Land Uses – e.g. Afforestation, Building and Roads.

The changes in plant distribution have been confirmed by the results of recent recording projects like the British Society for Botanical Information (BSBI) *Monitoring Scheme* and *The Scarce Plants Project*. The BSBI Monitoring Scheme (1987-88) (Rich & Woodruff 1990) was a sample survey in which one hectare (10km square) in every nine was re-surveyed in 1987-88. *The Scarce Plants Project* (1991-92) was set up by the Joint Nature Conservation Committee and the Institute of Terrestrial Ecology to review the status of the scarce species in Britain. A scarce species is one that is thought to occur in over 15, but less than 100, 10km squares (appearance in less than 15 10km squares puts a species in the Red Data Book).

The publication of Clive Stace's *New Flora of the British Isles* in 1991 highlighted many Alien Taxa that are now quite widespread in the countryside; many of these plants were not included in the 1962 Atlas.

In 1996 The Botanical Society of the British Isles and The Biological Record Centre (Institute of Terrestrial Ecology) launched a bold and ambitious new project to produce an updated Atlas of Vascular Plants of Britain and Ireland.

The Aims of the Project

Its aim is to bring together the many plant records that have been made since the publication of the 1962 Atlas and to add to them by carrying out field surveys in the four years leading up to the millennium (1996-99). All these records will be entered into a single database that will be used to produce a new Atlas ready for publication sometime in the year 2000. There will be in three categories of records, i.e. pre 1970, 1970-87 and post 1987.

Progress so far at Monks Wood.

The majority of records prior to 1987 have already been entered into the BRC Vascular Plant Database at Monks Wood and to date (early 1999) another 300,000 new Atlas records have been added. About half of the records, which are submitted to the Record Centre, are sent in on computer disc and the rest on master cards purposely designed for the project.

Records from East and West Sussex.
In this final year for collecting records, the Sussex Botanical Recording Society will be very active, recording in all the under worked 10km squares in order to present as true a picture of the status of plant distribution in Sussex as possible. A number of field trips have been planned and many individual members have also adopted their own squares in which to record.

From the data received so far it appears that we are short of records from many urban areas. It is in these areas that there are still many unusual and interesting plants to be found, not only escapees from gardens but also alien plants originating from animal and birdseed mixes and many other sources. It is a pity that there are not more people recording the alien plants because they are after all a fundamental part of our changing flora. Environmentalists talk of indicator species for ancient woodlands or old meadows etc. but it is the aliens that could well be indicators of global warming or some other phenomenon and they should not be ignored.

We have all seen the dangers of ignoring certain introduced plants for example the *Rhododendron ponticum* (Rhododendron) and *Fallopia japonica* (Japanese Knotweed), plants that are not native here but have found their niche to the detriment of our native flora. There are other more recent invaders that are causing alarm in the wetlands, such as *Myriophyllum aquaticum* (Parrot's Feather) from South America and more recently *Hydrocotyle ranunculoides* (Floating Pennywort) from North America. The latter was first recorded in 1990, but is now to be found in many places in Southeast England and is spreading rapidly to other parts of the country. To make Atlas 2000 a success and to represent a true picture of the status of the British and Irish flora we must record all native, naturalised and casual plants found in the wild.

Two Bays Project

Dr. Barry Yates

Two bays, one environment - a shared biodiversity with a common focus.

The Project Area
The project encompasses two areas, Rye Bay in East Sussex and the Baie de Somme in Picardy, France. Rye Bay covers 91 km^2 and includes the classic sites of Camber, Rye Harbour and Pett Level as well as the river valleys of the Rother, Tillingham and Brede.

The Project has 4 aims:

- Develop a common resource of data for comparing the Two Bays environment.
- Improve management techniques for habitats such as shingle and wetlands.
- Implement these techniques in order to enhance these habitats.
- Disseminate the knowledge generated by the project.

The Habitats
There are common habitats in the Two Bays including intertidal areas, shingle, sand dunes, saltmarsh, brackish and freshwater wetlands including reedbeds, grazing marsh and woodland.
There are also similar designations to our SSSI (SAC, SPA and Ramsar), SNCI, AONB.

The Species
During the past two years we have been gathering the available wildlife information of Rye Bay and adding it to the Rye Harbour Nature Reserve Database. The table shows the number of species on Rye Harbour Nature Reserve, Rye Harbour SSSI and the Rye Bay Area. Many of the species recorded can be considered local, notable, or rare, according to RECORDER.

Species to end of 1998	Common	Local	Notable	Rare	Total	Records
RYE HARBOUR LNR	2211	561	241	63	3076	44382
RYE HARBOUR SSSI	2424	617	281	91	3413	67762
RYE BAY	2982	837	423	132	4374	117676

We have made comparisons with the species in the Baie de Somme. Future reports will consider the habitats, historical habitats, accounts of rare species and wildlife management.

WILDLIFE GROUPS	TOTAL	SOMME ONLY	RYE ONLY	SHARED
ALL PLANTS	1071 species	245	348	478
INVERTEBRATES	3172 species	281	2396	495
VERTEBRATES	374 species	18	54	302
ALL SPECIES	4617 species	544	2798	1275

How you can help us?

- If you have any records for Rye Bay or Baie de Somme please let us have them.
- If you have any spare recording time please think of this project and give us a visit this year!
- If you know anyone with relevant records please let them know they are useful to the project.
- Identify the priority species for your group.

How we can help you?

If you want information about a species or group of species - we can provide it.
If you want to record wildlife in the Baie de Somme we can make arrangements for you.

More information at www.yates.clara.net or leaflets available.

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