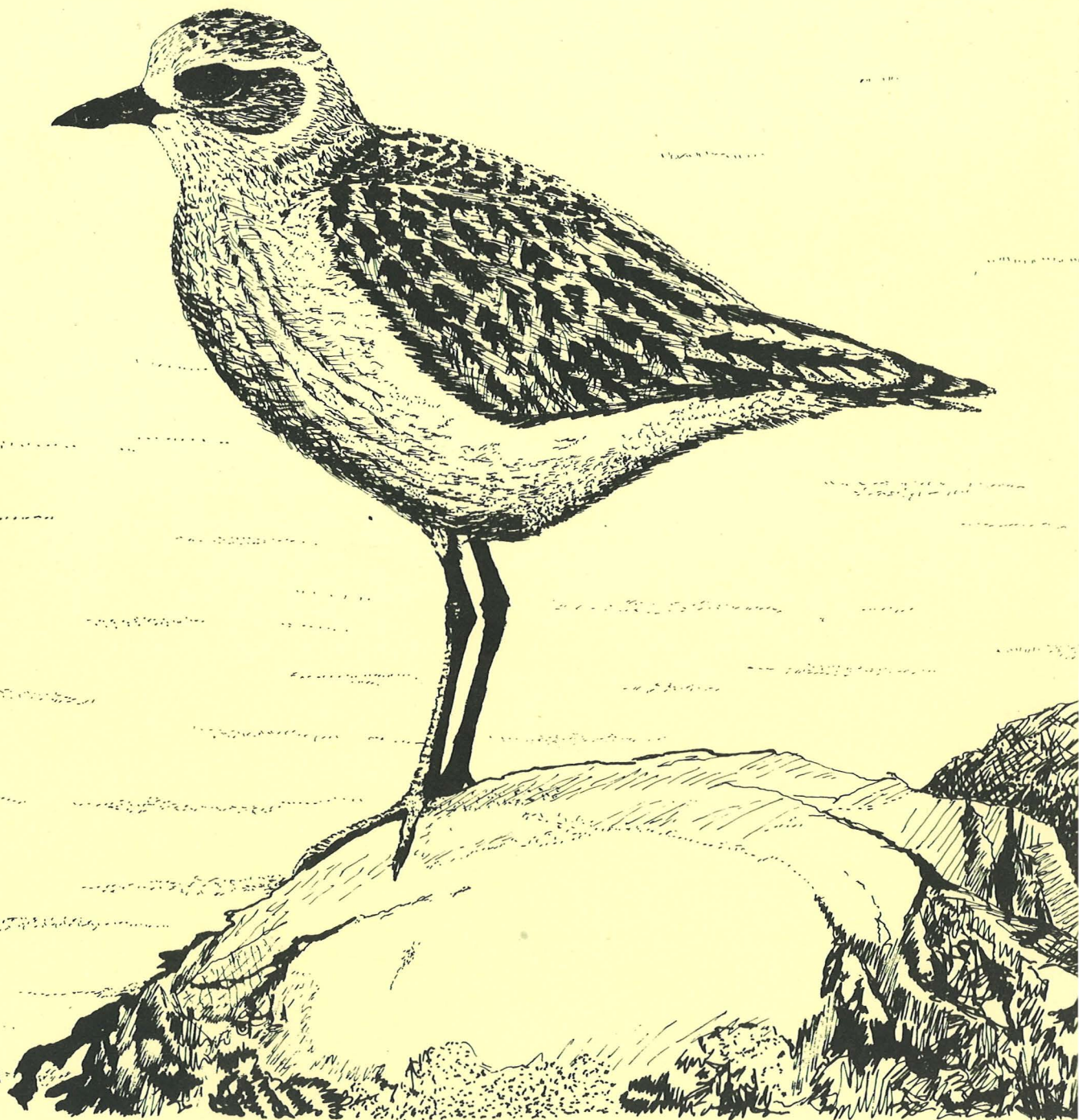


B.C.G.

Newsletter Vol 2 No 6

March 1980



EDITOR'S NOTE

This issue of the Newsletter has an East Anglian flavour, and my thanks are due to colleagues in that region, and particularly Peter Lambley of Norfolk Museums for acting as link man.

Members will note the insert from the Fauna Preservation Society. Reading ORYX, the journal of the Society, is arguably the best means of keeping abreast of worldwide conservation issues. Specimen copies are available from the Society, C/o Zoological Society of London, Regents Park, London NW1 4RY.

On a more personal note, this will be my final effort as Editor. Unfortunately, other commitments prohibit my continuation in this role, although I still hope to continue to be involved with production and distribution, and make an input via the Committee. However, I would like to take the opportunity of thanking everyone who has helped me over the last two years, particularly those members who supplied articles (usually at short notice!), also Denise MacBarron and Judy Sunley of Sunderland Museum for their accurate and patient typing, and to Tyne and Wear County Council's Reprographics Department.

Finally I must pass on my best wishes to the incoming Editor, Geoff Hancock of Bolton Museum, and hope that the membership will support him fully in his efforts.

Cover Design by Alan F. Johnston, Kelvingrove Museum, Glasgow.
Juvenile Grey Plover drawn from a field sketch made in February 1980 on the Clyde Estuary.

Contents

Chairman's Report	241
Secretary's Report	244
Editor's Report	245
Museums Association Conference, London, Sept. 1980	246
The Wellcome Institute Herbarium	246
Earthwatch	247
Book Review	248
Request for Information	249
BCG Prize Crossword	250
BCG Study Weekend at Leicester	252
Storage Cabinets for sale	254
Natural History at the Colchester & Essex Museum	255
- Herbarium, J. J. Heath	256
- Invertebrates, K. Hawkins	257
- Vertebrates, L. C. Sawyer	262
Herbaria in the Norfolk Museums Service, P. Lambley	263
Some thoughts on Fieldwork, P. Lambley	265
Would you believe it? T. Irwin	266
Celebrating Mother's Centenary in Doncaster, P. Skidmore	268
Confessions of a Bald Eagle, C. Howes	270
The Collections Research Unit in Yorkshire and Humberside, A. Norris	273
The Herbarium of Glasgow Museum & Art Gallery, G. Jones	275
A Collections Research Unit for the Midlands, J. Mathias	282
Wildlife & Countryside Bill	284
- Further Information re Consultation Paper No. 3	284
- Conservation of Habitats	290
- Countryside Provisions	293

CHAIRMAN'S REPORT

It is customary in any society for the chairman to present an annual report but I feel that the pages of the 'Newsletter' have informed member very clearly of the Group's activities during the past year and it would be superfluous for me to reiterate this information.

Nevertheless, I feel that the opportunity to write a report is one I should accept so as to highlight particular features and to present a personal view of the future and problems facing biologists in museums.

The BCG is a small society and whilst the Committee has representatives of most kinds of museums and covers most parts of the United Kingdom, the Group has not attracted many members from the national museums in London. This reflects a fundamental difference in the work between these major institutions and most other museums in the country. However, the Group is anxious that it should be representative of all museums and accordingly close links have been maintained with the British Museum (Natural History).

The common feature of all museums (as distinct from say interpretative and educational centres) is that they possess collections. The size and importance of the collections at the Royal Botanic Gardens, Kew and the British Museum (Natural History) readily distinguish these institutions as something very special, not only in this country but in the world as a whole. However, many of us feel that collections elsewhere are undervalued although a few large collections (e.g. the national collections in Edinburgh and university collections at Cambridge and Oxford) are recognised as being important for scientific research. To try and focus attention on provincial collections, the BCG has helped arrange conferences, organised collection surveys and responded to various official reports. The result of this work indicates even more clearly that our suspicions are confirmed. A vast resource of information lies largely unknown to our employers, whoever they may be, to government, to research workers and even to ourselves and the museums profession. Having done this work, the BCG is actively trying to make the newly discovered information available but this takes time.

Much is being made of the impending leisure age and the annual conference of the Museums Association had this as its theme for 1979. The attention of BCG was therefore focused on this topic during the specialist session and I feel sure it is an area where a great deal more thinking needs to be carried out.

Another topic that was considered during the year was the question of training. In particular the problems of technical training and the training of taxidermists. It is apparent that there are serious difficulties. Professional training has received less attention but the BCG should look carefully at the consequences of changes in connection with the Diploma of the Museums Association and the lack of systematic topics in degree courses.

It is probably dangerous to speculate on what may happen in the future, but I feel that biologists in museums should consider carefully what may be their future role in society. Continuing financial problems are likely to be an ever-present difficulty. If museum biologists want more financial resources, not only must the case be carefully presented and argued but consideration must be given as to where the cash is to be obtained. There are, it seems to me, only two alternatives. Either it must be taken from someone else's pocket or else it must be earned. This seems to leave biologists in an impossible position but if the widest view of museums and their role in society and the leisure industry is taken, this may not be so. However, beyond bearing this fundamental problem in mind, I do not feel we should consider it further at the moment. Of much greater importance is to consider the role of museum biology itself.

Biology and natural history has enormous public interest. There are probably more people seriously interested in natural history (admittedly mostly ornithology) than in any other subject. Quiet countryside pursuits, including bird watching and natural history, are amongst the most popular of all "sporting" and recreational activities. Natural History programmes on television are similarly amongst the most popular and a new natural history book is frequently a best seller. Wild plants and animals together with environmental considerations are clearly of great interest to millions of people.

However, the large, systematically arranged collections of dead natural history specimens may seem to have little relevance to the interests of our public. Yet, if we are to survive, let alone prosper, in our profession, we must make these collections relevant. We must bridge the gap of understanding.

On the one hand it is necessary to make our employers fully understand the enormous public interest in natural history. I fear far too many do not appreciate this fact and consequently a good deal of money is spent on vocal, but comparatively minor interest groups in the arts. However, care is needed as an immediate response might be a demand for yet more displays - arguably one of the most inappropriate ways to interest people in living plants and animals! Certainly more interpretation is needed but displays are only one medium; publications and direct interface between curator and public may be much more effective. Indeed one of the most striking and rewarding activities is to demonstrate to an audience in the field the diversity and nature of wildlife.

On the other hand there is the need to demonstrate the scientific value of natural history collections and their importance for research. Nobody questions the importance of the collections at the British Museum (Natural History) but conversely few believe that there is much of value in smaller museums elsewhere. Furthermore these attitudes influence future collecting policies and research.

I believe it is a comparatively easy matter to demonstrate the large public interest in natural history but so far as I know this has not been demonstrated or quantified. This needs to be done. The BCG is exposing the fallacy of considering provincial museum collections as of little scientific interest but their importance tends to be historic rather than contributing to contemporary research. Indeed, the level of understanding of this historic scientific interest outside the BCG membership appears to be low. To get museums involved with contemporary research close links need to be developed between them and the research councils, universities and polytechnics. The BCG hopes that the first steps can be taken towards this goal at its proposed conference in September 1981. Its success will depend not only on attracting senior people to read major papers, but also on attracting an audience from outside the Museum's profession. Demonstrating the contemporary as well as historic scientific importance of museum natural history collections and attracting an appropriate level of research from outside the museum's profession is an immensely difficult task. Yet I am convinced that, so long as one believes that collections are the essence of a museum, this must be done to insure that there is a long-term future for museum natural history collections.

Perhaps, therefore, the most important requirement is to demonstrate convincingly why the research that should be done in association with provincial museum collections is of relevance to the man in the street in the leisure age.

Eric Greenwood

The normal function of a secretary's report is to review the activities of the Committee, but, as the Chairman has pointed out, deliberations of that body are minuted in full in the Newsletter (more out of laziness than democracy). The opportunity is therefore afforded for me to reflect a little upon my own function as a 'representative' of the B. C. G. The quote marks are deliberate - not even the Committee is representative of all types of museum, region or discipline, although we do our best, and it sometimes seems that my only specialism is attending committee meetings; but I suppose that is yet another of the penalties of living near London. But as I understand it the group never expected to be able to speak with one voice. Indeed it is precisely because of the babel of biology that the group was formed - to communicate rather than unite (hence the importance and contribution of the Newsletter).

Over the past few years the Professional Groups Committee of the Museums Association has developed as a very useful forum for groups such as B. C. G. and G. C. G. to air their views and we have had a certain amount of influence on Association policy, although the Committee itself has a rather anomalous status. At last we have managed to persuade the Association to deal with collections at Conference (see my note elsewhere) and this is a real opportunity to deal with the fundamental problems, common to us all, in the presence of the purse-holders (i. e. directors and members).

At the same time I have been asked, on various occasions, to give the B. C. G.'s opinions on matters ranging from museum education to (most recently) wildlife legislation. My attitude is that, whilst members should be kept informed on all matters relating to biology in museums, it would be folly for me, or the committee, to make definitive pronouncements. It is in these situations that the members must react according to their own needs; there are enormous advantages in highlighting the diversity of museum biology to the politicians before policies are made which suit no-one. I realise that this involves members in having to do their own campaigning but I do not regard the B. C. G. as a union to represent and prop-up its members; surely it is a co-operative society - work together, use it and it is bound to pay dividends!

Stephen Flood

EDITOR'S REPORT

The four issues produced this year have again provided a range of articles covering the various aspects of the Biology Curator's role. The regional theme has also continued, with a south-west, a north-east and this East Anglian issue.

An annual report should reflect on the past year, but I feel it is time to look ahead. My term as Editor is now at an end, and I personally feel that a change is required - to provide new impetus, new direction, a new approach. I am sure that our incoming Editor, Geoff Hancock, would welcome the views of members regarding the role of the Newsletter and its future development. Should we be considering an improved format, or a longer print run, or even a journal separate from the Newsletter? Do we want to include photographs, have a 'technical' section and a section devoted to 'Collections and Collectors'? How should we go about attracting advertisers, or 'selling' the Newsletter to institutions other than museums?

Some of these basic questions have been discussed at Committee, yet often without the benefit of views of the members. The Newsletter is the major vehicle of communication between members and means of informing others of our work, our objectives, our problems .

How do you feel the Newsletter should develop?

Peter Davis

MUSEUMS ASSOCIATION CONFERENCE

LONDON - September 1980

1. 'Specialist' Day, 22nd September.
The arrangements for this day are being handled by B. C. G. but the details will appear in the official programme, in the hope that governing bodies will be persuaded to find 'Conference' money for that day. Favourite of the suggestions so far is a half day visit to the Tring area. Views would be welcome.

2. Conference theme.
Members with strong cases and willing to speak up on the state of collections wanted - otherwise details (including slides etc.) of horror stories etc. would be appreciated. Now is the chance to make a public moan, don't miss it.

Stephen Flood
St. Albans Museums

The Wellcome Institute Herbarium

The Secretary has received a letter from Richard de Peyer of the Wellcome Institute concerning a collection of plants which the Institute wishes to dispose of. Two collections are available, one a collection of c.150 ferns (largely tropical) and collected prior to 1824, the other 140 folders of varied plant material assembled as a sideline to the large materia medica collection which Wellcome assembled in the 1920's and early 1930's.

Any institution interested in these collections should contact Richard de Peyer, the Wellcome Institute for the History of Medicine, 183 Euston Road, London, NW1 2BP.

EARTHWATCH

This charitable American organisation underwrites scientific research projects all over the world by arranging for interested volunteers to join professional researchers in the field and share in the work as well as the costs of the expedition.

Over the past eight years Earthwatch and the affiliated Center for Field Research, have sponsored 390 expeditions in 48 countries with 4,000 people participating. In 1980 the organisation is supporting 65 projects, with some 750,000 dollars being contributed to the research by 1200 participating amateurs.

With a view to increasing its support to European Institutions and scientists, and to encourage public involvement in science, Earthwatch have recently opened an office in London.

Any BCG member interested in applying for support for their research, or in joining one of the expeditions, or simply finding out more about the organisation should contact Joan Hastings, Earthwatch, 81 Victoria Road, Kensington, London, W85 R4. (01-937-8313)

A catalogue is available indicating the range of projects for 1980, which includes six in Britain.

P. D.

SAFETY IN BIOLOGICAL LABORATORIES
Biochemical Society Special Publication No. 5

Edited by Edward Hartree and Vernon Booth 1977

The biology curator building a library on the health and safety aspects of his work, could usefully add this introductory, 68-page text published by the Biochemical Society to his shopping list.

The book begins with those elementary laboratory precautions often omitted from more specialised works, yet which judging from personal observation are neglected or unknown to many working in museums. Incorporating sections on the handling of glassware, protective clothing, chemical dispensing and storage, this basic information should be particularly useful to anyone with a non-scientific background.

Thereafter successive chapters, written by specialist contributors, are concerned with the particular hazards associated with electricity and fire, the animal house, carcinogens, radiation and microbes. Each chapter contains references for further reading.

Whether as safety officer for the management or union side of his department, or as a curator drawing up codes of practice for his laboratory or workshop, most of us will find something of value in this book.

Available for £1.60 + postage from the

Biochemical Society Book Depot,
P.O. Box 32,
Commerce Way,
Colchester,
CO2 8HP,
Essex.

Tim Riley
Sheffield City Museums

REQUEST FOR INFORMATION

I have begun a systematic study of the British sponge fauna. In order to form a better understanding of the species and to help untangle some of the taxonomic muddles, it is necessary to examine the early published material. Though much of it exists in the collections of the B. M. (N. H.) much of it is still missing. It would be good to know how much has survived elsewhere. I would therefore appreciate hearing from anyone who has information on the sponges from historical collections such as the following:-

19th century collections of interest would include:-

Sowerby, J.	1804-6	(G. B.)
Montagu, G.	1818	"
Grant, R. E.	1820's	"
Templeton, J & R	1836	(Ireland)
Bellamy, J. C.	1839	(Devon)
Couch, R. Q.	1842	(Cornwall)
Parfitt, E.	1868	(Devon)

18th century collections, equally as interesting but less likely to have survived, would include:-

Ray	1724
Seba	1734-1765
Pallas	1766
Ellis & Solander	1786

Miss S. M. Stone,
Department of Zoology,
British Museum (Natural History),
Cromwell Road,
London,
SW7 5BD.

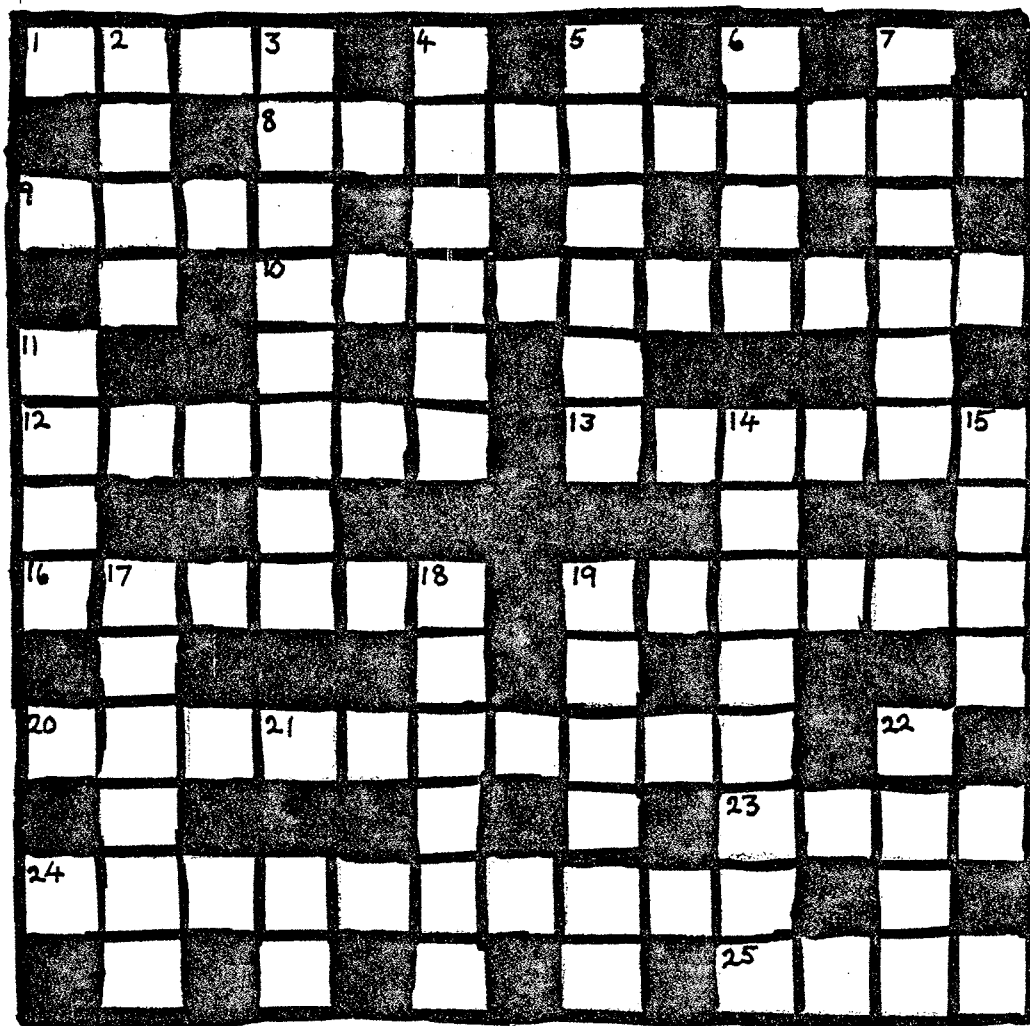
B. C. G. PRIZE CROSSWORD

This must be easy ... after all, it was written by the East Anglian Irishman!

The prize is up to a week's free accommodation in Norwich for anyone wanting to do fieldwork or other research in Norfolk. Sorry, we can't pay your fare here.

The prize winning entry will be pulled out of a waste paper bin one month after publication. Following that date a stamped addressed envelope will ensure that you receive a copy of the solution.

Entries to: Tony Irwin, Castle Museum, Norwich, NR1 3JU.



ACROSS

1. Soft touch for a geologist (4)
8. 18 down can be one (5-5)
9. A rose by any other name (4)
10. A bird does this in the wink of an eye (10)
12. An ungulate will travel this way (4-2)
13. A well-cushioned bone (6)
16. One of a series (2-4)
19. Bits of tortoiseshell (6)
20. Spiny skin (10)
23. A unicorn ? (4)
24. Food for Lasioderma (10)
25. To do with gametes (4)

DOWN

2. Xerophytic greeting (4)
3. Weight-lifting insect (5-3)
4. Sign of bird protection (6)
5. Seeds of cereals (6)
6. Sharp billed bird (4)
7. Where to find a llama (2-4)
11. Very smart young nidifuge (4)
14. Inverted bryophyte society (4-4)
15. Smelly deer (4)
17. Flower - alternatively young goat (6)
18. Nearctic macrophyte (6)
19. Thin layers of blanket weed (6)
21. The end of some families (4)
22. Joins with a cat (4)

As an alternative to participating in a large scale 3 or 4 day conference this year (like the one at the B. M. (N. H.) in 1979) the BCG is organising a smaller meeting in 1980 in the form of a study week-end. This is to be held at Leicester Museum and BCG members should by now have received a provisional programme and booking form. The theme is 'curatorial and collecting techniques' with emphasis on new developments.

The week-end begins in earnest on Saturday morning with the A. G. M. We hope to keep the business as brief as possible and to progress to a discussion on the future development of the BCG - our aims and objectives whether they be broad issues of policy, initiatives to be pursued, campaigns to be waged or surveys to be promoted; in fact anything anyone cares to raise.

This will be followed by Peter Morgan (National Museum of Wales) introducing a discussion on the proposed new Bird Protection Laws (summarised in BCG Newsletter, Vol. 2, no. 5, December 1979). These will almost certainly include some form of museum-based egg collections register and possibly a scheme for the registration of skin collections which may be operated by the Guild of Taxidermists (I understand this is not yet finalised). I know these proposals also have provoked comment amongst curators and this will be an opportunity for the membership to voice their opinions.

Saturday afternoon is to be an informal session of demonstrations of techniques by members. The programme lists some but we have room for more and we rely here on the willingness of members to describe in any way they wish (by demonstration or static display) new techniques in any field related to the general theme. These could be modifications to standard methods of, say, identification or collection, or completely new techniques which may still be at the experimental stage. Demonstration and display facilities will be available all afternoon but please let me know if you intend to participate so I can draw up a timetable a week or so in advance of the meeting.

Saturday evening remains free at present, but we would like to show films or slides if any members have them available. It is not important to adhere strictly to the theme for this session and any vaguely museumish subject will do. So if you have any film of collecting trips or a particular technique being performed, again let me know in good time so I can put together a programme.

The sessions on Sunday are more formal and will be as given in the programme. We expect to finish around 3.30pm.

Accommodation is available in Gimson Hall, a short walk from the Museum, on Friday, Saturday and Sunday nights as are all meals (the exception is dinner on Sunday evening should anyone wish to stay overnight). Coffee and tea will be provided from the conference fee of £1.50 (this must be paid by everyone attending sessions other than the A. G. M.).

If anyone has any queries or wishes to contribute to any of the sessions, please contact John Mathias, Keeper of Biology, Museum & Art Gallery, 96 New Walk, Leicester, (0533-554100, ext.262).



"IT'S AMAZING THE WAY THEY STAND PERFECTLY STILL!"

STORAGE CABINETS FOR SALE

Leicestershire Museums, Art Galleries and Records Service has for sale four 'Rothschild' cabinets, ex B. M. (N. H.) stock from Tring. Each is 188cm. tall by 140cm. long by 70cm. deep and contains 58-60 dust proof drawers (8-9cm x 43 x 66cm). These have wooden tops hinged at the back so any drawer has to be removed from the carcass before it can be opened; the carcasses are in good order. The cabinets provide sound (albeit cumbersome) storage and were originally designed to house the Rothschild bird skin collection.

Anyone wishing to make a bid for one or all of these cabinets should contact Mr. Gordon Smith, Central Purchasing Department, Leicestershire County Council, County Hall, Leicester Road, Glenfield, Leicester. The buyer(s) will be expected to remove the cabinets from the New Walk Museum and Art Gallery, Leicester.

If further descriptive details are required please telephone John Mathias, Keeper of Biology, Leicestershire Museums Service (0533 - 554100, ext. 262)

John Mathias
27.2.80

NATURAL HISTORY AT THE COLCHESTER AND ESSEX MUSEUM

There was an active Natural History section at Colchester during the Victorian period when a number of local collectors and the early Colchester Natural History Society donated specimens to the Museum. These donations included a worldwide series of marine mollusca, collections of mounted birds, birds eggs, skeletal materials, moa bones and the J. Yelloly Watson collection of minerals on which a handbook was published in 1873.

Many of the early curators were all-rounders with an interest in Natural History and actively added to the collections, but at about the time of the First World War, or just after, Archaeology became the major preoccupation and the Natural History collections started to decline, eventually the shells, minerals, skeletal material and eggs were put into store in the boilerhouse and the birds were either burnt, thrown away or exchanged with other museums for archaeological material.

The stored material became dirty, labels were eaten by mice, specimens rotted in the damp and any Natural History material offered to the museum was refused.

During the mid 1950's a number of churches became redundant in the town centre and after some wrangling it was decided to convert All Saints which is in the High Street near the Castle, into a Natural History museum. Clifford Owen, now Deputy Director at Leicester was appointed Assistant Curator in 1957 and served until 1966 when I was appointed as Keeper of Natural History.

During his tenure Clifford Owen rescued the collections from the boilerhouse and other dirty storage areas and installed them in the drier slightly cleaner atmosphere in the old church. He established the first displays and the nucleus of the reference collections, but more important, he established fieldwork as part of the job, with the necessary equipment including cameras and telephoto-lenses, and a proper library was provided eventually by the Borough Council.

He also managed to get an assistant appointed to help with the technical side of the work.

On taking up my post in January 1967, I found that a scheme had already been proposed for the partial re-display of one side of the gallery, this I was able to develop into a complete re-display of the whole gallery, and we replaced all the previous displays except for a salt marsh diorama and a gamekeeper's gallows.

There is now the prospect of the removal of the stores, offices and laboratory to a nearby warehouse block, where we would be able to provide proper facilities for our growing collections and staff, which now include two Assistant Keepers, the technicians job having been upgraded to Assistant Keeper in 1972 and a second Assistant Keeper being appointed in April 1979.

This would be followed by further redevelopment and expansion of the displays and work has been in hand for several years now, accumulating material for this.

It has been a matter of policy from the start that all visitors enquiries are dealt with on the spot where possible, which whilst inconvenient at times does produce a very good customer relationship, and a steady stream of donations, whilst avoiding a pile up of uncollected enquiries.

The existing state of development of the collections is dealt with in the following articles.

J. J. Heath
Keeper of Natural History

The Herbarium at the Colchester and Essex Museum

No herbarium material survived from the early museum collections except for one book of marine algae which belonged to the first Colchester Natural History Society (1872-84). This came to the Museum on the winding up of that society. Most of these specimens date from 1849-50. Another book of seaweeds was received sometime after 1935. It had originally been presented to Cranbrook School in 1871 by Mrs Gray of the British Museum and passed through at least two other ownerships before coming to this museum.

Additional marine algae have been collected locally by the present staff to develop this side of the collections.

Mosses, Liverworts and Lichens are all represented by mainly recent specimens collected by Clifford Owen and other members of staff plus a collection of Lichens from the town's Roman Wall formed by J. F. Skinner in 1978 which included a Lichenicolous Hyphomycete fungi new to the British Isles.

There are a small number of mosses from the British Bryological Society acquired on the death of Dr. Vinter, a local doctor/naturalist in 1960.

Fungi are represented by a small selection of freeze dried specimens and a few dried specimens collected by the staff. The puff balls are in the majority as a recent survey of them is being undertaken by J. F. Skinner of Southend Museum.

The Vascular plant herbarium has a reasonable coverage of the British Flora with a few specimens predating 1950 from the herbarium of G. C. Brown (1889-1967) H. E. Littlebury and Rev. J. E. Hull although in every case these are only minor holdings, with the main herbarium being elsewhere.

Among the more recent holdings, are some specimens from S. T. Jermyn (1907-73) author of the current flora of Essex, whose main herbarium is unfortunately in the Smithsonian Institute Washington, U. S. A., and B. T. Ward plus the herbarium formed by J. M. Betts as part of her degree studies.

We are currently expanding this area of the herbaria paying particular attention to alien and escaped plants and critical species groups such as Burdocks (the local flora is unreliable due to changes in the species concept within the group and we are, with the help of local societies, examining all the populations of the plant in North East Essex).

With the help of the Botanical Group of the Colchester Natural History Society, we have instigated a mapping project for Dittander (Lepidium latifolium) which has extended its known distribution considerably in this area during the two years that it has been running. These schemes, as well as a survey of local woods, are continuing and yield valuable data for the biological data bank held at the Museum.

J. J. Heath
Keeper of Natural History

The Invertebrate Collections at the Colchester and Essex Museum

Most of Colchester Museum's store of invertebrates comprises insect cabinets, and most of these, not surprisingly, hold macrolepidoptera. Between collectors, the British species of butterflies and moths are well covered.

The principal Lepidoptera collections are described below under the name of the collector.

MACROLEPIDOPTERA

A. D. Blaxill - a large and locally important collection which was donated to the Museum in 1977. Most of Blaxill's specimens were obtained between 1930 and 1950. He specialised in breeding British butterflies and produced many fine series which are housed with his moths at Colchester. Of particular note is a series of Large Tortoiseshells.

D. Baker - another large and comprehensive collection of macrolepidoptera. Baker lived in Essex and collected moths and butterflies from London and the home counties for a considerable part of his life, from 1900 to the 1950's. Each specimen is labelled with a code which refers to diaries now in the care of Colchester Museum.

Collection from Bury St. Edmunds - no one seems to know for sure who the collector of this holding is. Colchester took the collection on loan from Bury St. Edmunds in 1976, and since then only one clue has emerged as to its origins. A label under specimens of aberrant magpie moths (Abraxis grossularia) refers to a paper written for "The Entomologist" in December 1903. With the help of Tony Irwin at Norwich Castle Museum (who produced the relevant volume) and Howard Mendel of Ipswich we concluded that these specimens may have belonged to Mr. E. G. J. Sparke of Tooting, London. The handwriting on other labels is very similar to that of Sparke's description of these specimens and his reference to "The Entomologist". It is quite possible therefore that much of the collection belonged to him.

Many of the specimens were acquired in Surrey, Kent and East Anglia, but a number of other localities are represented. Also included in this collection are specimens collected by W. Harwood, a professional local entomologist (1840-1917).

W. P. Seabrook - This collection was acquired in 1978 on a twenty year loan from the Seabrook family. W. P. Seabrook lived in Great Baddow, near Chelmsford, in Essex, and collected Lepidoptera from widespread localities. He was most active in this between 1930 and 1950, taking mostly butterflies and larger moths, but there are some microlepidoptera amongst his specimens now at Colchester. The Museum also has the use of correspondence, drawings, records and notes from his collecting period.

Wood - one cabinet of assorted insects, mostly macrolepidoptera; British butterflies and moths and some foreign Lepidoptera, Odonata, Orthoptera and Coleoptera are included. The collection was purchased by Colchester Museum in 1972. Specimens were collected from various sites in Britain, although not many specimens have locality data with them.

Gervaise F. Mathew - Colchester possesses a small part of the collection of this Victorian Essex naturalist, who discovered Mathew's Wainscot (Leucania favicolor). There are 48 species of British butterflies represented, 50 species of the larger British moths, and 3 species of microlepidoptera. The remainder of the surviving collection is in the care of the British Museum (Natural History).

C. Nield - this collection was acquired on loan in 1979. Nield lived in Essex and many of his specimens are local, but there were other collecting localities, including Uppingham, the New Forest, Cromer and Aberdeen. He carried out most of his collecting during the first half of this century. The larger moths are housed in two cabinets and the butterflies in one small cabinet.

Shillitoe - some specimens from a collection of South European macrolepidoptera acquired in 1961. The rest is housed at the British Museum (Natural History).

Joe Firmin - three drawers of larger moths and butterflies which include specimens of some local and rare species. Joe Firmin is still an active Essex lepidopterist.

W. Temple (see below) - a few drawers of British Geometridae which were part of a larger collection of Lepidoptera by Temple, and which came with his collection of Coleoptera to the Museum.

Humphrey - a small collection of mainly British Macrolepidoptera, with some foreign specimens amongst them. The British specimens were collected from Hampshire, Norfolk, Sussex and Cambridgeshire between 1940 and 1950. Humphrey's collection came to Colchester Museum in 1971.

MICROLEPIDOPTERA

A small collection of local microlepidoptera has been built up at Colchester by the Museum staff. These specimens remain to be identified however.

COLEOPTERA

There are two significant collections at Colchester Museum.

William Temple (also see above) - an important and useful local collection. Temple collected from about 1900 to 1940, and produced a large double cabinet of mainly Essex specimens, with a few insects from Bedford. All are fully labelled and in systematic order. He also obtained specimens from other collectors, namely Tomlin, J. J. Walker, Champion, Merrin, Hadfield (a local dealer) and W. W. Fowler who wrote what was for a long time a standard reference work on Coleoptera.

A. D. L. Cox - Mr. Cox's wife gave his collection to the Museum in 1967. It is at present housed in 16 store boxes. Although there were no field notes accompanying the collection the majority of specimens are well labelled. Most of the collection consists of Essex specimens, but other sites were visited in Leicestershire, Northamptonshire, Huntingdonshire, Devon, Nottinghamshire, Hampshire, Surrey, Buckinghamshire, Derbyshire, Lincolnshire and Kent. The 1940's and 1950's were the time of greatest accumulation.

Cox wrote a paper on beetles of the Colchester area which appeared in "The Entomologists" monthly magazine on June 30th, 1950, and which was based on specimens in his collection.

ODONATA

J. Firmin (see above) - Firmin collected some dragonflies and damselflies from Essex. Other unlabelled dragonflies are to be found amongst Wood's collection (see above), and the Museum itself acquires Essex specimens through enquiry and fieldwork.

ORTHOPTERA and DIPTERA

Colchester has a few specimens of Orthoptera and Diptera (Syrphidae), collected by A. M. Hutson of the British Museum (Natural History) in the 1960's and presented by Mr. Andrew Low. These were collected from the New Forest, Dorset and Surrey.

OTHER INSECT ORDERS

The Museum staff, with the help of Colchester Natural History Society, are busily collecting insects other than Macrolepidoptera in an effort to build up a more representative entomological store for north east Essex. As yet, many have not been identified, but some inroads have been made this year with the bugs (Heteroptera). Most of those collected so far have been provisionally identified, but still need to be checked.

ARACHNIDA

Spiders

These are represented at Colchester by a small collection of local spiders made by Shane Parker in the 1960's, and some specimens collected and identified by Robert Strauchan from Friday Woods near Colchester. The Parker specimens have had all their identifications confirmed by the British Museum (Natural History).

Pseudoscorpions

The nucleus of a reference collection has been gathered together over the past year.

Other arachnids (mites, ticks, harvestmen) are at present collected on a random basis from Essex localities, and are largely unidentified. All are liquid preserved.

MOLLUSCA

There are some molluscs from the first Colchester Natural History Society collections, dating from the late 19th century, now at the Museum. Most have data. Other molluscs are those specimens collected by museum staff over the past 20 years, or the remains of a once world wide collection which was sold commercially, and which is poorly documented.

OTHER INVERTEBRATES

There are small collections by museum staff of Coelenterates, Platyhelminthes, Nematodes, Annelids, Crustaceans, Molluscs, Echinoderms and Tunicates which are mostly preserved in propylene phenoxetol. A proportion of these have been identified. The nearby Writtle Agricultural College have also given the Museum a mixed collection of liquid-preserved specimens. These have little data as they were for use as teaching material.

Two collections of documents should be mentioned here, although they do not complement any specimen material in the Museum. One consists of field notes, diaries and journals once belonging to Mr. F. Buck, a prominent British Coleopterist who lived in Essex for some time and contributed a great deal to our knowledge of local beetles. He was author of one of the Handbooks for the Identification of British Insects, published by the Royal Entomological Society.

Colchester also has books and offprints once belonging to Rev. J. E. Hull, the noted Arachnologist. His specimens of spiders and mites, which were once at Colchester Museum, were passed to Oxford University, the mites eventually going to the British Museum (Natural History).

Back-up information to the invertebrate collections is gradually being added to the Biological Records System here, and a distribution map file for Essex biological records is currently under way. There is also a card index of macrolepidoptera records which formed the basis of "The Butterflies and Larger Moths of Essex", published by Essex Naturalists' Trust in 1975. The Natural History Department is fortunate in possessing a large and growing library, and also has a substantial collection of slides. These include photographs of Lepidoptera taken by William Temple's son in the 1950's and 1960's.

Kate Hawkins
Asst. Keeper (Invertebrates)

The Vertebrate collections at the Colchester and Essex Museum

A small quantity of skeletal material survived from the early collections included some specimens from the collections of C. R. Bree more noted as author of 'Birds of Europe not occurring in the British Isles'. His ornithological collections went to W. H. Harwood, a Colchester dealer in Natural History specimens and their present whereabouts is unknown to us.

The osteological collections have been extensively developed since about 1970 and now include several hundred bird and mammal skeletons which are used to identify remains in owl pellets and stomach contents and also bones from Archaeological sites. Any specimen that is unsuitable or not required for the display or study collections is skeletonised, if in excess of this museum's requirements it is passed on to another museum or area service.

Using corpses of vertebrates found dead or legally shot by the donor, we have been able to develop our displays and study collections from nothing in 1957 to over 2,000 specimens today. Almost all our sea birds are from oiled birds found dead on local beaches, for which we developed cleaning methods many years ago. The network of "Body Snatchers" founded by Clifford Owen has been developed and enlarged during the years so that it now yields up to 200 corpses a year.

These study collections are used extensively to teach bird identification and by artists needing colour notes and feather details as well as providing data for scientific projects.

We have supplied cuckoo guts to one research worker and owl weights to another and are at present ourselves studying the grit and food contents of local ducks and geese. As most specimens are prepared in the museum we are able to extract, on a routine basis, samples of liver for analysis at the University of Essex.

Reptiles and amphibia are mainly represented by fluid preserved specimens, we have decided to use phenoxetol based preservatives as there is a considerable fire hazard in the museum.

Fish are grossly under-represented, a situation which we hope to rectify in our new displays, and at the same time to develop our study collections.

To back up our collections we have an extensive series of colour slides and access to the C. P. Rose collections of black and white negatives which are on long term loan to the museum from the present Colchester Natural History Society.

Being able to preserve most specimens in the museum has enabled large reserve collections of mounted material to be accumulated. These are used to produce a series of changing exhibits which enable us to show a variety of different species in the small area we have available for display. This results in a steady return flow of local visitors. The cost of producing such display using outside contractors would have been prohibitive (if we could have found anyone to produce them) but we feel sure that the time involved producing them 'in house' is well spent.

L. C. Sawyer
Asst. Keeper (Natural History)

HERBARIA IN THE NORFOLK MUSEUMS SERVICE

The herbarium at the Castle Museum is only a moderate size, consisting of about 26,000 sheets of flowering plants and about 7,000 packet / sheets of non-flowering plants. The emphasis is on East Anglian plants, though in the past, through the Botanical Exchange Club, specimens were added from all over Britain so that almost all British flowering plants are represented except in some of the critical genera. The first two Presidents of the Norfolk and Norwich Museum, founded in 1825, were both notable botanists so that it is not surprising that the Museum herbarium should be part of a long and continuing interest in the botany of the county.

The first President was Sir James Edward Smith (1759-1828), the man who purchased the Linnaean collections for £1,000 and brought them to Britain. He was subsequently a founder member and first president of the Linnaean Society. Born in Norwich in 1759, he developed an early interest in botany. He studied medicine at Edinburgh and London and moved back to Norwich for the last thirty years of his life. During this time, the Linnaean collections resided in his front room and were an object of pilgrimage for many distinguished foreign and British botanists. After one such visit, Professor Schüttes of Bavaria said to a friend that 'the relics of Mohammed are not enshrined with more devotion than the collections of Linnaeus in the house of Sir James Smith in Norwich'. After his death in 1828, the collections including his own, were sold to the Linnaean Society. Despite his association with the Museum, he only gave a rather poorly labelled collection of British and foreign plants, mostly from Mauritius and Switzerland, with a few from elsewhere including 'the garden'.

Dawson Turner (1775-1858) succeeded Smith as President. He was a Yarmouth banker and an authority on cryptogams, although in later life his interests turned to archaeology, art and amassing a large library. He published a number of important works on seaweeds and with Borrer, *Lichenographia Britannica*. Most of his collections are now in the British Museum (Natural History) but we do have a good small collection of seaweeds made by him mostly from Norfolk.

Other early collections include one by the Norwich Botanic Society which is poorly labelled. A collection which is much better documented is that of John Salmon (? 1802-1859) who lived for several years at Thetford before moving to Godalming in Surrey. His collection is backed up with diaries which have been useful in tracking down old localities for some of the Breckland rarities. Another local collection given in the 19th century was that of James Paget who made an extensive collection around Yarmouth. His collection includes specimens of the now extinct *Senecio palustris*.

It was not until 1928 that a post of natural history assistant was created and the museum was very fortunate to appoint Mr. Edward Ellis, or Ted Ellis as he is known to his many friends and acquaintances. From then until his retirement from the museum in 1956, he was responsible for rescuing many collections which are likely otherwise to have been lost. One find was a collection made by a local botanist called Fred Robinson, part of which is now in the British Museum (Natural History) but the more interesting, with important specimens of species like Calamagrostis stricta and Cucabulus baccifer, is now at Norwich. A collection by Miss Davie given in 1929, mostly from one Broadland parish, has provided a useful comparison with modern surveys in connection with the pollution problems in the Broads. A major addition to the herbarium was that of H. D. Geldart in 1942. His collection included the herbaria of many other local botanists and included much Botanical Exchange Club material.

In recent years, we have acquired the herbarium of the East Anglian office of the Nature Conservancy Council which includes many useful specimens from the Eastern counties. We have also added many aquatic plant specimens as a result of the various surveys taking place in Broadland and elsewhere. Our bramble collection has also been greatly improved through the activities of a local botanist, Alec Bull, and we now have one isotype.

The foreign flowering plant herbarium is rather small and generally inadequately labelled, but does include a fine collection of arctic plants collected by Col. Fielden from northern Russia. Another collection of scientifically little value has labels of some sociological interest e.g. 'the aboriginals swarmed up the tree to get this for me' - the nomenclature was described by a former colleague as Zulu bush!

In the cryptogams there is a good collection of myxomycetes recently checked by B. Ing. Many of the specimens were collected by H. G. Howard, a guide lecturer at the museum before the war. Rusts and smuts are quite well represented but the collections are rather weak at present in other fungi. The basis of both the moss and lichen herbaria are collections made by a Suffolk botanist, Arthur Mayfield, in the 1920's and 1930's. Most of these collections were made round the parish of Mendlesham in Suffolk. In recent years the lichen herbarium has been extensively added to. Although still primarily an East Anglian collection, there are specimens from other parts of Britain, especially south-west England, Wales, Yorkshire and parts of Scotland. There is also a small foreign collection.

Elsewhere in the Service there is a good collection of Breckland plants by H. Dixon-Hewitt at Thetford and King's Lynn has a small general herbarium of mostly local interest.

Peter Lambley
Norfolk Museums

SOME THOUGHTS ON FIELDWORK

I still find that people are surprised that museum naturalists actually do fieldwork, yet for most of us this is an essential aspect of our work if we are to record, acquire specimens and gain a working knowledge of our area. However, it is potentially very expensive in time and money, and in recent years we have been examining more critically the aims and methods of the fieldwork which we undertake.

Broadly, our fieldwork falls into two main categories. Firstly, unplanned visits in response to an enquiry which cannot be dealt with over the telephone, or a specimen to be collected. By their nature these visits are largely unavoidable and include calls to summer bat roosts in houses, temporary geological sections and picking up reported specimens for the collections. The second are planned visits within a framework of a particular survey. By careful planning this second category can be made more cost effective.

Circumstances obviously play a major part in determining the types and levels of surveys in different counties. In Norfolk we are dealing with a large, highly agricultural county covering some 2,000 square miles and seventy 10 km. grid squares or parts. Despite the intensive farming it is still very rich biologically with about fifty nature reserves (at the last count) covering some 30,000 acres, plus other sites of SSSI status. However, despite having the regional offices of the Nature Conservancy Council, the R.S.P.B., a Naturalists Trust, a County Naturalists Society and the University of East Anglia, the county is not as well surveyed as some others. (I sometimes wonder what we all do!). Areas like the Breckland and the North Norfolk coast are fairly well known. Broadland has been so well surveyed that it might be considered as another reason for its decline. However, the agricultural heartland probably has still quite a few gems yet to be discovered; for instance, one potentially grade 1 site was found last year. Informal discussions with the various organisations led to a set of priorities and we have been concentrating on these. The priorities were determined by two main criteria: the lack of knowledge about particular habitats or groups and the demands from planners and others about certain areas. As a result we have been involved with work on river valleys where there are still areas of unimproved meadow and the demands for gravel extraction are greatest. So far, we have surveyed two rivers and have liaised with organisations like the Otter Trust and the N.C.C. on several more. With the help of the Naturalists Society we are surveying several long sections of disused railway which are to be used for recreation. In collaboration with the industrial archaeologists we have visited underground structures such as lime kilns and ice houses in search of hibernating bats. Endangered dragonflies have been the subject of a joint N.C.C., museum and amateur survey. The latest venture is a survey of churchyards with the help of the W.I. The launching of this scheme, incidentally, gave the writer his one and only chance to appear on the stage of the Theatre Royal in front of an audience of 400 women.

We hope for records of various ferns and other plants as a result. So far we have resisted a field by field survey, although we did undertake a pilot survey of one 10 km. square to test such a scheme. This is because at present we feel it is best to concentrate on areas of greatest need.

In planning our surveys we have had much help on techniques from various members of the N. C. C. and it is quite clear that methods are becoming increasingly sophisticated. A recent survey of Norfolk woodlands, for instance, was a model of its kind. We do not expect to match their expertise but by keeping abreast of these developments we can at least take them into account and use them where practical.

Norfolk is not, of course, unique in being involved in activities of this kind. Museums in many parts of the country are engaged in such work yet before the war this would have been considered unusual. It is perhaps an area of our work which has changed more than most.

Peter W. Lambley

WOULD YOU BELIEVE IT ?

No doubt there are many of you who anticipate with pleasure the chance to read an account of how in 1856 Rear Admiral Sir Marmalade Brittlethrop, R. N. (retired and deceased), brought back the first specimen of Pavolv's Dribbling Shrew (Sorex slobberychops) into this country. That the specimen was a stowaway in an erotic West African gourd is no discredit to Brittlethrop. (His collection of erotic gourds in another matter).

The shrew was found by Brittlethrop's butler who, being an intelligent and good-natured fellow, fed it to his cat. Unfortunately the cat was sleeping at the time and the shrew, upon hearing a dinner bell, proceeded to eat most of the cat's nose. This proved too much for the butler who gently stamped it to death and took the specimen to the museum. The curator at that time was not a taxidermist, nor was he studying for the Museums Diploma, so the shrew was put on display without preparation. After a few days' hectic visiting (you know how it is), the public lost interest in the exhibit and no more seems to be recorded about the shrew itself. However, a few weeks later, several blue bottles (Calliphora sp.) were found flying around inside the showcase. One of these was pinned and placed in the General and Municipal Insects Cabinet, where it lay as the only material evidence of Brittlethrop's shrew.

Then in 1938 a Norwich teacher was giving her class a pre-war lesson on 'Death and Decay'. The schools loan service was only able to offer her a bluebottle by way of visual aids. In the 'Loans Out' book is an entry which reads 'One bluebottle fly from Dribbling (possibly near Shrewsbury)' etc. For some reason the museum did not consider it worthwhile to keep a 'Loans Returned' book. We do not know, therefore, whether the specimen ever came back, but in the collections at present there is only one bluebottle which appears to have been passed around a class of eight year-olds. That was accessed in 1978, as the result of a public health enquiry concerning a foreign body in a slice of spam.

To all of you who were not looking forward to the story of Brittlethrop's shrew, I really am most awfully sorry. But, you know, one has to keep to some sort of format for these B. C. G. articles; and what with recent issues being full of wombats, unpronounceable molluscs and GOS (I suppose they mean goshawks), I felt that the editor would be quite miserable without some . . . some HUMAN INTEREST for this East Anglian special. Really I wanted to write about packing biological material for the post, you know - cross pinning insects, what to do about air holes for venomous snakes - all that sort of useful stuff which we poor assistant keepers have to find out for ourselves. But Keeper says he's going to write some esoteric account of the herbarium collections in Norwich. Which means he'll write down some names from the accession registers, then look them up in that fat green book he keeps on his desk, you know - a 'Dictionary of British Botanists and Horticulturalists and Irish Florists and Poets'. I suppose I could do the same for the insect collections, but we can't afford Pam Gilbert's 'Dictionary of the Bibliographies of Obituaries of Deceased and Dying Entomologists and Irish Poets'. So I would have to struggle through mountains of obscure correspondence between all manner of men and Bishops, half of whom can't write and some of whom write in two different directions on one side of the paper! And even then, I've only spotted the word 'moth' four times, while I now have a complete account of the curate's back troubles and several essays on whether or not Britain will enter the war. WHAT IS THE POINT OF IT ALL?

I know several, if not all, of you are thinking "That's just the sort of defeatist negativity we come to expect from an Irishman living in East Anglia". Well, it's no joke living so close to all these cruise missiles at this time. Can you imagine what it's like doing fieldwork here? One moment, I'm delicately plucking spring flies off the blackthorn blossom, and the next, some 40 ft. (sorry, 12.192147m) alloy monster full of plutonium crashes through the hedge - and my net! Well, they do fly quite low.

Anyway I've already written an article about the insect collections in Norwich (Antenna, vol. 2, p. 73), so those of you who are really interested will already have seen it. Next issue I'll try and jot down some thoughts about posting biological material. (How many of you are still packing specimens in polystyrene?). Incidentally, the bit about the spam is true and Norwich Museum did receive a shrew a few years back - perfectly preserved in a bottle of Guinness, but I couldn't write an article about that - you just wouldn't believe it!

Tony Irwin
Norwich Castle Museum

CELEBRATING MOTHER'S CENTENARY IN DONCASTER

On the evening of 9th February 1880, John Maw Kirk, Doncaster's Chief Librarian, Fred Milner, a local artist and Matthew Henry Stiles, the leading pharmaceutical chemist in the town, met at Kirk's house to discuss the formation of a microscopical society. A month later, when they held the first official meeting under the title of Doncaster Microscopical Society, they had already attracted a membership of about 30 enthusiasts.

From its inception the society had an illustrious membership and as time progressed and changes of emphasis or fashions occurred, so the organisation changed its name. Within a matter of months it became the Doncaster Microscopical and General Scientific Society, as a concession to those within its ranks who were not microscopists, and before the close of the century even the word 'Microscopical' was dropped from the title. By then Kirk had passed on and Milner had left the district, but the other founder member Stiles remained as a leading figure throughout the society's half century; indeed he wrote a history of the society to mark the occasion. It was not until the early 1960s that fashion dictated the final name change to Doncaster Naturalists Society.

Although quite a vigorous society throughout much of its hundred years it has never excelled the splendour of its first few decades. The 1880s and 90s were inspiring times for the membership included several savants, including J. Mitchell Wilson the area M.O.H., the prominent locomotive engineers John Shotton and Patrick Stirling, many local solicitors, civil engineers, architects, ministers of religion, private school teachers, professional photographers etc. . But as specialisation became increasingly imperative, new daughter societies formed, like the Doncaster Camera Club in 1894, and the Doncaster Engineering Society during the First World War.

During that period, members of the society carried out some notable studies and some excellent scientific careers were started under the influence of its members. A notable example of the latter was Thomas Hill Easterfield who, as a teenager in the society in the 1880s carried out a masterly study of the Boulder Clay in a local brickpit, following this up a few years later with a remarkable study of the chemistry of river pollution, under the guidance of Mitchell Wilson. A few years later, after a distinguished period at Cambridge he was appointed Professor of Natural Sciences at Victoria University in New Zealand, finally becoming Director of the Cawthorn Institute there. He was in the forefront of biochemical research.

Another person to receive great help through the society with its strong geological interest at that time, was William Sawney Bisat who along with his close friend and advisor in the Doncaster Society, Henry Culpin, was to achieve such distinction in his studies in Carboniferous stratigraphy.

Strangely enough one of the major influences on Bisat, apart from Culpin, was George Grace; "strangely" because he was only in Doncaster for a very short time where he was Principal of the Technical School, but it was just at the time that Bisat was a pupil there. Grace regarded Bisat as one of his star pupils long before the latter had made his reputation. Throughout life Bisat acknowledged his indebtedness to Grace.

Doncaster in the late 19th century lacked a museum and some felt this was scandalous in a modern town. In fact, a century earlier, Doncaster possessed a museum, albeit a private one run by William Beilby. In the 1830s, when the town's population was only 10,000, there were three; the Doncaster Lyceum, and two private museums run by John White and the famous taxidermist Hugh Reid. After Reid's museum closed in the 1850s, Doncaster had been without one, despite the persistent campaigning of Lepidopterist John Riley Hawley, a very highly respected Doncaster figure who had been successful in having a Free Library established in mid century after many years of pressure.

Riley was never to see his dream realised but his campaign was perpetuated by Fred Milner who, unlike Riley, outlived the Doncaster Philosophical Society which operated from 1865 to 1874, and carried the flag into the Donaster Microscopical Society. Here the seed landed on fertile ground, being eagerly taken up by two political radicals whose love of oratory was perhaps exceeded by their devotion to science, namely Dr. Herbert Henry Corbett and Samuel Edgar. Both well versed in the affairs of local government as Labour councillors in local wards, these men were able to carry Riley's dream to reality. Commencing in 1896 they were elected to negotiate with the Doncaster Corporation on behalf of the society along with Stiles, Mitchell Wilson and others, and in 1900 a room was set apart in the Guild Hall as a museum. When in 1908 larger premises at Beechfield House became available, the museum was greatly expanded and in June 1909 Corbett was asked to officiate as Honorary Curator, a request which he happily accepted.

Corbett was one of those rare individuals who rapidly achieved note in whatever field he chose to work. As far as local natural history studies were concerned he concentrated on those fields which were not covered by others. For a time when geology was on the wane in the society he leapt into this subject and achieved great distinction. This appears to have resulted in wider enthusiasm and he then appeared to concentrate on botany. Although he died in 1921 there are those still living in Doncaster who remember him with great affection for his unbounded enthusiasm and companionship.

Corbett's curatorial duties only lasted until September 1911 when the first full-time professional curator, E. Cornish Senior was appointed. The impersonal face of bureaucracy caused Corbett some annoyance at the time of the changeover, but he and his society colleagues continued to take an interest in their museum, and this happy relationship between museum and society remains to this day.

So the mother of Doncaster Museum is just 100 years old and society and museum are joined in the centenary celebrations. One function is an exhibition lasting a few days only, but the other will provide a more lasting momento. A booklet, under preparation, reviews the growth of science in the Doncaster area since Tudor times. Research for this publication has been quite multidisciplinary and has provided innumerable ideas for museum displays; certainly enough to occupy the child until its centenary in 2,000.

P. Skidmore
Doncaster Museum.

CONFESSIONS OF A BALD EAGLE !

During January 1979 Chris Devlin of Doncaster Museum's natural history staff designed and constructed a spectacular display featuring some of the world's larger birds of prey. The centre piece of this avian extravaganza is a rather splendid American Bald Eagle (Haliaeetus leucocephalus), mounted in what is better described as a heraldic rather than a naturalistic pose.

The origin and history of this prize specimen is something of an enigma, there being no label, and as far as I can see, no specific mention of it in the museum's accession registers. Long serving members of staff can only remember that during the late 1950s or early 60s it had been on display in a glazed mahogany cabinet (now destroyed) in Doncaster Museum's former premises at Beechfield House, and was probably therefore part of the Sir William B. Cooke collection, which formed the nucleus of the mounted bird exhibits - though I can find no conclusive proof of this.

In re-displaying the eagle its base had to be removed, giving an opportunity to search for any clues as to the bird's past. There were no taxidermists labels or inscriptions of any kind, though a damaged corner which revealed that the modeller had used newspaper in its construction gave promise of dates and possible clues as to the provenance of the taxidermist if not the bird.

The precious base suddenly assumed the historical and scientific importance of any Egyptian mummy about to be unwrapped. The dismantling process was undertaken as if by a team of C. I. D. forensic scientists, and the unravelling of its contents was not unlike the unrolling and deciphering of the Dead Sea Scrolls!

The base, a competently modelled craggy pinnacle adorned with the customary sparse tufts of vegetation (Nardus stricta, Aira praecox, Linum catharticum and Xanthoria sp.) and false bird droppings, was composed of a square softwood board and a framework of two wooden boxes to which screwed up newspapers had been nailed. This skeleton had been coated with layers of pasted newspaper. A final layer of thick brown paper stuck down with animal glue had its surface sand textured and colour tinted.

Of the boxes forming the stout framework into which the Eagle's legwires had been anchored, one, according to branded marks, had contained 12oz 3oz bottles of Bovril. The smaller box bore a Cadbury's Cocoa label and an 'Eggs with Care' sticker, indicating that it had been used to pack something fragile - possibly eggs! Fragments of a post office sticker showed that the box had been posted some time during 1898 from (?) Lane, Stourbridge and a 4d stamp had been franked with the Stourbridge franking mark. Did we have the work of a Stourbridge taxidermist or perhaps was one of our taxidermists correspondents from Stourbridge?? The plot thickens. A dessicated mouse dropping found in a screwed up page of the Durham County Advertiser stuffed into the bovril box was analysed for tell-tale elves of a gastronomic nature but no conclusive proof was found.

The newspapers used to pad the framework proved rather more fruitful. No less than ten newspapers were identified:- The Church Times, The Field, Financial News, Illustrated London News, The Record, The Guardian, Nottingham Daily Guardian, The Scotsman, Newcastle Daily Journal and the Durham County Advertiser. The first four papers probably betray the background and social class of our taxidermists correspondents - the sporting clerics and idle rich. The provincial papers from Nottingham, Durham, Northumberland and Scotland may be clues to the 'home ranges' of these 'sporting clerics' etc. But the presence of 9 editions of the Durham County Advertiser and two of the Newcastle Daily Journal suggest that our taxidermist may have been from Geordie Land. British Taxidermists (Herriott, S (1968) Leicester Museum publication) and local trade directories list many potential candidates, though as the newspapers were dated from 20.11.1892 to 12.8.1898 (38% being 1898 issues) the celebrated John Cullingford of Durham who operated c.1878-1905 may have been our man.

So far investigations have suggested that our Bald Eagle was mounted not in America, but in Britain, possibly by a north-eastern taxidermist, maybe John Cullingford of Durham, not earlier than 12.8.1898. Although some progress has been made, the pedigree of our 'baldie', his collector and taxidermist still remain shrouded in mystery. There can't have been many American Bald Eagles in British provincial collections, so I would welcome help from any Bald Eagle enthusiast in trying to answer some of the outstanding questions.

The newspaper remains provided an unexpected batch of fascinating biological and social history data, most of which was extracted from a matrix of adverts for patent gravel pills, cough and corn cures. The Durham County Advertiser of 1897 reported that Dr. H. T. Gilbert had found 'some evidence of evolution' in Gateshead! On 27. 5. 1898 the 'Advertiser' reported that the wet spring was feared to be having a disastrous effect on the survival of game chicks. Runs of salmon and sea trout, after a good early start had slumped, and the price of salmon in local markets was up to 2/1d per lb compared with 1/9d for the same period the previous year. The first grilse of the season had been caught at Burnmouth and weighed 2lb and a 30lb salmon, the heaviest of the season, had been caught at Goswick. The Newcastle Daily Journal 22. 6. 1898 reported that Mr. William Hardy, fishing in the Bowmont, had caught over two dozen trout, one weighing $1\frac{3}{4}$ lb. Collectors of antique otter records will no doubt be interested that the Durham County Advertiser 27. 5. 1898 reported otter hunting in progress in the River Swale and that two otters had been seen fighting at Batts Castle paper mills. The Newcastle Daily Journal 22. 6. 1898 recorded that Mr. Wilkinson's otter hounds were indulging in their annual fortnight's hunting on the Tweed, Till and Glen and had so far made 4 kills, the reporter recalling that in 1891 an animal had been killed at Riffington-on-Tweed. In The Field 18. 5. 1895 J. B. D. B. claimed that he 'never saw such a year for wasps', having killed 501 in 10 days in May. The Nottingham Daily Guardian 28. 8. 1897 noted that Major Jameson had been killed by lightning whilst gathering mushrooms in a field at Guildford - possibly an early record of Psalliota campestris for the Guildford area. The same natural history oriented newspaper reported on a visit by the Lincolnshire Naturalists' Union to the Boston area on 24. 8. 1897 where they spent a pleasant afternoon studying the foreshore of the Wash, the banks of the Welland and the marshes in the neighbourhood of Frampton and Wyberton. The report made more play of the presence of the two great Lincolnshire naturalists Rev. E. Adrian Woodruff-Peacock and John Cordeaux than what these bastions of the natural history scene actually found. The 'Scotsman' noted the death of John 'Ratty' Leonard, an Edinburgh character famed for his rat-catching abilities. He could catch 50-60 in a night to be sold for 'sporting' (?) purposes at 4d each. A certificate of character issued by a Scottish Court read:-

"The bearer John Leonard of Edinburgh, practical rat-catcher, honest in every respect except in the neighbourhood of a whisky barrel".

Still on the subject of booze, the Durham County Advertiser 27. 5. 1898 reported that William Peacock, mineral water manufacturer, was fined £1 at Scarborough for selling Hop bitters and Hop stout with an alcoholic content above the permitted limit!

Colin Howes
Doncaster Museum

THE COLLECTIONS RESEARCH UNIT IN YORKSHIRE AND HUMBERSIDE

A request for information on the Natural History collections, in the Yorkshire and Humberside Area, from Charles Pettitt of the North-West Collections Research Unit (NWCRU), resulted in the establishment of the Yorkshire and Humberside Collections Research Unit (YHCRU), at a meeting held in the Yorkshire Museum, York, on 10th April 1979.

The meeting was called by Mr. Michael Lloyd (Director, Museum and Art Gallery Service for Yorkshire and Humberside), and invitations were sent out to all museum curators in the area who are responsible for Natural History material.

At the inaugural meeting Colin Simms (Yorkshire Museum) was appointed as Secretary of the Unit, with Adrian Norris (Leeds City Museum) as Chairman. Mr. Norris was also asked to administer any funds made available through the Area Service.

Since that first meeting, a great deal of work has been done by the group, and we are now able to report that the task of gathering the information on collections in the area is now well under way. Details of over 720 named collections housed within the area have now been transferred on to the computer at Manchester.

The data coding forms used by YHCRU are based on those used by NWCRU, with slight modifications.

The sample form shows details of a collection at Leeds City Museum. The major part of which was transferred to Manchester Museum, because of reorganisation after war damage.

All the type specimens in this collection were subsequently transferred to the British Museum (Natural History).

It is hoped that the unit will be able to produce a complete catalogue of the Natural History collections in the Yorkshire and Humberside area within the next few years.

A. Norris
Leeds City Museum

COLLECTION RESEARCH - DATA CODING FORM (C)

UPDATE ENTRY

IMPORTANT: Please consult notes on the reverse before completing this form

LIT REF ONLY

1	COLL	Fraser, Lt. Col. F.C.
2	SUBJ	Dragonflies (Odonata)
3	GEOG	South American
4	PERI	1930's
5	NUMB	34 specimens
6	ASSN	-
7	LOCN	Papered, in store box
		<input checked="" type="checkbox"/> YES
8	ACON	Return from Manchester Museum (See ADDN) Acc. No. 41 - 1946
9	MSSM	-
10	LREF	Trans Royal Ent. Soc. Lon. 96:(2) : 11-46 1 pl 13 figs (1946) Trans Royal Ent. Soc. Lon. 97:(18) : 443-472 7 figs (1946)
11	BIOG	-
12	MUSE	Leeds City Museum
13	NMCO	Adrian Norris date 6-3-1979 <input checked="" type="checkbox"/> LEEDM
14	ADDN	All the types listed in the two publications above are in the BM (Nat. Hist.). The bulk of the rest of the material is now in The Manchester Museum.
15	CLAS	
16	OCOD	
17	IDEN	

THE HERBARIUM OF GLASGOW MUSEUM AND ART GALLERY

Introduction

The collections of the City of Glasgow were initiated by the activities of a local coach-builder, Archibald McLellan (1796-1854), who was also an enthusiastic art collector. He left his collection, and the building to house them, to the City, but unfortunately he was insolvent at the time of his death. In order to save the collection, the City had to 'buy' both collection and building.

In 1870, Glasgow Corporation purchased Kelvingrove Mansion House, built in 1783, in what is now Kelvingrove Park. It was known locally as the City and Industrial Museum, housing predominately historic and scientific material. Natural history collections were by then rapidly accumulated, thanks to local interest, but little display space was available.

In 1876, an extension was added for technological items; 1888 saw the last International Exhibition, which raised funds towards a new building to house all the collections.

By the 1890's construction was well underway, and a 2nd International Exhibition was held in 1901 to coincide with the opening of the new museum also in Kelvingrove Park. As the journal "British Architect" commented in 1892 : "combines both picturesqueness and dignity. The former quality is perhaps somewhat in excess".

The new building allowed the formation of various departments including natural history (with geology).

THE HERBARIUM

Most of the botanical collections date from the decades around the turn of the century. Whilst the Universities of Glasgow and Strathclyde (formerly The Glasgow & West of Scotland Technical College to 1912, then the Royal College of Science and Technology) tended to acquire herbaria of academic botanists, the Museum has those of local societies and dedicated enthusiasts. Most of the departmental curators of the time were more geologically inclined, which caused a backlog to accumulate.

Recently a programme of conservation, cataloguing and amalgamation has been underway, with additional help provided through the S. T. E. P. scheme. The herbarium has been rehoused in new purpose-built storage cabinets, and is now reasonably accessible, though much work still remains to be done. All extra-European material is treated as low priority for the present. The only collections to be retained as entities will be Dr. James Stirton's mosses and lichens, which contain type specimens.

THE COLLECTORS

As most of the collectors were of localised importance, with literature on them correspondingly local, I am including some biographical details of them for this article.

Rev. John Fleming (1785-1857) was better-known as a mineralogist and palaeontologist; his mineral collection is also in the museum. By profession, he was a Presbyterian minister, and most of his specimens are from his parishes in Shetland, Fife and Clackmannan as well as from Edinburgh, where he attended the university. His vascular plants include our earliest specimens, plus some collected by George Don Snr. (the Scottish alpine botanist), and a number acquired through the exchange activities of the Botanical Society of Edinburgh (started 1836), many of which had been obtained from eminent botanists of the period eg. C.C. Babington; J.H. Balfour; J.T. Boswell-Syme; Rev. J.S. Henslow; W.J. Hooker; W.A. Leighton; W.W. Newbould; T.B. Salter; N.B. Ward & H.C. Watson, amongst others.

Fleming also included seaweeds, fungi, lichens and mosses in his collection, and these may provide some early Scottish records.

The Philosophical Society of Glasgow came into being in 1802, receiving its Royal Charter a century later. The herbarium was started in 1843, when the Glasgow Botanical Society amalgamated with them. However by 1882, there were only 3 members left in the Botanical Section, probably due to the new interest in anatomy and morphology, and it was agreed to donate the herbarium, which is comprised wholly of vascular plants, to the museum. Most specimens are either Scottish or continental Europe, though some from India and North America are included.

Amongst the other local societies that had close associations with the Museum, was the Natural History Society of Glasgow, which flourished from 1851 until 1930 when it joined with the Andersonian Natural History and Microscopical Society. In 1881, the Society and the Parks Committee of the Town Council made an agreement by which the Society would provide a collection of British plants and invertebrates: the museum had to provide storage and materials for mounting the specimens.

Accordingly, in 1883, a small collection of flowering plants and a larger collection of mosses was presented to the museum, to be followed by some hepatics in 1884. The moss collection was "the nucleus of a complete one, so far as British species are concerned. Its value depends mainly on the number of representative species it includes Many of the specimens have been gathered by men such as Dr. Greville, Dr. W. Wilson, Prof. Dickie and Prof. Schimper 268 specimens alone have been gathered by McKinlay".

George Horn who was born in Camlachie, Glasgow in 1828 and died in 1912, donated his herbarium to the museum in 1902.

Apart from an apparently unsuccessful foray to Australia during the Gold Rush, Horn spent most of his life running a grocery business in Glasgow. His collection of mosses and vascular plants is fairly comprehensive and includes many local specimens; others have been obtained through Scottish contemporaries in the case of mosses, and on a national scale for flowering plants through the Botanical Society of Edinburgh exchange activities. A fair number of specimens are from Norway, probably indicative of the growing interest in plant habitat, at the latter end of the last century, comparing Scottish mountain flora with that of the European arctic. (viz the activities of the Scottish Alpine Botany Club in the 1880's).

Rev. Robert Kerr (1857-1939) was a minister with the United Free Church, and later the Church of Scotland. From some 47 years, he was with Kirkmuirhill Church in the parish of Lesmahagow, Lanarkshire, and it is from this area that many of his specimens were collected. Most are vascular plants including some 70 European alpinas, but mosses are also represented.

Dr. W. G. Blackie (1816-1906) was pre-eminent in the business life of Glasgow, being the founder of W. G. Blackie & Co. (Printers) which was an adjunct to his father's firm of Blackie & Son (Publishers). He was also deeply interested in education and in charitable societies, but little is known of his botanical activities, despite most of his specimens being Scottish.

David Robertson (1806-1896) was a former herd-boy, who studied at night class, and became the owner of a successful pottery shop in Glasgow. Partly through the interest of his 2nd wife and through friendship with Roger Henedy, who wrote 'Clydesdale Flora', he developed an interest in marine flora and fauna, and later geology. It was because of the ill-health of his wife that the Robertsons moved to Great Cumbrae, an island in the Firth of Clyde, and it was here that due to his interest in marine life, the Marine Biological Station was eventually established just before his death. As shown in the appendix, his botanical interests covered most groups, the algae being especially well-represented.

Dr. James Stirton's collections of lichens and mosses are the most important of the collection. Dr. Stirton (1833-1917) was a gynaecologist, holding a professorship at the old Andersons College in Glasgow from 1889. His spare time was devoted to botany and he collected extensively in the Scottish Highlands. He also corresponded at home and abroad with many leading authorities, and received specimens from them (Sir

George Watt, Beckett, Buchanan & Andrew McKinlay). Both collections contain types named by him, many of which still stand today. The original lichen collection was divided between Glasgow and the British Museum (Nat. Hist), by Annie L. Smith, in the early part of the present century.

Stirton was active in many local societies, including the Philosophical Society of Glasgow and the Glasgow Society of Field Naturalists, as well as the Botanical Society of Edinburgh and the Linnaean Society (fellow). Most of his numerous papers appear in the "Transactions" of these societies, as well as in the Scottish Naturalist, Annals of Scottish Natural History and Grevillea.

COLLECTORS OF MINOR COLLECTIONS

The Andersonian Naturalists of Glasgow (shortly to become the Glasgow Natural History Society) deserves mention as the last survivor of the plethora of naturalists' societies, which sprang up in the City in the last century. Formed as the Natural History Society of Glasgow in 1851, it included many of the afore-mentioned botanists, as well as those from the university colleges amongst its members. In 1931, two other societies, the student-orientated, Andersonian Naturalists Society (founded 1885) and the Microscopical Society of Glasgow (1886) amalgamated with it, eventually to form the present society. The collection of vascular plants, obtained locally, was presented in 1903, by the then Andersonian Naturalists' Society.

W. A. Mudd (1830-1879) came from Yorkshire, where he was originally a gardener; he later became curator of the Botanic Gardens at Cambridge. He is known to have produced ex siccatæ fasciculi of lichens, but it is uncertain whether the Glasgow collection is from one of these, as there is no trace of bound volumes.

Richard Spruce (1817-1893) was a Yorkshireman, who spent some years in South America. He also maintained a close contact with the Botanical Society of Edinburgh. The collection of South American mosses in the museum was obtained via the Natural History Society of Glasgow.

Robert Turner (1848-1894) was Assistant Registrar of Shipping in Glasgow, and was president of the Andersonian Naturalists Society (1890-92). His collection of vascular plants are all local.

Charles Eadie flourished 1873. He was employed in the Office of Public Works of the Corporation.

David Landsborough (1779-1854) was well-known as a pioneer of marine biology, working mostly along the Ayrshire coast.

The museum holds 3 copies of bound seaweed fasciculi entitled "Treasures

of the Deep", probably sold, as D. E. Allan suggested, to holidaymakers, ".....in aid of his Kirk and its schools". There are also letters to Prof. J. Fleming from Landsborough.

George W. Ord (1871-1899) worked at the Museum and later at the People's Palace (branch museum). His main interest was geology; his plants are Scottish alpinists.

Prof. Thomas King (1834-1896) was well-known as a botanist in Glasgow, where he spent most of his life, except from 1864-73 when he went to Chile. In 1889 he was made Professor of Botany at the Anderson Medical College, and a year later, of the Veterinary College. He was active in most of the local naturalists' societies; his particular interest being seaweeds.

The Forestry Commission has given a collection of the cones of about 20 introduced conifer species, grown at the Younger Botanic Gardens arboretum at Benmore.

There are 2 collections whose donors remain a complete mystery:

138 vascular plants from Kirkcudbright and Dumfries, collected 1859-60, and 177 vascular plants with poetry (!) from localities near Glasgow and Aberystwith (sic), no date.

Of the remaining collectors: Mrs. E. Hopkins, English & Welsh mosses (fl. 1815-97); J. Booth, Holstein mosses in exsiccata bound volume (fl. 1918); Dr. J. Foulds, S. American mosses (1896); Mrs. M. Gunn, Firth of Clyde seaweeds (1945), and G. Scott, Scottish flowering plants (fl. 1860), I have no information and any would be welcome.

Gwyneth Jones
Glasgow Museum and Art Gallery.

APPENDIX : approx. size of collections

CLASSIFICATION	COLLECTOR	BRITISH	EUROPEAN	OTHER
ALGAE	D. Robertson	A collection of around 900 specimens mostly British (freshwater & marine) on long loan to Scottish Marine Biological Assoc., Dunstaffnage, Oban.		
MARINE	Mrs. M. Gunn	30		
	Prof. J. Fleming	c.200		

CLASSIFICATION	COLLECTOR	BRITISH	EUROPEAN	OTHER
MARINE	Prof. T. King	186		
	D. Landsborough	3 fasciculi		
	Unknown	9		
FUNGI	Prof. J. Fleming	60		
	Museum staff	40		
LICHENS		(freeze-dried)		
	Prof. J. Fleming	150		
	Mudd	260		
	Dr. J. Stirton		1000	1000
BRYOPHYTES	Museum staff	200		
	J. Booth		200	
	Dr. J. Foulds			60
	Mrs. E. Hopkins	220		
	G. Horn	700		
	Rev. R. Kerr	360		
	D. Robertson	425		
	R. Spruce			291
	Dr. J. Stirton		5500	2000
	Nat. Hist. Soc.			
	Glasgow	800		
VASCULAR PLANTS	Dr. W. G. Blackie	445		
	C. Eadie	212		
	Rev. J. Fleming	2000		
	G. Horn		2500	
	G. Ord	28		
	D. Robertson	280		
	G. Scott	215		
	R. Turner	69		
	Unknown	138		
	Unknown	177		
	Andersonian Nat. Soc.	260		
	Nat. Hist. Soc.			
	Glasg.	85		
	Phil. Soc. Glasg.		4000	500
Museum staff	100			

References

It would be very cumbersome to include biographical references, but some more general ones on herbaria and natural history societies in Glasgow are given, plus some on the history of botany in Scotland.

Crundwell, A. C. 1952. Bryological Collections in Britain: the Glasgow Museum Trans. Brit. Bryol. Soc. 2, 1.

- Fletcher, H.R. 1959. Exploration of the Scottish flora. Trans. Bot. Soc. Edinb., pp 30-47.
- Lee, J.R. 1952. The History of the Society. Glasg. Nat. XVII, I, pp 4-7. (the Andersonian Naturalists' Society of Glasgow).
- Lloyd, B. 1964. The herbarium of the Royal College of Science and Technology, Glasgow. Glasg. Nat. XVIII, 7, pp 363-368. (now University of Strathclyde).
- MacKechnie, R. 1958. Plant recording in Clydesdale. Glasg. Nat. XVIII, I, pp 3-14.
- McNair, P. 1907. On the history and development of the natural history collections in the Glasgow Museums. Roy. Phil. Soc. Glasg. pp 3-18.
- Patton, D. 1952. Glasgow's Natural History Societies. Glasg. Nat. XVII, I, pp 8-10.
- _____ 1954. The British Herbarium of the Botanical Department of Glasgow University. Glasg. Nat. XVII, 3, pp 105-125.
- Power, W. 1951. A Kelvingrove Jubilee, 1901-1951. Pub. Glasgow Art Gallery and Museums.
- A note on the Nat. Hist. Soc. Glasg. agreement with the Museum to form a herbarium. Proc. Nat. Hist. Soc. Glasg. 1880-83 pp 272-73.
- Various notes and reports on excursions of the Scottish Alpine Botany Club in Trans. Bot. Soc. Edinb., 1870-92.

A COLLECTIONS RESEARCH UNIT FOR THE MIDLANDS REGIONS

On February 19th 1980 an ad hoc meeting of the Midlands region Natural Science Curators (together with other interested parties) agreed to establish a Natural Sciences Collections Research Unit for the Midlands. Support and encouragement was offered by the existing Midlands Area Service. This support was accepted on the understanding that other arrangements may have to be made should that Service at any time split into East and West Midland Services, in order that the Research Unit could continue to operate over the Midlands region as a whole.

The Midlands Research Unit will work along much the same lines as the established Units in the North West and Yorkshire & Humberside. The accumulated data are to be placed on file at the Manchester University Computing Centre and processed using the FAMULUS package and with Dr. Charles Pettitt responsible for data input, updating, and initial production of catalogues. The regional organisation, however, differs from that in operation elsewhere in that a panel of curators have been given the responsibility for listing all the 'minor' private, university and other collections in the region, arranging for visits to be made to uncurated collections, and vetting the input forms to ensure that entries conform to minimum standards before being passed on to Manchester. So access by record compilers to the computer will, at the initial stage, be via the appropriate panel member. The input forms will be based on those used by the N.W. and Yorks/Humberside Units but are likely to have minor modifications. Their exact layout and content will be decided at a meeting of panel members on March 18th and forms should be available, together with an instruction leaflet, soon after that meeting.

Panel membership was decided by subject speciality and geographical location; because of the size of the area to be covered there was an agreed duplication of expertise in the east and west. We therefore have a specialist geologist, botanist and zoologist for both the eastern and western counties, and a secretary/convenor making seven members in all. Each panel member will vet the input forms from compilers in his area, prepare a list of institutions, societies and individuals holding natural history material for an agreed area around his operational base; and enrol the help of subject specialists willing to visit uncurated collections.

Composition of the Midlands Panel

East	John Crossling (Derby)	Geology
	Tony Fletcher (Leicester)	Botany
	Graham Walley (Nottingham)	Zoology

West	Tristram Besterman (Warwick) Brian Abel Seddon (Birmingham) Geoff Halfpenny (Stoke)	Geology Botany Zoology
------	---	------------------------------

Secretary/Convenor John Mathias (Leicester)

This achieves a fair spread of expertise throughout the region and with a division of labour along these lines we expect most of the traceable collections to be on file by February 1982. Regular meetings will be held for all contributors to sort out problems and to check progress towards the 1982 deadline.

The most difficult task initially is to make as complete a list as possible of all collections in the region. So will anyone who has experience of collections and collectors in the Midlands, particularly in the private, academic or educational fields, please contact me with the details as soon as they can:-

John Mathias,
Keeper of Biology,
Museum and Art Gallery,
96 New Walk,
Leicester.

Tel. 0533-554100 ext. 262



Department of the Environment

Room

Tollgate House Houlton Street Bristol BS2 9DJ

Telex 449321

Direct line 0272-218

Switchboard 0272-218811

☒
☒
☒
☒
☒

Your reference

Our reference

B/104

Date

October 1979

Dear Sir,

WILDLIFE AND COUNTRYSIDE BILL: FURTHER INFORMATION RE CONSULTATION PAPER NO 3
PROHIBITED MEANS AND METHODS OF KILLING AND TRAPPING

1. On 20 August Consultation Paper No 3 on Species Protection was circulated in which proposals for prohibiting certain methods of killing and trapping mammals were outlined with a provisional list of prohibited means (Appendix 9).
2. As a result of the comments we have received, and consultation with the Ministry of Agriculture Fisheries and Food we have arrived at a list of pest species of mammal (Annex I) and a revised form of Appendix 9 (Annex II). It is proposed that the methods listed in Annex II will apply to all species except listed pests (Annex I). Their use on pests will be subject to existing legislation which will in no way be weakened by the Act, and to the general proviso that prohibited means may only be used for pest control purposes by authorised persons. Thus existing regulations and control of poisons, traps, etc currently in force will continue. A summary list of methods of killing at present prohibited or restricted is enclosed for information (Annex III). The proposed prohibitions apply totally to non-pest species so the net result is that the laws relating to pests remain unchanged but further protection is afforded to other species. Provisions will be made for licensing the use of the prohibited methods where there is local infestation by species otherwise protected.
3. Also attached is a revised list of prohibited means and methods of killing, capture and other forms of exploitation of birds. The list now includes not only those methods and means listed in the EEC Directive on the Conservation of Birds but also the prohibitions listed in the Protection of Birds Acts 1954-1967 and an item proposed during consultations, chemical wetting agents.

J C GOLDSMITH

PEST SPECIES OF MAMMAL

Badger

Mole

Rabbit

Grey Squirrel

Rats

Mice

Fox

Deer

Hare

Stoat

Pine Martin

Weasel

Mink

Hedgehog

Coypu

Pole-cat

Wild-cat

APPENDIX 9

PROHIBITED MEANS AND METHODS OF KILLING, CAPTURE AND OTHER FORMS OF EXPLOITATION

MAMMALS

- * Snares
 - Live animals which are blind or mutilated used as decoys
 - Tape recordings used to decoy animals
 - Electrical devices capable of killing and stunning
 - Use of artificial light sources to attract mammals
 - Mirrors and other dazzling devices
 - Devices for illuminating targets
 - Sighting devices for night shooting comprising an electronic image intensifier or image converter
 - Explosives (except cartridges and bullets)
 - Nets (1)
- * Traps (1)
- * Poison and poisoned or anaesthetic bait (including gas)
 - Gassing and smoking out
- * Semi-automatic or automatic weapons with a magazine capable of holding more than two rounds of ammunition
- * Use of aircraft to pursue and overtake animals
- * Use of motor vehicles in motion to pursue and take mammals.
 - Bows and Crossbows

(1) if applied for large scale or non-selective capture or killing,
 * subject to existing legislation

METHODS OF KILLING AT PRESENT PROHIBITED OR RESTRICTED

- BADGERS:**
1. Badger Tongs.
 2. Any firearm other than a smooth bore weapon of not less than 20 bore or a rifle using ammunition having a muzzle energy of not less than 160 footpounds and a bullet weighing not less than 38 grains. MAFF have permission to use .22 pistols to despatch badgers.
 3. All poisons
 - other than under licence.
- MOLES:**
1. All poisons except strychnine and gassing substances.
 2. Spring traps other than those specified in SI 1958/24.
- RABBITS:**
1. All poisons except gassing substances.
 2. Spring traps other than those specified in SI 1975/1647.
 3. Myxomatosis (deliberate spreading of).
- GREY SQUIRRELS:**
1. All poisons except warfarin.
 2. Spring traps other than those specified in SI 1975/1647.
- RATS AND MICE:**
1. The poisons yellow phosphorus, red squill and strychnine. Fluoroacetic and acid a salt thereof or fluoroacetanide, salts of thallium, zinc phosphate for use as rodenticides require a permit from MAFF.
 2. Spring traps other than those specified in SI 1975/164 and SI 1958/24.
- FOXES:**
1. All poisons except gassing substances, and strychnine under permit.
 2. All spring traps.
- DEER**
1. All poisons.
 2. Trap, snare, poisoned or stupefying bait.
 3. Any firearm or ammunition mentioned in Schedule 2 of the Deer Act 1963.
 4. Arrow, spear or similar missile.
 5. Any missile whether discharged from a firearm or otherwise carrying any poison, stupefying drug or muscle-relaxing agent.
 6. Discharge any firearm, or project any missile, from any mechanically propelled vehicle.
 - except under licence. Items 5 and 6 shall not apply to anything done by, or with the written authority of, the occupier of any enclosed land where deer are usually kept in relation to deer on that land.

APPENDIX 6

PROHIBITED MEANS AND METHODS OF KILLING, CAPTURE AND OTHER FORMS OF EXPLOITATION

BIRDS

- * Bird lime or any substance of a like nature
 - * Snares
 - * Hooks and lines
 - * Live birds used as decoys (including blind, maimed, mutilated and injured birds) whether or not tethered or secured by means of braces or other similar appliances
 - * Springs
 - * Gins
 - * Baited board
 - Chemical wetting agents
 - Tape recordings used to decoy birds
 - * Electrical devices capable of frightening, killing and stunning
 - * Use of artificial light sources to attract birds
 - * A shotgun of which the barrel has an internal diameter at the muzzle of more than 1 $\frac{1}{4}$ inches
 - Mirrors and other dazzling devices
 - Devices for illuminating targets
 - Sighting devices for night shooting comprising an electronic image intensifier and image converter
 - * Explosives (except cartridges and bullets)
 - Traps (an exception will be made for certain types of trap for the legitimate function of game bird rearing)
 - Nets (existing exceptions will be retained)
 - Poison
 - * Poisoned, poisonous or stupifying substances (including gas)
 - Semi-automatic or automatic weapons and with a magazine capable of holding more than 2 rounds of ammunition
 - Bows and crossbows
 - * Use of aircraft to pursue and take injure of kill birds
 - * Use of motor vehicles in motion to pursue and take injure or kill birds
 - * Use of boats fitted with an engine to pursue and take, injure or kill birds
-
- * Subject to existing legislation

WILDLIFE AND COUNTRYSIDE BILL: CONSULTATION PAPER NO 4

CONSERVATION OF HABITATS

This is the fourth in a series of consultation papers relating to a proposed Wildlife and Countryside Bill. Any comments should be sent in time to reach the Department by 8 October 1979 and addressed to the Department of the Environment, Room 324, Tollgate House, Bristol BS2 9DJ.

Although present legislation gives protection to species of wildlife there is no legal protection outside the planning system, other than ownership, afforded to the habitats on which the future of these species is recognised to depend. As a result the Nature Conservancy Council and the voluntary bodies have concentrated their efforts on buying important sites where these became available or endeavoured to arrange voluntary agreements with landowners to protect the wildlife.

Whilst these actions have afforded some protection, the protection of other sites declared by the NCC to be of Special Scientific Interest is entirely dependent on information gathered incidentally or on voluntary notification by landowners and tenants of those proposed activities for which statutory approval is not required but which could result in the total and irrevocable destruction of the habitat. Such activities may include cutting down trees, drainage and changes in farming practice.

The NCC in their paper, published in 1977 "Nature Conservation and Agriculture" suggested that "very approximately 4% of the scheduled sites are severely damaged each year".

The Government has a duty to ensure that the most valuable wildlife resources can be conserved for the Nation. Furthermore the Government already has obligations internationally, principally derived from the "Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat" and the recently adopted EEC Directive 79/409 on the Conservation of Wild Birds, to protect habitats which are important to wildlife. In these circumstances it is proposed to take measures to ensure that practices which might threaten the most important sites are notified by the owner or tenant in order to avoid the possible destruction of habitats without the issues being carefully examined in the interests of the Nation as a whole.

The proposal is that the Secretary of State for the Environment should designate (in the light of advice from the Nature Conservancy Council and in consultation with the Minister of Agriculture or the Secretary of State for Scotland or Wales or such other Ministers as might be concerned) a small number of selected sites where landowners or tenants would have a legal obligation (subject to penalty) to give 12 months notice to the NCC of their intention to undertake practices which could be detrimental to the identified scientific interest and are not caught by planning controls. Quite clearly, therefore, it would be unrealistic for such designations to encompass every hectare of land possessing any, or even a high degree of scientific interest.

It must be recognised that the extent to which the Government can enable the Nature Conservancy Council to purchase land in order to protect wildlife is, of course, constrained by the state of the nations economy and competing financial requirements. Designation must have a potential effect on public expenditure and the greater the number of designations, the greater the potential effect. Nevertheless as a starting point it is proposed that any site must comprise all or part of a site identified by the NCC as a Site of Special Scientific Interest. Within this it is clearly sensible for the Secretary of State to consider designation

- (a) where a change in practice would imperil the future in Great Britain of one or more species of flora or fauna native to this country or
- (b) to meet an international obligation specific to a named site. (At present there are 13 such sites which, in the main, are owned by the NCC or subject to nature reserve agreement and include large areas of open water).

The above criteria are restrictive and it would be sensible to provide for the Secretary of State to be able to designate sites which are of particular national interest but are outside the scope of the first two categories. The recent Ribble Estuary case would not have fitted either category but was clearly of such national and international importance that it would have justified designation. Other cases might include fossil bearing geological strata of exceptional importance. New factors and influences create marked changes in public and national concern and it would be unfortunate if, having identified a new and serious threat, the Secretary of State was unable to make a designation because there was no legislative provision. A suggested third category might, therefore, be "Exceptional cases which merit special treatment in the National interest". Such rare cases could be the subject of affirmative resolution by Parliament. Views of recipients on this third category would be particularly welcome.

On receipt of notification, the NCC would be required to inform the landowner or tenant as early as possible but in any event within say 3 months whether or not the proposed action was in their view acceptable. If so, he would be free to go ahead. If not, the NCC would be expected to endeavour to negotiate an acceptable solution with the proposer. If these efforts failed, the NCC would, as now, be free to consider making a compulsory purchase order under powers which were provided in 1949 under the National Parks and Access to the Countryside Act. (In this respect it is worth noting that the NCC has never been forced to use its compulsory purchase powers for other than technical reasons although it came very close in respect of the Ribble). Should no agreement be reached or order made within the 12 month period, the owner or tenant would be free to proceed.

It is also proposed to introduce a legislative provision to make it illegal to destroy the value of a designated site or any other Site of Special Scientific Interest in respect of which the NCC has formally notified the owner of the initiation of compulsory purchase procedures. These provisions would apply until such time as the purchase is completed or the order rejected or otherwise withdrawn. It is proposed to amend the NCC Act to provide a duty for the Council to protect sites designated by the Secretary of State except where in any particular case he decides otherwise.

It will, of course, be necessary to build in appropriate provision for financial compensation for loss and other safeguards for the individual. Safeguards already exist for that part of the process covered by the existing compulsory purchase powers.

The intention is to provide the Government with a legislative power which will ensure that the limited number of habitats which it has acknowledged as being of vital importance either nationally or internationally cannot legally be destroyed without the Government first being given the opportunity to intervene.

Department of the Environment

August 1979

WILDLIFE AND COUNTRYSIDE BILL: CONSULTATION PAPER NO 5

Countryside Provisions

1. This is the fifth in a series of consultation papers relating to the proposed Wildlife and Countryside Bill. Any comments should be sent in time to reach this Department by 8 October 1979 and addressed to the Department of the Environment, Room 324, Tollgate House, Houlton Street, Bristol BS2 9DJ.
2. It has been widely recognised that legislation is desirable on a number of miscellaneous matters relating to the countryside and, during the last Parliament, certain provisions were included in the Countryside Bill. Ministers are disposed to include similar provisions in the new Wildlife and Countryside Bill as follows:-
 - (i) a specific power for local planning authorities, including National Park Authorities, to make management agreements with owners and occupiers of land for the purpose of preserving or enhancing the natural beauty of any land within their area or of promoting its enjoyment by the public. Local planning authorities include County and District Planning Authorities, the Greater London Council and the London Boroughs;
 - (ii) a power for local authorities to warden land to which the public are allowed access but for which there is no existing wardening power, and to warden footpaths in the countryside. The first of these powers would be exercisable only with the agreement of the owner and occupier of the land and the only purpose for which wardens could be appointed under either power would be to advise and assist the public;
 - (iii) a specific power for the National Park Authorities to make grants or loans to assist public or private projects conducive to their objectives, which are to preserve and enhance the natural beauty of the Parks and to promote public enjoyment of it;
 - (iv) a power for the Countryside Commission to make orders, which would be subject to Ministerial confirmation, varying National Park boundaries.
3. It is also proposed to provide for the further matters below:-

Nature Conservancy Council Grant Powers

4. The Government is very conscious of the valuable contribution that is being made by the voluntary bodies in the nature conservation movement, and by individuals, in furthering the cause of nature conservation in Great Britain. The cost of much of this work is met by voluntary contributions and some by grants generally of a "priming" nature, from the Nature Conservancy Council.
5. Under Section 3 of the Nature Conservancy Council Act 1973 the NCC may make grants for:
 - a. the establishment, maintenance and management of nature reserves in Great Britain;
 - b. the provision of advice and dissemination of knowledge about nature conservation;
 - c. the commissioning, support or carrying out of relevant research.

6. Thus the Council cannot make grants for activities which fall outside these functions but which would nevertheless be of benefit to nature conservation. Nor can the Council at present make loans. It is proposed to empower the NCC to make grants or loans for any projects which it considers beneficial to nature conservation by provisions similar to the powers of the Countryside Commission to make grants or loans in their particular field under Section 9 of the Local Government Act 1974 (this requires the grants or loans to be in accordance with arrangements approved by the Secretary of State and Treasury).

7. This proposal would not imply an increase in the NCC's own annual Grant-in-Aid. Its effect would be to give the Council greater latitude, within its budget, to provide assistance to nature conservation in Great Britain.

Countryside Commission - Pensionability

8. It is desirable to amend the Countryside Act 1968 to bring it into line with the policy which has been pursued since 1973 on pensionability and compensation for loss of office for part-time paid members of State Boards with substantial workloads. The 3 paid members of the Countryside Commission are in this situation but are at present at a disadvantage because the Act lacks the enabling powers for the policy to be carried into effect in the case of the Commission.

Limestone Pavements

9. The total area in Great Britain of the geological formations known as limestone pavements is a little over 5,000 acres. Most of this occurs in North Yorkshire and Cumbria, and there are smaller areas in Lancashire, Wales and Scotland. Geologically these formations are of considerable significance by reason of the evidence they present of past events and of the processes which have gone into their formation. Biologically they are important by reason of the sheltered and humid habitat in the runnels in the pavement which enables species of rare and uncommon flora to flourish.

10. In recent years limestone pavements have suffered damage from the illicit removal of rock, largely to supply the garden rockery trade. The large scale removal of rock is a quarrying operation subject to planning control, but there has been some doubt in the application of the planning regulations to the removal of loose stone. During the course of the former Countryside Bill a new clause designed for this situation received a considerable measure of general agreement.

11. It is proposed in the new Bill to strengthen the protection afforded to limestone pavements which have been notified to local planning authorities as sites of special scientific interest. A provision would be included to enable the Secretary of State and the County Planning Authorities to make a Limestone Pavement Preservation Order where it appeared to them that the character of the land, which was of geological and botanical interest, would be likely to be adversely affected by the removal or disturbance of limestone. The Order would prohibit the removal of limestone without planning permission. Thus it would become an offence if the owner or tenant occupying land covered by a Limestone Preservation Order removed or disturbed, or permitted removal or disturbance, of limestone if this were to be done in the absence of planning permission.

12. Limestone Pavement Orders would take immediate effect. Those made by the County Planning Authorities would be subject to confirmation by the Secretary of State.

13. This paper does not deal with moorland conservation, which is still under consideration.

BIOLOGY CURATORS GROUP - OFFICERS AND COMMITTEE 1979/80

Chairman

Eric Greenwood
Merseyside County Museums
William Brown Street
Liverpool, L3 8EN
051 207 0001

Secretary

Stephen Flood
St. Albans Museum
Hatfield Road
St. Albans A21 3RR
0727 56679

Editor

Peter Davis
Sunderland Museum
Borough Road
Sunderland SR1 1PP
0783 41235

Treasurer/Membership Sec.

Kelvin Boot
Royal Albert Memorial Mus,
Queen Street
Exeter EX4 3RX
0392 56724

Museum Association
Liaison Officer

Geoff Stansfield
Dept. of Mus. Studies
152 Upper New Walk
Leicester LE1 7QA
0533 28273

Asst. Editor

Geoff Hancock
Bolton Museum
Le Mans Crescent
Bolton BL1 1SE
0204 22311

Members of Committee

Peter Morgan
National Museum of Wales
Cathays Park
Cardiff CF1 3NP
0222 26241

Mike Hounsome
Manchester Museum
Oxford Road
Manchester
061 272 3333

Martin Brendell
British Museum (NH)
Cromwell Road
London SW7 5BD
01 589 6323

Peter Lambley
Castle Museum
Norwich, NR1 3JU
0603 22233

John Matthias
Leicestershire Mus.
96, New Walk
Leicester LE1 6TD
0533 554100

Co-opted Members

Dave Erwin
Ulster Museum
Botanic Gardens
Belfast BT9 5AB
0232 668251

Michael Taylor
Museum and Art Gallery
George Street
Perth
0738 32488

Ray Ingle
British Museum (NH)
Cromwell Road
London SW7 5BD
01 589 6323

Bari Logan
Royal College of Surgeons
Lincoln's Inn Fields
London WC2A 3PN
01 405 3474

James Bateman
County Museum
Fletchers House
Woodstock OX7 1SN
0993 811456