NEWSLETTER

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BIOLOGY CURATORS GROUP

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Editor : Steve Garland

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EDITORIAL

A rather short Newsletter. The reports from the September seminar are due out shortly, but are, unfortunately, too late to mail with this issue. They will definitely be out before the April forum, (barring major disasters).

REMEMBER THAT YOUR SUBSCRIPTIONS ARE NOW DUE.
SEE THE ENCLOSED FORM.

Please keep up the excellent quality of copy which we have received during the past year.

Finally, I hope that enough people will attend our A.G.M. this year to ensure that it is quorate.

Steve Garland & Derek Whiteley

ANNUAL GENERAL MEETING AT ZOOLOGY DEPARTMENT

UNIVERSITY COLLEGE LONDON, GOWER STREET WC1

Friday 19th April 1985

Programme

10.00	Coffee - Seminar Room 2nd floor
11.00	"History of the Museum." Rosina Down - Lankester Theatre, ground floor
11.15	A.G.M.
12.15	Tour of the Museum and Collections
12.45	Lunch
2.00	"General problems in preservation", Reg Harris et al - Lankester Theatre
4.00	Tea - Seminar Room

Lunch — A list of the numerous venues in the area will be provided at the meeting.

A map of how to get to UCL is enclosed with the Newsletter. There is no car parking available for visitors, except for disabled members. Meter parking in the area is difficult and expensive. All day parking is available in some car parks not far distant from the College. For further information contact Mrs Rosina Down 01-387 7050 extn 416.

BIOLOGY CURATORS' GROUP

Notice of Annual General Meeting - 1985

The Annual General Meeting of the Biology Curators' Group will be held at 11.15 a.m. on Friday, 19th April at the Zoology Department of the University College London.

Agenda

1. Apologies
2. Minutes of the Annual General Meeting held on 6th April 1984 at the Booth Museum of Natural History, Brighton.
3. Secretary's Report (to be circulated).
4. Treasurer's Report (to be circulated).
5. Editor's Report.
6. Election of Officers and Committee.
7. Date and place of next meeting.
8. Any other business (any business under this heading should be notified in writing to the Honorary Secretary at least four weeks before the meeting).

Nominations are invited for Officers and members of the Committee.

Present position: (Year of election in brackets)

Chairman - Eric Greenwood (1979) retiring
Secretary - Penny Wheatcroft (1983) willing to stand for re-election.
Treasurer - John Mathias (1980) " " " " "
Editor - Steve Garland (1982) " " " " "
Committee - Peter Davis (1984) " " " " "
Ian Wallace (1984) " " " " "
Adam Wright (1984) " " " " "
Charles Copp (1983) " " " " "
Rosina Down (1983) " " " " "
Geoff Halfpenny(1983) " " " " "
Peter Lambley (1982) moved to Papua New Guinea.

The Committee has the power to co-opt. Present co-opted members are Geoff Stansfield, Martin Brendell, Lawrence Way.

Also on Committee are Geoff Hancock, Production Editor and John Cooper, GCG representative.

The full Committee consists of 9 posts, of which only 3 are presently filled.

Nominations; Nominations for Officers and Committee members must be supported by two members of the Group. Nominations, in writing, must reach the Secretary at least two weeks before the Annual General Meeting. (A signed statement that the nominee is prepared to stand is also useful).

Penny Wheatcroft, Hon. Secretary, c/o Public Services Dept. BM(NH), London.

BIOLOGICAL RECORDING FORUM

Chelsea College, University of London

17-18 April 1985

The Biological Records Centre (ITE, Monks Wood) and the Biology Curators' Group are collaborating to organise a forum to discuss the practical aspects of biological recording. The Forum will follow on from the seminar, *Biological recording and the use of site based biological information*, organised by the Biology Curators' Group at Leicester, in September 1984.

Structure of the Forum

The Forum is intended to allow those concerned with the practical aspects of biological recording to discuss methods and problems, and to exchange views. The Forum will be structured in 7 sessions, each devoted to a single theme. Each theme will be introduced briefly by the theme leader, who will then chair the open discussion. The theme leaders will also summarise the discussion, and if relevant, draw up a set of conclusions. It is hoped that all participants will take an active part in the discussions.

Pré-prints and publication

Pre-prints, introducing the 7 themes, will be circulated to all participants before the Forum. Written summarises of discussions and conclusions will be prepared by theme leaders for publication after the Forum.

Accommodation and facilities (NB BOOKING CLOSES 23 JANUARY 1985)

Residential accommodation will be single study/bedrooms in the Lightfoot Hall of Chelsea College in Manresa Road, off Kings Road, London SW3. All meals can be provided for those who book. The discussion sessions will also be held at Chelsea College. A licenced bar will be available at lunchtimes and in the evenings. NB Car parking is not available at the College, although there is on street parking on metres.

Discount travel

British Rail offers discounts of up to 30% on fares for conference delegates. If you intend to travel by train please indicate this on the booking form. Details of how to obtain this discount will then be sent to you.

Participants

It is hoped that participants will be drawn from the following organisations and groups

- Local records centres
- Biology Curators' Group
- County naturalists' trusts
- Royal Society for Nature Conservation
- Nature Conservancy Council
- Institute of Terrestrial Ecology
- National Trust Biological Survey
- Museum Documentation Association
- National biological recording scheme organisers.

If there is anyone who you think may be interested in the Forum, but may not be contacted as a result of mailing to the above, please let the organisers know as soon as possible.

Organisers

Paul Harding (BRC)
Institute of Terrestrial Ecology
Monks Wood Experimental Station
Abbots Ripton
HUNTINGDON
Cambs
PE17 2LS

Tel: (04873 381)

Charles Copp (BCG)
City Museum and Art Gallery
Queen's Road
BRISTOL
BS8 1RL

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BIOLOGICAL RECORDING FORUM

Chelsea College, University of London

17-18 April 1985

P R O G R A M M E

Wednesday 17 April

10.00 am	Assemble and coffee
10.30 am	Introduction by Charles Copp and Paul Harding
10.45 am	THEME I (Leader: Paul Harding)
	What is a biological record?
	The minimum standards for a record.
12.30-1.45 pm	Lunch
1.45 pm	THEME II (Leader: Tony Irwin)
	Validation of records
	The status of records, the need for voucher material and taxonomic vetting.
3.30-4.00 pm	Tea
4.00 pm	THEME III (Leader: Sue Cross)
	Networking
	How records can be acquired.
6.00 pm	Theme III ends
6.30 pm	Dinner

Thursday 18 April

9.00 am	**THEME IV (Leader: Lawrence Way)**
	Data Storage
	Form, access and security.
10.30-11.00 am	**Coffee**
11.00 am	**THEME V (Leader: Charles Copp)**
	Computing
	A review of the present situation and a forward look.
12.30-1.45 pm	**Lunch**
1.45 pm	**THEME VI (Leader: Pam Copson)**
	Uses and users
	The rationale of recording.
3.30-4.00 pm	**Tea**
4.00 pm	**THEME VII (Leader: Geoff Stansfield)**
	The problems being faced
	Possibilities for future developments in recording.
6.00 pm	**Forum ends**
6.30 pm	**Dinner**

CONFERENCE ON SAFETY IN MUSEUMS

16th-17th September 1985

Organised by ; B.M.(N.H.) & Museums Association & U.K.I.C.

To be held at Flett Lecture Theatre, Geological Museum.
Numbers limited to 200

Contact the Museums Association for details.

BOTANICAL SOCIETY OF THE BRITISH ISLES in association with the BIOLOGY CURATORS' GROUP

****
*
* Recording Critical Groups in the Flora of the British Isles *
*
****

A conference to be held in Liverpool on September 12th & 13th, 1985.

The conference will be based at the Merseyside County Museums and the University of Liverpool Halls of Residence.

Topics include: LOCAL FLORAS: THE CRITICAL ELEMENT

BSBI HANDBOOKS: WORK IN PROGRESS

CURRENT RESEARCH INTO CRITICAL GROUPS

HYBRIDISATION IN CRITICAL GROUPS

THE USES OF CRITICAL RECORDS

OPERATION GROUNDWORK NORTH-WEST.

A key feature of the conference will be workshop sessions covering a selection of particularly difficult groups, and a session on the use of computers in producing local floras.

Speakers and workshop session leaders include:

J. Akeroyd, H. Ash, R. Bateman, I.R. Brown, D. Doogue, Revd. G.G. Graham, A. Gunn, J. Handley, C. Howarth, D. McClintock, J. Moore, D. Parker, F. Perring, J. Ravest, A.J. Richards, T. Rich, J. Rodwell, P. Smith, C. Stace and S. Webster.

The large herbarium of the Museums, in which critical groups are well represented, will be used during the conference.

Further details and booking arrangements will be available shortly, and enquiries should be made to either J.R. Edmondson or E.F. Greenwood at Merseyside County Museums, William Brown St, Liverpool L3 8EN. Tel: 051-207 0001.

THE GROWTH AND SIGNIFICANCE OF THE NINETEENTH CENTURY SHELL COLLECTIONS IN THE CITY OF BRISTOL MUSEUM AND ART GALLERY

C. J. T. Copp

INTRODUCTION

On 12 November 1940 the Bristol Museum was badly damaged by fire during an air raid. The Greville Smythe Room, which housed the greater part of the natural history invertebrate collections, was destroyed along with many thousands of specimens. Those specimens recovered from the damage, together with reserve collections which had not been on display, were removed to the basement of the adjacent City Art Gallery where they remained, in need of attention and rehousing, until 1972. There had been a plan to build a new museum at another site in the city but when this scheme was eventually abandoned it was decided to use the available funds to improve the storage in the Art Gallery building in Queen's Road, now housing both Museum and Art Gallery.

The storage project (Elkin 1975) involved the complete refurbishment of the Art Gallery's basement area and the construction of special storage units. In the natural history and archaeology stores, the larger items were housed on Dexion racking, much of which was glass-fronted, while the smaller items were stored in specially constructed wooden "Smithsonian units", which are mobile boxes on castors with lift-off fronts and interchangeable drawers. In 1976, when I joined the Museum, the main phase of this storage project had been completed and the task of sorting and cataloguing the specimens had begun. The shell collections were partially housed in Smithsonian units, but for the most part were still wrapped in tissue and stored in the large cardboard boxes in which they had been fumigated.

My first task was to unwrap the collection, lay it out in Smithsonian unit drawers, and then sort the collection into taxonomic and geographical order. Some British collections have been left in their original cabinets but most will eventually be incorporated into the main taxonomic run with some specimens going into a separate reference collection of British species which is maintained to deal with straightforward identifications. After this sorting the task of cleaning, reboxing, identifying, registering and cataloguing the collection has proceeded. To date over sixteen thousand out of an estimated hundred thousand shells have now been identified and listed. This includes most of the groups popular with collectors such as volutes, cowries, murexes, cones and strombids. Many of the remaining groups await attention from taxonomic specialists.

Much of the shell collections had become jumbled through their long history, especially the catastrophe of 1940, and the only way properly to elucidate the significance of the collection was to go back to the records and trace the origin and growth of

the collection. This approach has proved immensely successful and has been extended to the botanical collections (Ratcliffe 1984). It is in progress for the entomology collections (for preliminary conculsions see Copp 1985b). The envisaged result will be a well ordered and documented series of collections whose context is regarded as important as their content.

HISTORY OF THE COLLECTIONS

The collections now in the City of Bristol Museum & Art Gallery have had a long and chequered history (Copp, in press).The natural history and geology collections in particular have direct continuity with those of the first Bristol Museum housed in the Bristol Institution for the Advancement of Science, Literature and the Arts, which opened in 1823 (Conybeare 1836, Barker 1906). From that time the development of the collections has fallen into three distinct phases. The first period lasted from 1823 until 1894 when the collections were in the possession of the Bristol Institution and its successor the Bristol Museum and Library Association. The second phase covers the period from 1894, when the collections passed into public ownership, until 1940. After terrible destruction caused during the air raid of 1940, the last period was a time when the collections reached their lowest ebb followed by a slow recovery and their eventual reorganisation. It is with the first phase of the museum's life, from 1823 to 1894, that this paper is principally concerned.

The social climate in relation to the development of natural history in Britain has been well described by Allen (1978). At the beginning of the nineteenth century the study of natural history was becoming more widespread and, indeed, some form of collecting was almost a social requisite. Although some branches of natural history were slow off the mark and others such as botany were curiously becoming thought of as suitable mainly for ladies, conchology was a well established subject for collections by the beginning of the nineteenth century. The opening up of foreign trade in the eighteenth century provided an increasing source of exotic specimens, and wealthy enthusiasts would vie with each other in the accumulation of species and the acquisition of rare specimens. Such affluent support soon led to the publication of large coloured reference works which in themselves were the source of a multitude of popular books which appeared when newer and cheaper printing methods were developed in the nineteenth century.

Of natural sciences only geology enjoyed a higher reputation than conchology. Although geology was a relatively new subject its strong economic bias, as in the search for coal, appealed to the mood of the times and the geologist commanded a manly or rugged image whereas the collectors of plants or insects all too frequently suffered embarrassment at the hands of amused onlookers. Many of the early geologists were "natural philosophers" in the widest sense and studied many branches of

natural history, so it is little surprise to find that geologists were among the most active contributors to the growing Institute's collections and their names appear many times on the list of shell donations.

GEOLOGISTS AND CURATORS

The pre-eminence of geology in the early nineteenth century, and particularly the historical associations of the Bristol and Bath districts with the development of that science, naturally favoured the appointment of geologists to the curatorship of the Museum of the Bristol Institution. This was also true for Bristol's sister establishment, the Bath Literary and Scientific Institution, founded 1825 (Torrens 1975). The first curator of the Museum of the Bristol Institution was J. S. Miller (c. 1780 - 1830) who worked there from 1823 until 1830, and was originally recommended to the post by Adam Sedgwick (1785-1873), Professor W. Buckland (1784-1856) and Professor Robert Jameson (1774 - 1854). Miller is best remembered as a geologist, particularly for his work on crinoids, but he was also the describer of two new living species of British land snails, Oxychilus alliarius (Miller) and Zenobiella subrufescens (Miller) (Miller 1822). He was also instrumental in the discovery and identification in Britain of the land snail Testacella maugei (Ferussac) (Taylor 1902). His published works included a list of the freshwater and land snails of the environs of Bristol (Miller 1822) and the Museum has recently acquired Miller's copy of Turton's Conchological Dictionary of the British Islands (1819), which he had extensively annotated and illustrated, thus underlining his interests in conchology.

The museum's second curator, Samuel Stutchbury (1798-1859), came equally well recommended by W. J. Broderip (1789-1859), Henry A. Palmer, William Everett, William Kirby (1759-1850), C. Stokes (1783-1853). William Yarrell (1784-1856) and Henry T. De la Beche (1796-1855) (Crane 1983). Stutchbury spent two years as a naturalist to a pearl fishing expedition in the South Seas, and after his return - several years before he was appointed to the Bristol Institution in 1831 - he appears to have worked for his brother. He brought much natural history and ethnographical material back with him. Much of this was sold, but some found its way into the Institution's collections. Stutchbury described several new species of living and fossil molluscs. The living species included (Stutchbury's names quoted) Myochama anomiodes, Cleidothyris brevis, Cleidothyris chamoides, Anatina (Myodora) pandoriformis, Anatina brevis, Anatina crassa, Anatina ovalis, and Anatina elongata. He described one new genus, Cypraecassis, from Cypraecassis rufa, the Bull's-mouth Helmet shell sent to him by a Dr. Cutting of 'Barbadoes'. From this source he also obtained a unique specimen of the bivalve Pholadomya candida with the soft parts preserved (Morton 1980). Among Stutchbury's other exciting discoveries was the first living specimen of the bivalve Trigonia which like Pholadomya had been thought to be long extinct and which gave rise to much argument in the growing debate on evolution (Crane 1976).

The energies and efforts of Miller and Stutchbury ensured the rapid growth and consolidation of the Institution's collections. Both made extensive use of Bristol's links through foreign trade as a source of new specimens. Stutchbury even had a booklet prepared for distribution to sea captains and others, outlining suitable techniques of collection and preservation (Crane 1982). In some instances dredges for shells, collecting bottles and preservatives were also supplied to those who offered to collect for him.

The intellectual standing of these first two curators was also of benefit to the Institution through the various academic connections they maintained. In this way men including Roderick Murchison (1792-1871), Richard Owen (1804-1892). Louis Agassiz (1807-1873) and Charles Lyell (1797-1875) came to be associated with the Institution. Owen and Agassiz described various specimens in the natural history and geology collections.

It is beyond doubt that the quality of the curators employed in the Institution was of enormous benefit to the museum, but the reciprocal effect on the curators seems altogether subject to question. Despite the lofty sentiments often expressed in the Institution's annual reports, the treatment of curators was often less than noble. Typical of this was the appointment of Miller. Despite declaring the importance of appointing a highly qualified individual to take charge of the collections and praising Miller's international reputation, the report for 1823 (read at the Annual Meeting of 1824) stated that the "circumstance of the institution during the preceding year not having required the actual attendance of the curator his services have hitherto been gratuitously rendered". Furthermore his second year was also on a "provisional basis" after which they would entertain the question of a salary. This appointment was, in fact, annually renewable, but in his obituary, however, the appointment was described by a sympathiser as a cause for deep regret and sorrow (J[elly], 1833)! Apparently for six hours a day, three days a week, Mr Miller "whom Baron Cuvier himself thought worthy of praise and commendation was doomed to the misery and degradation of having to 'shew the lions' of the exhibition to every ignorant and idle gazer whom curiosity and a members ticket brought thither!". Miller worked twelve or thirteen hours a day, six days a week, on the collections and it was in part this excessive confinement which led to the deterioration and collapse of his health.

This cavalier treatment of curators did not substantially improve through the century. When Edward Wilson (1848-1898) was curator the Library and Museum Association was falling on hard times and so from 1886 ceased to pay him a full and regular salary a situation which was only remedied when the museum passed into public hands in 1894. After the death of Crocker, the Assistant, in 1891, Wilson recieved "a regular, although very small salary". In 1892 this was £50, half of his 1885 salary ! Wilson was a geologist with a particular interest in fossil

gastropods, but like his predecessors his knowledge extended to living mollusca. Despite his conditions of work he added many new shells to the collections including new species of land shells from Australia. He co-operated with W. H. Hudleston (1828-1909) on a catalogue of British Jurassic Gastropoda (Hudleston and Wilson 1892) and also knew Ralph Tate (1840-1901), from whom he may have obtained his Australian material.

Other curators during the nineteenth century were primarily geologists although, like E. B. Tawney (1841-1882), they worked on all the collections leaving their annotations on labels and in catalogues. W. J. Sollas (1849-1936) worked through the invertebrate collections and described a number of new species of sponge. He was appointed to the Chair of Zoology and Geology at Bristol University, in 1880 and resigned from the Museum in 1882 because the University Collection "required his entire services".

During this period a number of assistant curators were employed and several notable volunteers worked on the collections. One of these, the Rev T. G. Ponton (dates not known) was a well-known conchologist who collected local land and freshwater molluscs, and contributed a paper on the freshwater mussel Dreissena polymorpha to the Bristol Naturalists Society (Ponton 1869). Dreissena is an introduced species, first discovered in the Commercial Dock, London, in 1824. A specimen was given to the Bristol Institution by W. J. Broderip (1789-1859) in 1825, and J. S. Miller introduced the species into local canals from where it spread. Ponton also provided information for Adolf Leipner's (1827-1894) list of Bristol Museum's shell collections catalogue, which together with later annotations by Wilson and others is a valuable source of information on the content of shell collections up until the turn of the century.

DEALERS

Natural history dealers were very numerous in the nineteenth century. Virtually every town and city had its local taxidermist whose work is generally well represented in museums. The direct role of dealers in the growth of museums' shell collections, was, however, much smaller. Individuals tended to buy at sales or through dealers and it was their collections which eventually passed to museums. Museums did not often go direct to shell dealers for specimens although around the end of t he nineteenth century Sowerby and Fulton Ltd were selling sets of molluscs together with display notes and labels to local museums.

From the middle of the nineteenth century until the early twentieth century the Bristol natural history dealers Theodore and H. J. Charbonnier played an important role in the care and growth of the Museum's collections, but the number of shells given was insignificant compared to the collections of birds and insects which were their main stock in trade.

Earlier in the century, however, when Samuel Stutchbury was

Curator of the Bristol Institution, he obtained numerous specimens of rare shells from Australia and the West Indies through his brother Henry Stutchbury (1796-1853) who was a natural history dealer and who himself took over as curator of the Institution for a year in 1852 after his brother left for a geological post in Australia.

THE IMPORTANCE OF TRADE

In the early nineteenth century Bristol was a thriving and busy port. There were many merchant ship companies and there were probably few Bristolians with any capital who did not at least own shares in a vessel. Many of the wealthier merchant families were related by business and intermarriage. In this way many of the members of establishments such as the various dining clubs, the Library Society and later the Bristol Institution were ship owners or were related to one. The proprietors of the Institution were quick to appreciate this and as early as 1824 were earnestly recommending "all those zealous for the prosperity of the Institution" to help enlarge the Museum's collections through the City's extensive foreign trade by "inducing captains and agents with whom they may be connected, to bestow some attention on these subjects, and forward such specimens as they may be able thus to procure." It was to this end that Stutchbury's advisory booklet (Crane 1982) was written, and ship-owning members of the Institution, including members of the Ames, Bryant, Cave, King, Poole-King, and Thorne families, are prominent among the early donors to the Museum (see list of donations given by Copp 1985a).

Bristol's shipping connections had been built on the slave trade with its triangular route which took ships to the Guinea Coast of West Africa, then to the West Indies and back to Bristol. When the slave trade was abolished for the British ships there was a slackening off of the Guinea trade but the large fleets of "West-Indiamen" remained. This emphasis on the West Indian trade also led numerous Bristolians to settle in the Caribbean area, mainly as plantation owners, or as professional men such as doctors and clerics. This has been a prominent trend in the eighteenth century especially for those fleeing Bristol's damp climate which encouraged chest ailments. Many of these settlers maintained close links with the Bristol Institution and sent back specimens. Some of the earliest items in the collections, at one time including shells, were collected by Dr Arthur Broughton between 1750 and 1796. He had been a physician at the Bristol Royal Infirmary but after a period of sick leave following a bad attack of "influenza", he settled in Jamaica. His collections were bequeathed to the Bristol Library Society and probably came into the Museum when the two institutions merged in 1870. The surviving herbarium includes type and cited specimens used in the Flora of Jamaica (see Crane 1981).

Another expatriate doctor with strong links with Bristol was Dr. J. H. Cutting of Barbados, of whom little is known. He was, however, a major contributor to the Institute's collections

between 1834 and 1841 whilst Stutchbury was curator. Among the new and rare specimens he sent were the pickled specimen of Pholadomya candida (see Morton 1980), a new sponge Dactylocalyx, and what was probably the first complete specimen of a living stalked species of sea lily (Pentacrinus sp.). The list of shell donations (Appendix 1) gives some indication of how much material was being obtained from the West Indies in the first part of the nineteenth century.

The West African Trade was revived towards the middle of the century as traders sought palm oil, ivory and other natural resources. Again this proved an abundant source of specimens. It was through sea captains that Stutchbury obtained some of the first gorilla skulls to be brought back to this country; these were described by Richard Owen (1849). Various living animals, including monkeys, zebras and lions were also collected for the West of England Zoological Society (more commonly known as Bristol Zoo), and on their death some eventually ended up on display in the Institution. Professional men and officials also took advantage of voyages and postings to this part of the world to collect specimens for the Institution. Among these was Robert Rankin, Chief Justice of Sierra Leone, who in 1836 sent natural objects of all kinds back to Stutchbury, including shells at least one of which, a pale Bolinus cornutus from the mouth of the Gambia, was figured by Reeve, in the Conchologia Iconica (1843-1878). Reeve cites Hugh Babb as the collector but Babb collected in South America although he, too, provided specimens and information to Reeve. In 1840 John H. Thwaites brought back shells from a voyage to Africa together with other marine items including a new species of sponge, Plocamia plena, later described by Sollas.

Other areas with which Bristol traded and from where shells were obtained included Newfoundland and Prince Edward Island. Towards the middle of the nineteenth century more species began to come from Ceylon (Sri Lanka) and Australia as England's influence and trade with these areas increased. Even our links with China are reflected in the shell collections, for instance through the donations of John Reeves, inspector of tea for the East India Tea Company at Canton (although it is not clear whether the donor was his son of the same name and job; see Copp 1985a).

SAILORS AND EXPEDITIONS

In addition to the captains and owners of Bristol's merchant ships, the Institute was also able to call upon the services of several members who were naval men engaged on oceanographic and surveying work. The donations in the early period of the Institutions's history clearly reflect the main themes in oceanographic work at that time, namely exploration and coastal surveying, particularly in polar regions and South America.

Among the better-known men involved in this work was Captain Sir William Edward Parry (1790-1855). In 1826, Parry and W. W. Rowland, Surgeon R.N., gave specimens collected on Parry's third expedition in search of the North West Passage. The shells were collected when on July 30th, 1825, their ship, HMS Hecla, and the accompanying HMS Fury were forced ashore at Prince Regent's Inlet where the Fury had to be abandoned. What enterprise to stop to collect shells at such at time! The ill-fated polar explorer Sir John Franklin (1786-1847) was also an honorary member of the Institution at about the same time although no shell donations are recorded from him.

Another member who sailed on naval surveying expeditions was Captain Ainsworth who in 1827 gave specimens collected by H.M. Surveying Ship Adventure along the coast of South America and the Straits of Magellan. Ten years later Lieutenant Hugh Babb R.N. (mentioned earlier) was collecting in the same area. In the 1840's Lieutenant Goldney R.N. gave specimens from Australia.

As the century developed, more civilians were involved in oceanographic research and collecting expeditions. Samuel Stutchbury had been on an expedition to Australia and the South Pacific prior to his appointment in Bristol and was aware what a source of new species such expeditions offered. In conchology the outstanding collector of the nineteenth century was Hugh Cuming (1791-1865) (Dance 1966). Cuming began his career in South America, whence he returned with a rich collection of shells in 1833, and went on to undertake two major collecting expeditions to the Philippines in the 1840's. The shells and plants which he brought back kept a whole generation of scientists busy describing new species. Most of the shells in the twenty volumes of Reeves' Conchologia Iconica came from the Cuming collection. The Bristol Institution was sent as many as a thousand shells by Cuming. The first donation in 1833 was of South American shells, and further donations in 1843 and 1849 followed his Philippine voyages.

Cuming's donations are of particular interest because they were mostly of land snails, often of new or undescribed species. The Philippines boast over 700 species of land snail and it was Cuming who drew the attention of collectors to their interest and beauty. Nowadays only the brightest attract attention as curiosities. In 1856 G. H. K. Thwaites (1811-1882), who had left Bristol to become curator of the Royal Botanic Gardens at Kandy in Sri Lanka, sent land shells to Cuming for identification and subsequent donation to the Bristol Institution. Land snails, particularly those from the Indo-Pacific islands, are among the most threatened of invertebrates (Solem 1974; Wells, Pyle & Collins 1983) and they are now thought to be disappearing at a rate faster than there are workers to catalogue them, so these collections made when the islands were still relatively unspoilt may be taking on a new significance in addition to their undoubted historical interest.

From the middle of the nineteenth century, investigations of

the waters nearer home were becoming more frequent and dredging for molluscs around the coast was providing much new information on species and their distribution. Two pioneers of dredging around the British Isles were George Barlee (1794-1861) and H. K. Jordan (1838-1923). Barlee provided much information on offshore distribution of molluscs to Forbes & Hanley (1849-1853) and his donations of 1846 and 1853 represent some of the earliest products of deep dredging. Jordan wrote a catalogue of British Mollusca (Jordan 1866) and although his collections are listed as being incorporated into J. R. le B. Tomlin's collection in Cardiff (Sherborn 1940; Cleevely 1983, p. 116), he also gave Bristol many specimens between 1867 and 1917.

Among the pioneer oceanographic voyages were those of the Porcupine and Shearwater (1869, 1870, 1871) which paved the way for the apotheosis of oceanographic expeditions, the voyage of the Challenger (1872-1876) (Linklater 1972). One of the men planning these expeditions was Professor W. B. Carpenter (1813-1885), son of the Bristol educationalist Dr. Lant Carpenter (1780-1840) and a member of the Bristol Institution, who in conjunction with John Gwynne Jeffreys (1809-1885) donated corals and echinoderms from the Porcupine expedition in 1869. The connection of the Carpenters with the Challenger expedition ensured that specimens and copies of the monographs from the voyage also came to the museum. A later curator of Zoology, F. G. Pearcey (d. 1927; Curators Assistant 1905-1926) had sailed on the Challenger as a young man and through his connections with Sir John Murray (1814-1914), Professor D'Arcy Thompson (1860-1948), and Owen's College, Manchester, many more specimens eventually came to Bristol.

DOCTORS AND CLERICS

Doctors and clerics played a significant part in the early development of the Institution. The pursuit of natural history was seen as a suitable weekday pursuit for clerics, being a means whereby they could increase their appreciation of God's works whilst getting out amongst their parishioners, as opposed to the more solitary, library-bound study of the classics.

Some of these benefactors were also geologists of note such as Dean William Buckland (1784-1856), an important geological author, Professor of Geology at Oxford and inspirer of amateurs and students alike. He was one of the donors, in 1823, of a skeleton of a fossil Ichthyosaurus communis from Lyme Regis, which was to be the nucleus of the museum's collections. Another donor was Henry Beeke (1751-1837), Dean of Bristol, after whom the mineral Beekite was named. Although we do not have any records of shells given by these two geologists, we do have shells from a third, the Rev. Henry Jelly (1801-?) a Bath contemporary of William Smith (1769-1839) , "father of English Geology" (Torrens 1975).

Predictably, a good source of shell specimens came from religious gentlemen sent abroad as missionaries, such as the Rev.

Daniel Wheeler who preached in the "South Seas" prior to 1830, and the Rev. Tucker who brought back shells from Tonga in 1846. Others may have been pastors to the British expatriate communities in British trading or colonial areas, such as the Rev. Lansdown of St. Vincent in the 1830's, or the Rev. Frederick Smith (e) (1822-1900) who brought back shells from India in 1860, and was also a geologist.

In 1886 Rev. H. Houseman gave four specimens of a new land snail, Iberus housemanni (Baird) from Morocco, but the most notable conchologist of the time to give shells was Rev. Philip Pearsall Carpenter (1819-1877). He described many of Cuming's land snails and was the author of the Catalogue of Mazatlan Shells in the Reigen Collection (Carpenter 1857). The catalogue was the outcome of purshasing 14 tons of shells from a Liverpool dealer for £50! P. P. Carpenter was the son of W. B. Carpenter, mentioned earlier, hence his connection with Bristol although he only appears to have given a few British freshwater bivalves and possibly a copy of his 'catalogue'.

Numerous doctors were actively associated with the Bristol Institution. Several of the most prominent members and benefactors were associated with the Bristol Royal Infirmary (Munro-Smith 1917). Amongst these men was the notorious Richard Smith (1772-1843) (Munro-Smith 1917), who kept his own museum of anatomical horrors at the infirmary. His prize specimens included a pair of testicles injected with mercury and a book of trial papers bound in the skin of the unsuccessful defendant. The skull of this unfortunate was often passed around at dinner parties for people to feel the criminal bumps ! His donations to the Institution's museum included a valuable series of Egyptian mummies but he also gave injected specimens of molluscs in 1832 and 1837. He is said to have died of apoplexy at a meeting of the Institution. His "jokes and stories told in a rather loud, brusque voice were long remembered".

Less colourful medical donors to the shell collections included Dr. William Bird Herapath (1796-1868), a distinguished toxicologist and member of a long established Bristol family, and Dr. Henry Riley (1797-1848) who collaborated with Samuel Stutchbury on the newly discovered remains of Thecodontosaurus and other early dinosaurs or dinosaur-like animals from Durdham Downs, Bristol (Riley & Stutchbury 1842). Dr. Richard Bright (1789-1858), discoverer of Bright's disease, typified the links upon which the Institution and its shell collection grew. He was the son of Richard Bright, merchant in the partnership of Ames, Bright and Cave, all shipowners who gave shells to the museum. Like many other notable scientists he attended Dr. Lant Carpenter's school where he met W. J. Broderip (1789-1859), conchologist and joint founder of the Zoological Society of London. Bright was employed at the Bristol Royal Infirmary and was also a geologist.

The museum's shell collection was originally founded on the collection of an Infirmary physician, Dr. Henry Lovel (c. 1753-

1823), who was well placed in Bristol society, being related by marriage to the poet Southey and acquainted with Samuel Taylor Coleridge. He died the year the Institution opened but left provision in his will for his collection, then valued at £500, to come to the museum after his wife's death. In the event she passed the collection over to the museum in 1824. Few of the specimens have survived and we can only guess at what rarities it once contained.

FAMILIES AND QUAKERS

The last major group to influence the growth of the Bristol Institution and, by inclusion, its shell collections were members of a number of long established and wealthy Bristol families, many of whom were Quakers with a deep commitment to humanitarianism and education. One of the original founders of the museum was the Quaker Edward Long Fox (1761-1835), the successor to Arthur Broughton at the Royal Infirmary. He was famous for his humane treatment of lunacy for which he was called in as a consultant to George III at Windsor. Another physician member was James Cowles Prichard (1768-1848), an expert ethnologist and, again, a member of an important Bristol Quaker family.

Later in the nineteenth century and into the twentieth century the Frys, a Quaker family who have been closely associated with Bristol's commercial development for more than 200 years, took an active interest in the museum. The collection of over 2000 tropical shells bequeathed by Miss P. A. Fry (d. 1916) forms an important part of that portion of the Bristol shell collections which survived the air raid of 1941.

The Swayne family have a long and distinguished Bristol pedigree, having produced many doctors linked to the Bristol Royal Infirmary (Munro-Smith 1917 gives a partial family tree). An early member, the Rev. George Swayne (1746-1827) of Pucklechurch, was the author of a pioneer book on pasture grasses which is preserved in the museum, and a later member, Major H. G. C. Swayne (dates not traced), donated a large series of Somaliland mammals to the museum in 1903. Swayne's Hartebeest, subspecies swaynei of the Bubal Hartebeest Alcelaphus buselaphus, is named after him. Samuel Swayne MRCS (dates not traced) gave a quagga skull to the museum in 1871 and two mollusc donations at a later date. He was long associated with the Institution and did much work in arranging and organising the natural history collections.

Some members of the Carpenter family have already been mentioned. This famous family gave rise to humanitarians including Mary Carpenter (1807-1877) and scientists like W. B. Carpenter, and their influence on the Institution lasted throughout the nineteenth century. With the demise of the Institution and its passing into public hands, the Wills family, owners of the large tobacco company, became deeply involved with

the museum and the new Art Gallery but this influence belongs to the second phase of the museum's life and did not directly affect the shell collections.

WHAT THE SHELLS TELL US

The shells incorporated in the museum collections can also tell us much about the times they were collected and the changing fortunes of species and habitats. Early nineteenth century collections tend to be rich in specimens rarely seen nowadays, such as the Prince of Orange's Flag Volute (Harpulina arausiaca) from the seas north-east of Ceylon. Sometimes this is because the collecting area is no longer visited on today's trade routes, or in other cases, it is because of the destruction of a vital habitat. Shells from Mazatlan in Mexico were at one time very popular but few dealers have any today whereas shells from Taiwan (Formosa) are rarely seen in nineteenth century collections even though today that is a major source of exotic specimens.

Many of the old shell collections contain specimens much larger than would normally be obtainable today, especially from heavily collected areas like the Philippines. Equally rare in modern collections are extensive series of land snails other than local ones. In the nineteenth century, thanks mostly to Hugh Cuming, land snails were very popular and the old identification books reflect this. Today there is not a single general guide to world land snails available. The land snails from vulnerable habitats like islands are disappearing fast under man's general onslaught on the natural environment and the same is true for the once abundant freshwater bivalve fauna of the United States. Once, every river had its own species of Unio and nineteenth century collections frequently have large series of them which, to their present owners' ignorance, often include representatives of extinct or vanishing species.

Modern collecting methods like scuba diving and the greater ease of travel in the twentieth century have drastically changed our knowledge of shells and our assessment of rarity. Old-time classics like the Golden Cowry (Cypraea aurantium) and the Glory of the Sea (Conus gloriamaris) still fetch good prices but only because of the historic and exotic connotations. At one time it was said, apocryphally, that you could only obtain a Golden Cowry from the neck of a Fijian chieftain, which was not easy considering that the Fijians were cannibals. Nowadays we know this to be somewhat untrue (Dance 1969) and the Golden Cowries are obtained in reasonable numbers, but never enough to meet demand. Other old-time rarities are now considered common, or disregarded altogether. The volute Harpulina lapponica was considered a rare shell in the 1820's, fetching around 7 guineas, as was the now commonly available Regal Murex (Hexaplex regius) from Pacific North America. In the early nineteenth century the rarest and most sought after shell was that of a heteropod gastropod, the Glassy Nautilus (Carinaria cristata). One was given to Bristol Museum in 1834 but today (if we could find it

!) it would pass unnoticed by collectors. This knowledge of the changing value and abundance of shells helps greatly when assessing the value of old collections in their context and can also be frequently put to use in dating undocumented collections.

Conclusions

Assessments of the value of museum natural history collections frequently concentrate on the presumed number of type and figured specimens that they contain, or on what important names are associated with them. Both criteria can be applied to the shell collections in the City of Bristol Museum & Art Gallery. There are certainly some taxonomically important specimens in the collection and at one time there were many more although it is not known whether or not they were lost in the air raid of 1940. Specimens, many of which survive, were also given by most of the well-known conchologists of the nineteenth century. Although we cannot trace our type specimens and many of our rare or spectacular shells are known to have been destroyed, this does not detract from another and to my mind greater value of the collections.

A study of the overall composition of shell collections and the way in which they grew gives us an insight into a great variety of aspects of nineteenth century life. The source of specimens and the changing emphasis on different collecting areas through time tells us much about the development of trade and the growing communications with remote parts of the world. In Bristol this is shown by the predominance of West Indian material and the gradual increase of shells from the Indian and Pacific Oceans.

The scientific emphasis was strong in Bristol's collections through the influence of the curators and the Institution's close links with the Bristol Royal Infirmary. One aspect of this is the way in which the development of oceanography can be traced through the museum collections.

The recurrence of the same family names both individually and in conjunction either by marriage or business is itself a reflection of the sociology of the middle and upper classes in Bristol through the century, especially the close-knit social structure and emphasis on education and self improvement. The close ties which professional men maintained with their home city are shown by the amount of material sent back by those living or stationed abroad.

The changing content of the collections partly reflects the changing fashions in study through the nineteenth century; for instance, there is a greater emphasis on local shell collections and a decrease in foreign land shell donations towards the end of the century. The specimens collected have their own tale to tell of fashions in collecting and the changing fortunes of both species and favourite collecting areas.

This different approach to the value of collections, away from the unbalanced assessment of their strict scientific worth, to a broader context (of which science is a part) enables us to appreciate them in a more complete way and perhaps even gain some deeper understanding of our own activities.

ACKNOWLEDGEMENTS

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Local Biological Recording Centres & the Micro User

J.Lee

The continued growth of Micro Computer ownership in this country, linked with the ever increasing power of these machines, promises to have considerable future impact upon the natural history recording business. For some of the most widely used machines, expansion options are increasingly available affording individual users considerable data handling and computing power. Further, individual machines may be linked to form 'Networks' via the telephone system enabling superior communication in the form of "electronic mail", "bulletin boards", and the use of shared facilities such as databases. This developing facility has expanded the potential of the individual micro enormously and there are good reasons for supposing that decentralised computing based upon shared facilities will be of considerable importance in the future.

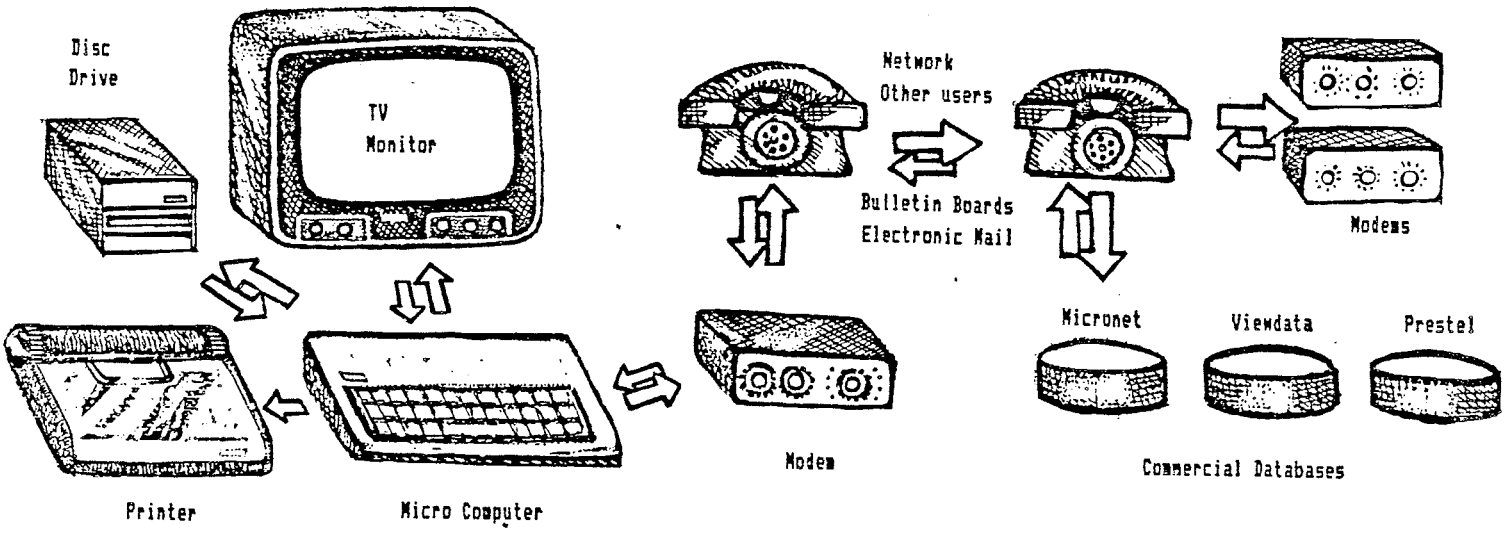
The increasing power of the micro is illustrated well in the case of the Acorn BBC B. The very large market created by wide sales has resulted in the availability of a huge variety of development options for this machine, both in terms of programmes, (often available in chip form, internally fitted, and a permanent addition to the machine's capabilities) and peripherals such as data storage disk drives, printers, and memory expansion units. In the last year for example, several add-on processing units have become available, enabling BBC B users to upgrade and to use the sophisticated IBM.PC and CP/M businss programmes. Upgrades of this sort vastly increase the inboard memory of the BBC B as well as enabling the

use of Winchester hard disk storage systems (of capacities of over 100 Megabytes). For the future, Phillips, the BBC and Acorn are at present jointly developing computer interactive video systems based upon laser read disks, with Gigabyte capacity. The launch of this new technology is promised for 1986, to coincide with the completion of 'The Doomsday Project', and aims to exploit a computer based training industry worth an estimated £50 million per annum.

There are currently available many powerful programmes for exploiting such computing powers, often in 'chip' form. Examples range from a choice of computer languages, word processors and databases with inbuilt statistical analytical capabilities, to graphic programmes and printer controllers. These fairly low cost programmes give the user considerable flexibility in terms of data handling and collation (Database), data manipulation (Word processor), and data output (the printing of formatted reports, maps, tables, charts etc). Both the inboard memory and the storage capacity of Micros are becoming less and less limiting factors in terms of serious scientific and business application.

With this in mind, recent developments in the field of communication between micros can be seen to be very significant. Via the telephone system, the facilities and the DATA of individual micro users can now be shared, (called 'Networking), main frame databases accessed, and a variety of almost instantaneous lines of communication opened (electronic mail). Different micro makes can also be networked together.

Figure 1



Groups of users may develop Networks of considerable power based upon BBC or similar micro units, and utilise shared facilities (eg. Hard Disk storage) and an unlimited variety of information may be communicated almost instantaneously in the form of data searches, maps, charts, high quality print, lists and moving graphics etc. Communication is considered to be the fastest growing area in micro computing.

Decentralised computing of the type outlined may prove to have many advantages to offer to those engaged in Natural History recording, and interesting questions emerge regarding the future.

1. Will 'Networks' under the collective control of groups of field workers and specialists tend to hold the most up-to-date information.

2. How will LBRCs relate to 'alternative' sources of data held by local recording 'Networks'.

3. Will the bargaining position of 'alternative' databases be strengthened in terms of demands for better servicing (and perhaps patronage) from recipient institutions?

4. Will freedom from political constraints (ie.county and district boundaries) give 'alternative' databases an advantage over some LBRCs, in terms of a coverage based upon geographic, and biological criteria?

At what rate Micro computer facilities are adopted, and in which direction they lead are matters for speculation, however, LBRCs clearly need to be aware of and very responsive to present developments .

A possible problem with preservation of insects in alcohol

There is a rather enigmatic statement in the latest issue of Antenna (Bulletin of the Royal Entomological Society) 8(4); p.201. In a report on the results of tree fogging a statement is made to the effect that "some Diptera in particular may deteriorate irretrievably after preservation in alcohol for more than two years". The large numbers of adult (and larval insects) collected by fogging in tropical rain forests does obviously present a problem of curatorial nature. It will inevitably be several years before material can be sorted beyond the order level, except in the odd family a particularly keen taxonomist is interested. In the meantime evaporation, bleaching, etc., can take its toll.

Peter Cranston of the BM(NH) kindly responded to my enquiry and states (in litt., 4 Dec. 1984) that in his area of interest (principally chironomids) specimens lose colour and are difficult to macerate after a period of a decade or more. Two to three year old material in his experience were still suitable for making good slide preparations. He knew of no published accounts of this phenomenon.

Here we have another example of a lack of apparently necessary research by conservation scientists in the field of natural history in museums. They are almost to a man employed on the human history side of things.

E. G. Hancock
Bolton Museum

khw

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Dr P E J Wheatcroft
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SE23 3PQ

Your reference

Our reference

Date
13 July 1984

Dear Dr Wheatcroft

WILDLIFE AND COUNTRYSIDE ACT 1981 - EGG COLLECTIONS

1. Thank you for your letter of 12 June about egg collections. I am sorry I was unable to let you have a reply in time for your recent committee meeting.

2. As far as donated egg collections are concerned, you need to satisfy yourself that they were legally obtained. As a general rule, if the eggs were collected pre-1954, then they should be acceptable. I understand that collections are usually wanted by museums only where detailed documentation on the originals etc of the eggs is available, so it should be evident in most cases how old the eggs are.

3. The sale of egg collections requires to be individually licensed by this Department. The advice from our Scientific Advisers the Nature Conservancy Council, is that they would not recommend the granting of sale licences unless the recipient is a bona fide museum, in which case an exemption may be made.

4. I hope you find this letter of some assistance.

Yours sincerely

PETER HEATH
Wildlife Division

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Taxidermy is the art of preserving and mounting natural history specimens in a lifelike manner; this is the correct definition of the word although unfortunately it is rarely adhered to as, in these days of mass unemployment, more and more people are turning to taxidermy to make a living rather than a work of art. Contemporary taxidermy therefore often brings to mind lumpy contorted and asymetrical objects so far removed from the original specimen as to be almost unrecognisable and in no way lifelike.

I say this not to flatter my own art but merely to point out that no amateur can possibly compete with the experience of the professional in the same way that no pictorial artist pretends that he has magic brushes or colours with which he creates masterpieces for he knows that only through wide experience and practise of the technicalities involved can he succeed in delighting people. Seeing the ease with which he handles and achieves his art, one may be missled into thinking the aquisition of such talent could be equally simple; so it is with taxidermy and in this advertisement I offer you not an ordinary service but one based on total devotion to my art and the variations therein .

I offer to supply not only mounted specimens, or to mount those of your own, but also to work with old specimens, bringing back their lost beauty, relaxing and remounting previously mounted or study skins and restoring colours faded by time & light. Seemingly trivial tasks can also be accomplished such as repairing split legs of birds, preening, recasing and securing specimens from the attacks of insects.

These are a few of the services available and I feel sure that even if you do not come within the West Midlands Area,(hence eligible for the grant offered by the Area Service), you will still find my work excellent value and quality.

INSECT AND SPIDER COLLECTIONS OF THE WORLD

A new work entitled "Insect and Spider Collections of the World" is being compiled by Dr. Ross H. Arnett, Jr., Florida State Collection of Arthropods, and Dr. G. Alan Samuelson, Bishop Museum. The purpose of this is to produce a standard list of collections of insects and spiders located throughout the world. This work will be useful both for the location of specimens and, with the acronyms, a way to cite the location of specimens in publications.

Each collection will be described by giving the size of the collection either by citing the number of drawers, boxes, slides, and vials, or by the number of specimens they contain. The names of the curators will be listed, along with notes on special collections, the regions covered, and similar data. Each collection is assigned an acronym unique to that collection. This "coden" is standardized by containing four letters. By using four letters, neither less, nor more, each collection will have a distinctive acronym, and there are enough possible combinations of four letters to enable us to add collections as needed without changing any codens.

There have been several recent attempts to produce lists of acronyms for collections. The most comprehensive was published in 1969 (now out-of-print) for the collections of Coleoptera of North America. Another list for Lepidoptera covered the entire world but did not give addresses and created about 70 coden "synonyms." The present work will include all these acronyms and add many more.

We are eager to make this book as complete as possible. We also are planning for easy update by entering all data into a computer file. We hope these codens will be universally acceptable and usable in entomology.

The enclosed questionnaire has been and is being sent out to all known institutions with insect and spider collections in their care. This form may be duplicated and distributed to those in charge of any known collection <u>including private collections</u>. We will appreciate your help in distributing these and thereby saving postage.

Please note that we will <u>not</u> include any private collections unless they are registered with a public collection. The reason for this is apparent when our previous directory is examined and it is noted that most of the private collectors have moved during the past 15 years, many have given their collection away, or they have passed on. Users of the previous work are unable to find out where the collection is now located.

Several museums have offered to register private collections which enables us to include these collections in this directory. In these cases, we give the name and address of the museum <u>besides</u> the address where the collection is <u>now</u> located. Registering a collection with a museum does <u>not commit</u> the collection to the museum. It merely means that the museum has agreed to always keep a record of the location of the collection. Thus if it is moved, the museum is notified, and then anyone trying to reach the collector is able to find the new address, or if the collection is disposed of, it can be located through this service. Private collectors who have not registered their collection with a museum, but who were previously assigned an acronym will continue to be listed, but with the notation: "permanent address unknown," or "refused to supply permanent address."

The questionnaire should be returned by airmail as soon as possible. At present we hope to have the work printed early in 1985.

[Leave blank above line; for office use only]
Geo. Region: Coden:
Date received:

QUESTIONNAIRE FOR "INSECT AND SPIDER COLLECTIONS OF THE WORLD"

Name of collection:_____

Mail address _____

_____ [Zip]_____ Country_____

Sponsorship of collection: Private institution [ ]; Federal [ ]; State or Province [ ]; Other_____

Coden: _____ [Must be 4 letters; May be changed if not already in use but only if not duplicated by another collection].

Director [Dr., Mr., Ms., etc.] _____ Phone: _____

Professional staff: _____

_____

[Please add additional professional staff on back of questionnaire, or send copy of your directory]

Description of collection [Include number of specimens in collection; see sample supplied; use reverse side or separate sheet for more space; we reserve the right to edit to save space if necessary]:

Special collections:

Type of housing [drawers, boxes, etc.]:

Publications sponsored:

Private collections of individuals affiliated [Individuals will not be included unless they give, in addition to their home address, a permanent address, e.g., University or Museum, where they may be reached if they change residence]:

PLEASE RETURN NO LATER THAN **DEC. 31, 1984** to: Dr. Ross H. Arnett, Jr., Florida State Collection of Arthropods, P.O. Box 1269, Gainesville, FL 32602, USA.

BOOK REVIEW

The local museum - notes for amateur curators
by Area Museum Service for South Eastern England
A4, 72pp.
£5 (inc. p.& p.) ISBN 0 904752 02 X

This booklet is similar in outline to **AIM** GUIDELINES No.2 Setting up and Running a New Museum but with extra information and updatings since the first edition of that publication in November 1980.

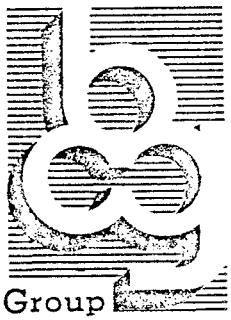
Nine main sections outline **Thinking and planning; Museum management; Collecting and documenting; The enemies and how to defeat them** (security of collections); **Conservation; Displays; Reserve collections; Exhibitions and events** and finally **The visitor.**

The few criticisms I have relate to sub-section **5.3 Pests** as several of the scientific names under the insect illustrations are incorrect (largely typing errors) and I feel that scale bars by the drawings would be better than magnification values. Some biology curators may also question the statement on page 30 that booklice ..."**are a symptom of bad conditions rather than an active threat.**". They may take longer than some other pests to damage collections but given the chance, damage them they will!

The use of chemicals such as Vapona and Paradichlorobenzene are mentioned and a note to take care is included. A reprint would I am sure benefit from the information in J. Lee's Pesticides in Museums article in **BCG** Newsletter Vol.3 Part 10.

Following initial apprehension on reviewing this publication aimed at the "amateur" curator within the pages of our "professional" newsletter, particularly as there are relatively few references to the natural sciences, I was pleased to find it well structured, informative, professionally sound and worthy of the attention of any curator.

G. Halfpenny



BIOLOGY CURATORS' GROUP NEWSLETTER

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The aims of the Biology Curators' Group are:-

i) to facilitate the exchange of information between individuals concerned with the management of biological collections and records, their research, conservation and interpretation.

ii) to present the view of curators of biological collections.

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