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Summary of 'Biological Collections. UK'

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Introduction

This is an attempt to summarise the main facts of this report. I hope that these notes will be of use. BCG now has a review copy which can be circulated to interested people. Copies are still available and Museums Association members can obtain them from the M.A., 34 Bloomsbury Way, London WC1A 2SF, price £35.

The full report is 600 pages long so it must be remembered that this summary is somewhat brief! Figures quoted are correct but I have obviously shortened verbal descriptions greatly. Check the original report before quoting!!

The report

Questionnaires were sent out between December 1983 and May 1984 to 672 museums. 604 (90%) were returned and were broken down as follows:

No biological collections	308
Biological collections only	232
Biological collections & full-time Natural History Curator	64

Museums with biological collections have been classified in eight groupings. Groups 5, 6 and 7 contain only museums with natural history curators, all other groups have none. They are summarised briefly as follows:

- Group 1** Small museums. Little commitment to natural history. Few specimens.
- Group 2** Some natural history activity. No future direction apparent for natural history. Little curation.
- Group 3** Some people available to work on natural history material. Significant collection size. Often receiving new material from research or survey work.
- Group 4** Special cases where, although there is no post for a full-time curator of natural history, there is a marked museum commitment to the section.
- Group 5** Museums or collections with at least one full-time natural history curator but activity restricted for a variety of reasons.
- Group 6** Usually more than one full-time natural history curator. Collections large. Museum undertaking a wide range of natural history activities. Providing sound service to the community.
- Group 7** The most active museums. Very large collections including type specimens. Undertaking wide range of activities including sound scientific work. Providing very good service to the community.
- University etc.** A group of research institutes etc. with no natural history curators. Many possess large collections with type material.

The museums

Groups 1 and 2 are ignored. Appendix XIII lists all museums in all groups.

Group 3 (16 Museums)

Tenby Museum
 Angus District Museum (Montrose)
 Philipps Countryside Museum
 Carmarthen Museum
 Falkirk Museums
 Dover Museum
 Luton Museum
 Bournemouth Museum

Buxton Museum
 Worcester City Museum
 Kirleatham 'Old Hall'
 Gray Art Gallery & Museum
 Saffron Walden Museum
 Royal Institution of Cornwall
 Wood End Museum (Scarborough)
 Oldham Museums

Group 4 (21 Museums)

Dorman Museum (Middlesboro')
 Kendal Museum
 Warrington Museum
 Kirklees Museums
 Rochdale Museum
 Lynn Museum
 Woodspring Museum
 Museum of London
 Powell-Cotton Museum
 Oxfordshire County Museum
 Linnean Society

Shropshire County Museums
 Dorset County Museum
 Wiltshire A & N H S Museum (Devizes)
 Carlisle Museum
 Swansea Museum
 Torquay Museum
 Manx Museum
 The Educational Museum
 Chelmsford & Essex Museum
 Wellcome Museum of Medical Science

Group 5 (14 Museums)

Cleveland County Museums
 Inverness Museum
 Perth Museum
 Southend Museums
 Maidstone Museum
 Scunthorpe Museum
 Lancashire County Museums

Birmingham Museum
 Somerset County Museums
 Bedford Museum
 Canterbury City Museums
 Paisley Museum
 Newport Museum
 Yorkshire Museum

Group 6 (22 Museums)

Cliffe Castle, Keighley
 Horniman Museum
 Warwickshire Museum
 Reading Museum

 Rotherham Museum
 St. Albans Museum
 Lincoln City & County Museum
 Buckinghamshire County Museums
 Hampshire County Museums
 Royal Albert Meml. Museum (Exeter)
 Harrison Zoological Museum

Kingston upon Hull Museums
 Derby Museums
 Hereford City Museum
 School of Animal Biology, UCNW
 (Bangor)
 Plymouth City Museum
 Bankfield Museum
 Passmore Edwards Museum
 Portsmouth City Museums
 Oxford Univ. Museum (Zool)
 Univ. Coll. London Museum (Zool etc)
 Birmingham Univ. Geol. Museum

Group 7 (27 Museums)

Sunderland Museum	Hope Entom. Collns (Oxford)
Univ. of Reading Herbarium	Nottingham Museums
Herbert A.G. & Museum, Coventry	Leicester Univ. Herbarium
Leeds City Museum	Leicestershire Museums
Dundee Museum	Bolton Museum
Stoke on Trent City Museum	Hancock Museum (Newcastle)
Sheffield City Museum	Ulster Museum
Ipswich Museum	Colchester & Essex Museum
North Herts Museums	Norwich Castle Museum
Booth Museum (Brighton)	Royal Scottish Museum
City of Bristol Museum	Manchester Museum
Doncaster Museum	Merseyside County Museums
Glasgow A.G. & Museum	Univ. Museum of Zool. (Cambridge)
National Museum of Wales	

Staffing

Curatorial posts

Of the 64 museums with posts: 27 have one post,
17 have two posts,
7 have three posts.

The rest have four or more posts (one has sixteen).

There are a total of 101 zoologists, 29 botanists, 10 biologists and 19 geologists. Entomology is the most popular specialist area in museums.

Pay scales are compared. The wide variety of scales is apparent and the gulf between scales in city/county museums and national/university museums is very noticeable.

Technical posts

Only 33 of the 64 museums with curatorial posts have technical staff available to work on natural history. Seventeen of the 27 Group 7 museums have access to technicians working in natural history departments.

Volunteers

It is stated that insufficient use is made of volunteer help. Natural history volunteer use is well below that in other subject areas.

MA Diploma

Twenty-two of the 64 museums have no natural history staff who hold the Diploma. No university/research collections curators hold the Diploma.

MSC Staff

From 1978 to 1983 as many natural history MSC person - years were used in museums as natural history curator - years. (What does this mean now that ET is here??)

Collections

This chapter of the report contains numerous facts and figures. I have extracted only a few. A full list (Appendix XIX) is provided of all 296 institutions' collections. The collections are categorised as 0 (none), small, medium, large and very large. The collections are listed by type - these being Insects, Molluscs, Invertebrates, Vertebrates, Non-vascular Plants and Vascular Plants. A number of museums are named in this section; especially those that have large collections but fall into lower groups than their collections warrant due to inadequate staffing or funding etc.

Of Group 1 to 3 museums Saffron Walden, Worcester City, Wood End and Darlington Museums all hold some large collections. Saffron Walden Museum is the biggest anomaly as its collections are of a size comparable with Group 6 museums, and larger than some Group 7 museums. The report suggests the appointment of a natural historian or the transfer of its collections to a museum with natural history curatorial resources.

An estimated 1 to 2.5 million biological specimens are housed in Group 1 to 3 museums and are, therefore, at risk due to lack of biological curatorial expertise.

Group 4 museums include the Museum of London, Dorset County and Carlisle Museums which all hold very large or large collections of more than one animal or plant group.

Group 5 museums include five holding large or very large natural history collections. These are Perth,, Maidstone, Yorkshire, Inverness and Birmingham Museums.

Type specimens

Three Group 2 or 3 museums hold type material. At two of the three it was impossible to distinguish the types. In addition, two Group 5 and three Group 7 museums do not clearly mark types. These museums are not fulfilling their function of safeguarding this material.

Current acquisitions

A large amount of information is included on the growth of collections. This follows the museum groupings with a few exceptions. There are no Group 1 or 2 museums acquiring significant natural history material whereas Group 7 museums are most active. There are, however, five museums with no natural history curator acquiring potentially valuable material from research and survey work. The acquisition of local, British and foreign material is discussed with tables breaking it down by museum group, collection type, etc.

Availability of specimens in biological collections

Physical accessibility

In 12 of the Group 7 and 15 of the Group 6 museums lack of space impedes research. This obviously affects curation too. The working party judged that only 28 museums had adequate facilities for visitors to work on the collections. Of these 22 are Group 7, 4 are Group 6 and 2 are Group 5. The five inadequate Group 7 museums are two national and three local authority museums. They are Bolton, Ipswich, Glasgow, Ulster and the National Museum of Wales.

Documentation

One fifth of museums with natural history curators do not regard documentation as a priority activity. Biological recording and display work are the two main overriding priorities.

Four Group 5 and one Group 6 museum reported that none of their biological material was catalogued. No Group 7 museums have everything catalogued but all have some catalogued. However, five have no insects catalogued. Over half of these Group 7 museums take over one year before newly acquired specimens are catalogued. This is explained by inadequate staffing levels at the most active museums.

(It is interesting to note here that the conditions for Registration of Museums will require a definite commitment towards cataloguing the backlog.)

Curation, caretaking and storage

Curation

In the majority (over 90%) of institutions the curators spend less than one third of their time on curation. Museums reporting no curation were predominantly in Groups 1 and 2 with one in Group 3 and one in Group 5 (due to frozen post). Six more collections receiving no curatorial care are in university museums or similar institutions. Five of these six institutions are still receiving new material! Even though their existing collections are at risk they still acquire more!

One quarter of museums with biological collections use volunteers to help with curation. In ten institutions all curation of insects is carried out by volunteers. In eleven institutions, voluntary staff carry out all biological curation.

The report points out that where curation of natural history collections by non-qualified staff occurs, damage to the collections ensues.

Expansion space

Details are given concerning curation being impeded by lack of room for expansion. This is a frequent occurrence.

Accessions register

Forty institutions have no accessions register. All are Groups 1 to 4 except two university departments in Group 6. They are all failing to conform to professional standards as laid down by the Museums Association. (This will cause them severe problems when attempting to register as museums.)

The backlog

The report includes tables showing the percentages of unaccessioned material in museums of each group. Over one third of Group 5, 6 or 7 museums have major accessioning backlogs.

Storage

Inaccessibility of collections is discussed and inadequate storage units are reported as a major problem. Twenty-four of the 49 Group 6 and 7 museums do not have a large enough storage area considering their role as major centres of museum natural history.

The working party considered that a minimum of 10% expansion room should be available in dry stores. Over half of the Group 7 and nearly half of the Group 6 museums **could not meet these criteria!** In each group 10 museums had **NO** space left at all.

Two Group 6 and one Group 5 museum reported the most acute problems. These are Southend, Passmore Edwards and Hereford City Museums.

Facilities and resources

Access to fumigation chambers, freeze driers, deep freezes and cold stores is discussed. It is pointed out that if none of these four items is available then a museum has no way to treat incoming specimens efficiently.

Access to a fume cupboard is vital to comply with Health and Safety legislation when handling many everyday chemicals. One third of Group 6 and 7 museums do not have access to one.

Widespread inadequacies concerning lighting, ventilation and water and power supplies in stores, offices and laboratories is noted. Group 6 and 7 museums tend to be the better off, but many still have major problems.

Libraries

Only 13 museum natural history libraries have a fixed annual budget of over £500. Tables are included showing library facilities on a regional basis. The main fact to emerge is that many museums are unable to maintain the size of library needed for their collections.

Microscopes

The provision of microscopes is worst in Group 1 museums and best in Group 6/7 museums. Absence of a microscope will obviously preclude work or research on many collections.

Loss of collections

Two thirds report some collections have been lost through neglect and one quarter report losses due to unforeseen disaster. The report points out that the museums losing specimens through neglect are not fulfilling the most important function of a museum - to safeguard material for posterity.

Eighty per cent of institutions with natural history curators report losses of collections or specimens through neglect. The main reasons for damage by neglect were reported as (in descending order of importance):

1. **Bad storage**
2. **Neglect, bad curation, bad handling**
3. **Pest attack**
4. **Absence of qualified curators**

A depressing appendix lists reasons given for loss of collections or specimens. Below are a few details:

Lost through neglect (126 occurrences)

Ex-curator used to hold auctions

Informal, undocumented exchange went ahead in the past

Dumping of 'excess' horns and antlers in 1930s

1977, insects and birds eggs destroyed through insecure external stores entered by children (hole in roof)

Unofficial gifts and exchanges

Material has left museum by unspecified means for unspecified reasons

Some material thrown away by previous curator. No details of losses available

Disposal of some specimens by bonfire, 1950s

At risk. Council considering sale of 'surplus' specimens to finance institution

Much late 19th and 20th century material has vanished without trace

Prior to 1970 many other museums and private individuals were allowed to 'help themselves'

1960-69 unofficial gifts and sales by caretaker

Collections disposed of by bonfire in early 1960s as surplus to requirements

Fumigants

The lack of a safe, effective pest-control strategy is mentioned and concern is expressed about the effects of regular and long-term exposure of staff to naphthalene, paradichlorobenzene, dichlorvos and mercuric chloride.

Security against fire and theft

Only 15% of institutions reported inadequate theft precautions but 59% reported losses due to theft. Sixty per cent reported inadequate fire protection for their stores. Forty-one per cent of Group 7 museums have inadequate fire protection in their stores! This obviously includes massive numbers of specimens and many types.

Collection maintenance

Among the Group 6 and 7 museums there are an estimated 2 million specimens in bad condition (ie on the brink of destruction). Approximately 7 million more are in indifferent condition. However, when visiting institutions the survey investigator found that nearly all curators had underestimated their problems!

Use of collections

Details are given of the use of collections by staff for research, display and loans and by visitors and researchers. Areas of concern include large numbers of institutions that are not used by researchers at all. Groups 1 to 3 and 5 are the worst in these respects.

Many museums with no natural history curator have biological displays. The selection of items suitable for display is an obvious concern.

Suitable repositories

In response to the question 'Is the museum able and willing to be a repository for collections from universities and research institutes?', 77 replied 'Yes'. However 31 of these museums had no full-time natural history curator! Of 25 Group 7 museums answering 'Yes' the working party considered that only 10 were really able to take such collections. Institutions causing them most concern are the Hope Entomological Collections (University Museum, Oxford), Manchester Museum, Merseyside County Museums, Castle Museum (Norwich) and Glasgow Art Gallery and Museum. Appendix XXVIII lists museums which said they were suitable but which the working party considers unsuitable - reasons are given.

Most museums were happy for a BCG representative to visit (4 refused). It was interesting to note that 85% of museums said they would welcome professional assistance from outside. This included many Group 6 and 7 museums.

Policies

Closure

The number of museums with formal arrangements for the collections if they were to close is very low. This includes 37 Group 6/7 museums.

Frozen posts

Forty museums reported frozen natural history posts and 34 had had posts removed in the last 5 years (to 1984).

Collection policies

Less than half of the institutions had collecting policies and of the 108 that did only 47 had them written down.

Code of practice for curators

Only 17% had formal guidelines for natural history staff. Only 6% had written guidelines! The working party regards the adoption of the MA Code of Conduct for Museum Curators by museums as an essential requirement for high standards of professional conduct.

Curatorial representation on committees

Curators do not attend policy meetings in most museums. The report gives examples of inefficient informal consultation arrangements and expresses concern that many museum curators do not have direct access to their trustees or committee.

Disposal of collections

Seventy-one per cent of institutions had no collection disposal policy! Even in Group 6 and 7 museums 43% had no disposal policy! Statistics concerning widespread disposal by gift, sale or exchange are listed. Unethical disposal is usually associated with the absence of a full-time natural history curator.

Summary

Under a chapter entitled 'Curators' Professional Milieu' the fundamental problems are summarised:

1. **Lack of essential resources (staff, equipment, library etc.)**
2. **Lack of space or inaccessibility of collections**
3. **Poor collection documentation**
4. **Poor communication and consultation (ie management problems)**

Five named museums have their problems listed (Manchester, Bolton, Sheffield, Birmingham and Hampshire) as do three un-named museums, all with problems caused by poor communication and consultation.

Other activities can adversely affect curation. Biological recording and display are the main causes and are a major problem in some museums where they receive overriding priority.

Appendices to the report

Many have already been mentioned but one that has not is the 'Black Mark' table. This lists museums in Groups 5 to 7 in 'Black Mark Order'. Black Marks are related to poor storage or documentation, lack of expansion space, poor access for research and curation, poor library provision and lack of important equipment.

Recommendations from the report

Recommendation 1

Peripatetic biology curators should be appointed to Area Museum Councils to offer advice and help with the care of biological collections and, where necessary, to curate them.

Each AMC should appoint at least one full-time peripatetic biology curator and the larger councils, such as the Scottish Museum Council and the Area Museum Service for South Eastern England should appoint not less than two curators. These curators should be appointed on 3 year contracts with the possibility of renewal following a review of the situation in museum natural history towards the end of the initial 3 year period. The peripatetic curators' work should be supervised by the Natural History Advisory Panels already established or yet to be established in the areas covered by AMC's in the United Kingdom.

Recommendation 2

The major museums identified as actual or potential centres of excellence in natural history should act as parent museums to the peripatetic biology curators.

The parent museums should be able to provide back up facilities for peripatetic curators and funds should be allocated from the AMC's to ensure that these museums are able to fulfil their responsibility.

Recommendation 3

Provision should be made in parent museums for the reception and storage of valuable and important biological collections discovered by peripatetic curators to be beyond the capacity of their custodians to conserve and curate. Parent museums must be given the wherewithal to provide space, modern storage units and the curatorial staff that this will require.

Although parent museums may be designated to take into their care biological collections under threat, the option remains of leaving collections where they are, provided means can be found properly to store and curate them on a long term basis. Decisions on whether a collection should be transferred to a designated museum will be based on the advice of the peripatetic biology curator and the Natural History Advisory Panels. Existing museums with commitment to local, regional natural history should be supported to improve accessibility of collections and support services.

Recommendation 4

New or additional conservation facilities consisting of a laboratory and a staff of properly trained conservation technicians should be established in the parent museums or in other central institutions including Area Museum Councils.

The conservation laboratories would attend to the great burden of conservation work already identified in broad terms and to which the peripatetic biology curators will address themselves. Staff with systematic expertise should be trained in relevant conservation techniques to deal with a wide range of biological material and its conservation. The Working Party endorses the view of Foster (1980) that natural history collections generally should be conserved by qualified scientists, with graduate curatorial staff being assisted by natural history technicians.

The new staff will supplement the work of preparators and taxidermists already in post and they may be AMC, museum or university personnel as best befits local and regional circumstances.

Recommendation 5

Area Museum Councils and the Museums Association should approach the Museums and Galleries Commission for funding derived ultimately from the Office of Arts and Libraries to support the appointment of the peripatetic biology curators and the formation of new conservation facilities as outlined in Recommendation 4.

Parent museums which are to receive and curate important collections from other museums (Recommendation 3) should be funded in the same way. However, some contribution from the parent museums' own controlling authorities, whether the museums be national or local authority institutions, should be forthcoming to bring the parent museums up to a satisfactory standard. Where important collections have been built up as a result of scientific research, the research councils should be approached for financial support. In some cases, sponsorship may be appropriate to support the care of important collections.

The pressure for financial assistance should be applied in the first instance by the Natural History Advisory Panels. This underlines the necessity that these panels should comprise senior and very senior professional and institutional members.

Recommendation 6

It is recommended that a catalogue of Biological Collections Advisory and Rescue Services (BIOCARS) be compiled by the Museums Association in conjunction with the relevant learned societies. A Secretariat should be established to consult with interested bodies and to make the compilation on which to base the catalogue.

Museums and learned societies have a reservoir of expertise and resources capable of being utilized to answer a wide range of questions and to provide co-ordinated services to other museums, governmental bodies and commercial organisations. The BIOCARS scheme would provide services paid for by clients, thus allowing museums to supplement their income.

Recommendation 7

The Museums Association, the Museums and Galleries Commission and the Research Councils should establish a steering group to co-ordinate and monitor action on the recommendations delineated here. This steering group should be responsible for recommending new action in response to changing circumstances.

The Working Party believes that long term co-ordination between the Museums and Galleries Commission and the Research Councils is an essential prerequisite to more efficient management and use of biological collections. Therefore, we recommend that the new steering group should make long term plans to ensure a continuation of its co-operative approach to the management of biological collections in the U.K.