

BCG

JANUARY
1977

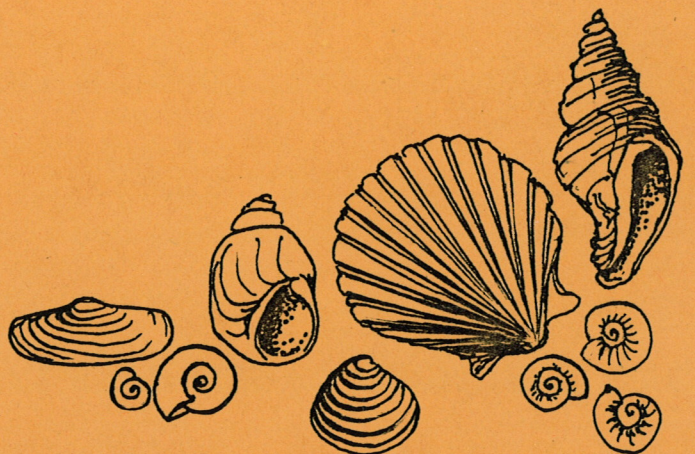
Newsletter No 5 of the Biology Curators Group

INCORPORATING REPORTS FROM THE ANNUAL GENERAL
MEETING AT BOLTON, DECEMBER 1976

LIVE ANIMALS IN MUSEUMS

CLASSIFYING A BIRD COLLECTION

MOLLUSC COLLECTIONS IN BRITISH MUSEUMS



Biology Curators' Group

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BIOLOGICAL CURATORS GROUP NEWSLETTER

No. 5 JANUARY 1977

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ITEMS FOR NEXT NEWSLETTER TO REACH EDITOR BY 4th JUNE.
ADVERTISING RATES ON APPLICATION.

(C) BIOLOGICAL CURATORS GROUP
1977

PRODUCED BY ST. ALBANS
MUSEUMS AND THE CITY AND
DISTRICT OF ST. ALBANS.

BIOLOGY CURATORS GROUPConstitution

1. The name of the Group shall be the Biology Curators Group
2. The aims of the Group shall be :-
 - a) To facilitate the exchange of information between individuals concerned with collections of specimens and records their conservation and interpretation.
 - b) To present the views of biology curators to the Museums Association and to other bodies.
3. Membership of the Group shall be open to any individual interested in the aims of the Group
4. Institutions shall not be eligible for membership of the Group but may take out subscriptions in order to receive the publications of the Group
5. The management of the Group shall be vested in a committee made up of the Officers of the Group and four other members
6. The Officers of the Group shall be the Chairman, the Secretary, the Treasurer and the Editor
7. The Officers and members of committee shall be elected annually at the Annual General Meeting
8. Nominations for Officers and members of committee must be supported by two members of the Group
9. An Annual General Meeting shall be held each year. Two weeks notice in writing shall be given to all members of the Group

Note -

The Committee have been asked to investigate a procedure for postal voting for officers and members of Committee, in order to ensure a more democratic election. A report on the proposals will appear in the next Newsletter. In the meantime any comments from the membership would be welcome.

Minutes of the Annual General Meeting of the Biological Curators Group held at Bolton Museum on Friday, third of December 1976

Apologies were received from S. Flood, R. Harris and D. G. Erwin

Report of Chairman The Chairman reported briefly on progress during the first year of the Group. A meeting of the Group had taken place in Cardiff on 2nd April. Committee meetings had taken place in Liverpool on 4th February and in Leicester on 2nd November.

Members of committee had met with representatives of the Systematics Association to discuss arrangements for a joint meeting.

Report of Hon. Editor In the absence of the Hon. Editor, the Hon. Secretary reported verbally on the main points in the report. Four issues of the Newsletter had been produced during the year. The next issue would include papers from the meeting to take place later in the day.

Report of Hon. Secretary-Treasurer The Balance Sheet for the year was circulated showing a balance of £40.91½ with the account for the fourth Newsletter still outstanding. It was agreed to maintain the ordinary subscription rate at £1 but to increase overseas subscriptions to £2. The Group now had a membership of just over 100.

Election of Officers The following were elected :-

Chairman	E. G. Hancock	(re-elected)
Editor	S. Flood	(re-elected)
Secretary-Treasurer	P. Morgan	

Election of Committee The following were elected :-

D. G. Erwin	(re-elected)
R. H. Harris	(re-elected)
J. M. Bateman	(re-elected)
M. Hounsome	

Future Programme The following tentative programme was agreed.

15th July 1977 Programme of interest to members to be arranged as part of the Annual Conference of the Museums Association in Bradford.

22nd and 23rd September 1977. A Seminar on 'The Functions of Local Collections' to be held in Liverpool in cooperation with the Systematics Association. Approximate cost £20.

April 1979. Joint meeting with the Society for the Bibliography of Natural History.

Any Other Business

Draft Constitution Copies of the draft were circulated and approved for adoption.

Proposal from P. Morgan.

That the officers and committee of the Biological Curators Group be elected annually by postal vote under the following conditions :-

a) Notification of the election and requests for nominations be circulated in or with the June Newsletter.

b) Nominations to be published and voting slips for selection be circulated with the September Newsletter.

c) Results of the ballot to be announced at the A. G. M. and in the December Newsletter.

Proposal from P. Morgan (continued)

The proposal was agreed in principal but was referred to the committee.

Newsletter content. Some discussion took place on the Newsletter content and it was agreed to look into the possibility of including the Museums Association Natural History Board of Studies bibliography in parts in future issues.

G. Stansfield Hon. Secretary-Treasurer

ACCOUNTS FOR 1975-76

<u>Income</u>	£
Subscriptions	104
Sale of publications	4
Advertising	10
Meetings	<u>3.35</u>
Total	£121.35 =====
<u>Expenditure</u>	£
Newsletter & Stationery	36.70
Postage	35.87½
Meetings	<u>7.86</u>
Total	£80.43½ =====
Balance in hand =	£40.91½p =====

Note 1. Account for Newsletter No.4 not yet received.

G. Stansfield -
Hon. Secretary/Treasurer.

REPORT OF BIOLOGY CURATORS' GROUP MEETINGAT BOLTON MUSEUM, DECEMBER 3rd, 1976

Well over 30 members attended the meeting against all the weather odds of freezing fog. As all the speakers also managed to travel, the afternoon programme was a full one and the sessions on various aspects of living animal and plant exhibits appeared to be appreciated.

Alan Howell initiated the proceedings, giving a résumé of his work with a formicarium while employed at Nottingham, full reference to the article in the Museums Journal Volume 75(2), pages 81-2 should be made. Denis Murphy followed with an introduction to the Merseyside County Museum Aquarium and then gave a practical demonstration of how to construct an all-glass tank with filtering system for a low-budget marine exhibit.

After a break, two of the delayed speakers having arrived, Mike Tong described the construction and maintenance of an observation beehive such as is in his charge at Elvaston Castle Country Park Museum. Alan Cheese then described the ways in which Shugborough had developed into a rare domestic breeds farm with interpretative facilities combined with conservation of living animals.

Unfortunately, the afternoon was drawing to a close and there was still one more talk to be heard. Alan's talk must have prompted quite a few questions but by this time a lot of members had taken their leave in order to attempt to travel back through the fog. Eric Greenwood stepped into the breach left when Don Moore, the Plant room technician at Merseyside had gone down with 'flu and described the living plant exhibits attached to their Natural History Gallery. This was followed by the remaining six or seven people examining the Bolton Aquarium conducted by Mike Graham before finally braving their journey home. Normally, visitors would have been welcome to stay on much longer for discussion and questions. Perhaps members who were present would let the Committee know if they thought the meeting satisfactory in timing, venue, content etc., in order that future meetings be planned to the greatest benefit of those wishing to attend.

The Chairman would like to thank sincerely all those members who attended and especially the speakers for travelling and arriving in such foul weather conditions.

EGH.

NOTE

The articles by Mike Tong and Alan Cheese will be included in the next Newsletter.

CHAIRMAN'S REPORT

Following the first General Meeting in London, December 1975, the Group has had one other meeting for members during the year, that being at Cardiff when the subject of Collecting Policies was aired and discussed.

The committee has been active in having two meetings, one in February, at which the Cardiff meeting was arranged and the Newsletter content and frequency for the coming year was established. The other was at Leicester in the beginning of November when the details of the A.G.M. were finalised and proposals for the A.G.M. were worked out for approval at the meeting. Two members have also attended meetings with representatives from the Systematics Association which resulted in a programme being prepared for the 1977 Symposium on The Function of Local Collections. These were Eric Greenwood and the Chairman.

A supposed privilege of a Chairman is to dwell upon thoughts for the future. As we have not yet considered or approved a constitution these thoughts are not at the moment formal proposals for action, but may subsequently be put forward as such:

My first and foremost thought since working in provincial museums has been that we have a basic duty to 'science' which has been consistently unfulfilled for many years. This is the curation and even recognition of type material. Having also recently embarked upon 'IRGMARisation' of my own collections and aired the matter with Andrew Roberts, it has become, to me anyway, obviously possible to have a national catalogue of types in provincial museums. Everything that this implies is a practical possibility now, from computer time down to individual curators researching their collections. I would like to see this become a viable project, distinct from collection and archival national indices.

With reference to collections, it has been said that our Newsletter is falling between two stools. One of these is that there is already adequate provision for notes on collections elsewhere or that collections are adequately known (questionable) and so our format need not be as the G.C.G. Newsletter, and the other is that there are not enough topical notes on recent developments in techniques, etc. Obviously the plea goes out to the membership. Do you want one or the other, neither or both? Whatever is decided the Editor ultimately relies on you sending in notes or continuing the series of 'Notes on Collections' which I started.

There is also great scope for collection-based research in provincial museums, many aspects of which will be scrutinised at the September 1977 meeting. However, in the meantime, most curators should be able to devote some time to their own little research topic and grants are available in these hard times to help in travel, equipment, books, etc. I myself have obtained one to work in the BM(NH) for a week from the

Professor Hering Memorial Research Fund which is awarded for certain aspects of entomological work. A Local Authority is only too quick to allow time off if it does not involve any expenditure. The essence of research work, though, is the publication of results, and it is useless to attempt the former unless the latter is achieved.

I have long been of the opinion that the technical staff of museums have been without an opportunity to either hear about the many aspects of their work or actually be able to demonstrate their skills and they must not be forgotten when 'curators' groups meet. The topic of 'Living Collections in Museums' covers a wide range of activities which require a technical skill and knowledge. This is one of the reasons for selecting such a topic for the Bolton meeting.

EGH.

New Members to December 1st 1976

Ms H. C. G. Ross	Ulster Museum, Belfast
Mr Sverre Bakkevig	Arkeologisk Museum, Stavanger
Dr P. F. Lingwood	Merseyside County Museums, Liverpool
Mr C. N. G. Scotter	Leicestershire Museums
Dr P. Wheatcroft	Coventry Museum
Mr D. Whiteley	Sheffield Museum
Mr C. J. T. Copp	Bristol Museum
Mr M. D. Murphy	Merseyside County Museums

HONORARY EDITOR'S REPORT, 1976

During the year I have produced three Newsletters using the photocopying facilities of my Council on a rechargeable basis. I fear my editing has not been as accurate as it should have been and Mr Stansfield's move to the University of London has no basis in fact. The creased pages in Newsletter 4 were a machine fault and we have received a compensatory reduction in the charge.

The content of the Newsletters has been somewhat of a problem. In the absence of a definite policy I felt that, for the first year, it would be interesting to see what articles arrived uninvited. This has resulted in mixed quality and rushed deadlines, and the publication of the Bolton Collection is as much a tribute to our Chairman's conscience as to their suitability for the Newsletter. I have, however, been encouraged by the wide variety of short notes and requests for information received, as this type of communication was always conceived as a major function of the Group.

During the past month I have attended two meetings on behalf of your Committee. The first was the inaugural meeting of the Environment Division of the Institute of Biology. Although it did not seem appropriate to request formal representation on the Committee I would strongly recommend close contact with this Group, and the Institute.

More recently I attended a discussion about a proposed joint meeting with the Society for the Bibliography of Natural History and the Geological Curators Group on the History of Collections. The GCG were, unfortunately, unable to attend so no more than preliminary ideas were put forward. A provisional date suggested is Spring 1979 - Spring 1978 would tend to clash with our own Conference in September 1977 whereas the suggested date does coincide with a scheduled SBNH Seminar, with all that implies with regard to publication of proceedings. Details will be worked out by a Steering Committee of two members each from the Groups involved.

Stephen Flood

Newsletters for 1977

No. 6 (available June) Invited articles on Record Centres.
Items relevant to M.A. Conference.

No. 7 (available September) On the theme of B.C.G. Liverpool Conference.

EXTRACTS FROM AND ADDITIONS TO A TALK GIVEN TO THE
BIOLOGICAL CURATORS GROUP A.G.M. 3rd DECEMBER 1976 - BOLTON.

AQUARIA IN MUSEUMS

M.D. MURPHY
MERSEYSIDE COUNTY MUSEUMS

The talk, which was to take approximately forty minutes, was to be primarily concerned with a demonstration of a cheap method of producing all-glass aquaria, using materials not necessarily originally intended for this purpose.

However, before doing this, a brief description of the size and scope of the aquarium and vivarium at Merseyside Museum was thought to be appropriate.

The present aquarium was opened to the public on 26th March 1966 and formed part of Phase 1 of the re-construction of the Museum which was necessary after an incendiary attack caused extensive damage during the last war.

Originally designed for the display of living fish and invertebrates inhabiting tropical and temperate freshwater and marine environments, it has never fully achieved this aim, although admittedly some representatives of each of these ecological niches are on display at present. The reasons for this short-fall were (and still are) lack of sufficient money.

Given the present grim financial position local government finds itself in, we are, obviously, not likely to be able to improve this situation in the aquarium for some time to come. However, this does not mean that considerable growth of the department has not occurred since its inception. On the contrary, many improvements and additions have been made since 1966, not least of which have been the development of tropical marine quarantine, experimental and display tanks; refrigerated systems for temperate displays; cold room facilities for holding living food and the inclusion of a vivarium. To act as 'back up' facilities, a whole range of sophisticated equipment has been added over the years, some of the most important items include air turbines, water sterilizing equipment, up-rated water pumps and seven of the original 26 mild steel exhibition tanks replaced with G.R.P. (fibreglass) tanks of improved design. Advances have also been made in the field of water storage and filtration. Currently the display area consists of 27 exhibition tanks in the aquarium, having a total volume of approximately 14,000 gallons of saltwater and freshwater; and 10 small aquaria and Museum jars in the vivarium.

There are 60 all glass aquariums behind the scenes which are used for quarantine, breeding and 'growing-on'; these range in size from 20 gallons to 150 gallons; Fifteen of these are maintained at 52°F in a large cold room and function as storage tanks for very large quantities of living food - shrimp, prawn, crab etc. all of which help considerably to defray the annual cost of food. An automatic topping-up system draws water from any one of four 3,000 gallon reserve tanks containing either saltwater or freshwater and dispenses it, on demand to any of the 90 tanks in the aquarium.

The role of the aquarium plays in the Museum context is important and highly successful; as a visit to the exhibition gallery soon proves. It is the most frequented area in the Museum being particularly popular with children and causes many people to re-visit again and again throughout the year. Records show that over the last 12 month period, aquarium staff dealt with over 200 enquiries made by members of the public visiting the aquarium. This figure does not include casual enquiries taking less than a couple of minutes to answer, or those made by telephone and letter which together would be well in excess of this figure. The bulk of these enquiries were concerned with problems of maintaining a wide range of living material. Fish, reptiles, aquatic invertebrates, amphibians and insects were all dealt with and the commonest questions pertained to - correct diet, control of disease, provision of correct environment, species compatibility and identification of the entire animal or part of it. Frequently specimens were presented to the Museum and, after a period of quarantine, were placed on display.

Part of the Museums Education Service programme for schools is based on the aquarium and includes in its work sheets many of the more important species on display.

The potential of the aquarium and vivarium and their impact on the public, particularly via the Education Service, has not yet been fully realised. It is hoped, however, that when the financial climate allows completion of equipping and an improvement of staffing levels, the service these departments can offer will be dramatically increased and result, hopefully, in greater public awareness of our environment and the vital role aquatic life has to play in its continued well being.

There then followed an open invitation to the assembled members of the B.C.G. to visit the aquarium and vivarium at Liverpool.

TANK CONSTRUCTIONGeneral Hints

1. Old or scrap glass may be used providing it is not deeply scratched or contains air bubbles. All glass must be cut absolutely square.
2. When calculating sizes of panels ensure that:-
 - a) End and side panels always stand on top of the base
 - b) Cut base slightly larger to give at least $\frac{1}{8}$ " projecting all round
 - c) If an oblong tank - always fit ends inside sides
3. All raw edges must be rubbed down with fine pumice stone or grindstone.
4. All surfaces should be completely clean and free from grease and finger prints. Use a non-fluffy cloth soaked in meths. or alcohol.
5. Lay out all cleaned panels on a free standing bench to allow access to all sides (important when constructing very large tanks). Bench should be long enough to allow the two end panels and one long side panel to be placed in a row.
6. Work in a warm, dry and well ventilated room and remember that, on completion, the tank must remain unmoved for at least 36 hrs.
7. Read carefully all instructions on the pack of silicone rubber.
8. When the tank is finished, great care must be taken to ensure that it is placed on a firm, level stand and is supported over the whole area of its base before filling with water.
9. 1 cu. ft. of water weighs approximately $62\frac{1}{2}$ lb.

Method

10. Taking each long side panel of glass, attach at least two strips of good quality linen backed adhesive tape to each end, leaving half their length (not less than 5 ins) projecting. Place one panel flat on the bench with the tapes, sticky side up, and put the other sheet temporarily to one side.
11. Taking each end sheet in turn, place edge on to the long side sheet, hold at 90° and firmly attach the loose ends of the adhesive tape. Place each end sheet now attached by the tape, onto the bench.

12. Taking silicone gun, run a thin bead of rubber $\frac{1}{8}$ " away from each end of the side sheet.
13. Lift each end sheet back into position on top of the long side thereby sandwiching the silicone rubber.
14. Maintaining their position (90° to the longside) lift the two end panels with the attached side panel into an upright (and free standing) position on the bench.
15. Taking the silicone gun, run a thin bead of rubber around the base plate, $\frac{1}{8}$ " from its edges.
16. Lift the 3 part - assembled sheets from the bench and place them accurately on top of the base plate and silicone rubber.
17. Take silicone gun and run a thin bead down the side edge of each end sheet.
18. Lift second long side panel, with its 4 or more attached adhesive tapes outwards, into position on the open side of the tank. Hold in place by attaching the loose ends of the adhesive tapes to the two end panels.
19. Square-up the entire assembly, ensuring that the base plate is projecting equally all round.
20. With all the panels now in position, gun silicone rubber inside the tank, first around the base, then the corners, taking great care not to press too heavily against the glass. Before the silicone starts forming a skin (usually 5 mins) use a finger to spread the bead carefully to form a gentle radius across the corners formed by the glass. Gun a small quantity of rubber around the projecting base outside the tank and smooth with the finger. Leave the assembled tank to cure for at least 36 hrs.
21. Strips of glass 2 - 3" wide may be attached to the top lip of the tank to give support and prevent "bowing" when the tank is filled. It is a good idea to cut the corners off some of these strips and assemble them in such a way that access to the rear corners of the tank (for such things as air-lines, electric leads etc) is not precluded. Large pieces of polystyrene are often useful for holding the glass strips in position prior to applying the silicone rubber.

MATERIALS LISTFOR SETTING UP MARINE AQUARIA ON A LOW BUDGET

M.D. MURPHY
MERSEYSIDE COUNTY MUSEUMS

Tank Construction

'Dow Corning' silicone rubber, 12oz cartridge plus cartridge gun. Available from most large petshops.

Biological Filter

'Novalux' corrugated roofing 8' x 2'6". Builders Merchants or D.I.Y. shop.

Pipes and Fittings

$\frac{3}{4}$ " tank connectors, 90° elbows, couplers, pipe, jointing cement etc. all 'Polyorc'. Available from most plumbers merchants; price list etc. from Yorkshire Imperial Plastics Limited, P.O. Box 166, Leeds, LS1 1RD.

Plastic Background - I.C.I. 'Darvic' P.V.C. sheet.

Water Pumps

Stuart Turner, made in brass (or stainless steel for marine use). Various capacities to suit individual requirements. Available from larger pet shops or garden centres or - Stuart Turner Ltd., Henley-on-Thames, Oxon RG9 2AD. 0491 22655.

Beer Cooler

Various sizes and makes available from any refrigeration specialist. Old units sometimes available from brewery or public houses.

READING LISTAquarium Technology

Stephen H. Spotte. Fish & Invert' Culture - Wiley Interscience. Highly recommended work dealing with all aspects of filtration, aeration, environmental control, toxicity etc. in the aquarium.

J.R. & R. L. Clark. Sea Water System for Experimental Aquariums; T. F. H. (G.B.).

A very useful collection of papers from various parts of the world dealing with a wide range of subjects pertinent to the maintenance of marine fish and invertebrates in both 'open' and 'closed' systems. Useful bibliography to many articles.

J. E. Shelbourne. The Artificial Propagation of Marine Fish; T. F. H. (G.B.). From the fisheries laboratory Lowestoft. Excellent compilation of facts dealing largely with Plaice rearing but containing useful information on cooling and U.V. irradiation units.

LIVING PLANTS IN MUSEUMS

D.K. MOORE
MERSEYSIDE COUNTY MUSEUMS

Summary

This talk was based on the construction and maintenance of the museum plant room. Various problems associated with growing plants under artificial conditions were mentioned together with suggestions for overcoming them.

Colour slides were used to illustrate relevant details. Briefly, the talk consisted of the following topics -

1. Plant Requirements - Lighting, temperature, Watering etc.
2. Construction of Growing Units - Plant trays, Light boxes, Light adjustment, Control gear
3. Maintenance - Watering systems, Nutrition, Pests and diseases and their control.
4. Support Systems - Service areas, production units, space requirements.
5. Illustrated Displays - Medicinal Herbs, Reclamation, Plant Nutrition.

SUPPLIERS OF MATERIALS

<u>Product</u>	<u>Supplier</u>
Air Conditioning Units	Haworth Air Conditioning, Lome Street, Farnworth, Bolton BL4 7LZ.
Automatic Watering Systems	Humex, 5 High Street, Weybridge, Surrey. Simplex Limited, Horticultural Division, Sawston, Cambridge CB2 4J. Wright Rain Limited, Ringwood, Hampshire BH24 1PA.
Biological Control for Red Spider & White Fly	Thompson & Morgan (Ipswich) Ltd., London Road, Ipswich IP2 0BA.
Capillary Water Matting	Plant Protection Ltd, Woolmead House East, Woolmead Walk, Farnham, Surrey.
Gamma Irradiated Seed	Philip Harris Biological Ltd, Addmixon, Weston-super-Mare, Avon.

SUPPLIERS OF MATERIALS

<u>Product</u>	<u>Supplier</u>
Genetic Seed Kits	Griffin Biological Laboratories Ltd, Gerrard House, Worthing Road, East Preston, West Sussex BN16 1AS.
Herb Seeds	Thompson and Morgan.
Laboratory Equipment	Griffin and George Limited, 285 Ealing Road, Wembley HA0 1HJ.
Lighting - Control Gear	Transtar, Prime Consort Road, Hebburn, County Durham.
Lighting - Flourescent Tubes	Philips Electrical Limited, Lighting Division, Century House, Shaftesbury Avenue, London WC2.
Lighting - Time Switches	Sangamo Weston Limited, Enfield, Middx.
Plant Propagating Cases and other Green- house Equipment	Humex, Simplex.

A REFERENCE LIST OF MUSEUMS IN THE BRITISH ISLES
WITH MOLLUSCAN COLLECTIONS

PETER LINGWOOD
DEPARTMENT OF INVERTEBRATE
ZOOLOGY, MERSEYSIDE COUNTY
MUSEUMS.

There has long been a need for a comprehensive list of museum natural history collections and R.J. Cleevely of the British Museum (Natural History) and the Society for the Bibliography of Natural History are currently engaged (B.C.G. Newsletter 2, March 1976) in producing a sequel to C. Davies Sherborn's 'Where is the collection' (1940, Cambridge University Press). This is to be produced as an index of collectors and their collections rather than the holdings of each museum, although the feasibility of reproducing the data in the latter form is currently being investigated (R.J. Cleevely - Personal Communication).

The following list of museums with molluscan collections has therefore been produced to compliment the molluscan section of Mr Cleevely's more detailed work. This list has been compiled from a number of reference works and is accurate to 1970. It is intended simply as a guide to the location of the larger molluscan collections and has been tabulated for ease of reference.

Only limited details of size and type of collection are given; details of addresses, telephone number etc., can be located in the current Museums Year Book. A list including the above information together with times of opening and current admission charges (if any) is to appear in the Newsletter of the Conchological Society of Great Britain and Ireland. Both fossil and recent material have been included because the division between the two is indistinct and to some extent artificial.

The largest collections, as might be expected, are housed in the national and university museums, although the collections of the provincial museums are also important. It is hoped that the smaller provincial and local museums will be covered by a subsequent article listing all museums with any sort of molluscan material; whether large and fully documented or just a box hidden in an odd corner! Although the majority of such material may be of little but local interest, it is possible that it may contain nationally or even internationally important specimens. The proposed list may therefore help in tracing 'lost' specimens and collections.

Whilst I have taken every care in compiling this list there may well be error and omissions. I would therefore be delighted to hear of any corrections and additions that would improve it, or details (i.e. location, recent or fossil, exhibit or research, approximate size) of collections not mentioned which might be included in the proposed list.

A REFERENCE LIST OF MUSEUMS IN THE BRITISH ISLES WITH MAJOR MOLLUSCAN COLLECTIONS.

MUSEUM.	EXHIBITS		RECENT.		FOSSIL		FOSSIL	
	RECENT	FOSSIL	SIZE	TYPES	SIZE	TYPES	SIZE	TYPES
ENGLAND.								
BATH. Victoria Art Gallery and Museum.	R		***					
BIRMINGHAM. Birmingham City Museum and Art Gallery.	R		X					
BRIGHTON. The Booth Museum of Natural History.	R	F	***					
BRISTOL. Bristol City Museum.	R							
BRISTOL. Geology Museum, Department of Geology, University of Bristol.					***			
CAMBRIDGE. Sedgwick Museum of Geology.		F			****			
CAMBRIDGE. University Museum of Zoology.	R		**					
COLCHESTER. Colchester and Essex Museum of Natural History.	R	F	*		*			
DORCHESTER. Dorset County Museum.	R	F	*		*	9		
EXETER. Royal Albert Memorial Museum and Art Gallery.	R	F	***		**			
HALIFAX. Bankfield Museum and Art Gallery.	R	F	*		*			
HUDDERSFIELD. Tolson Memorial Museum.	R		*					
HULL. Wilberforce House.			**				50 (some doubtful)	
IPSWICH. Ipswich Museum.	R	F	**		***			6
LEEDS. City Museum.	R	F	**		**			
LEICESTER. Leicestershire Museum and Art Gallery.	R	F	**		***			
LINCOLN. Lincoln City and County Museum.			**		**			
LIVERPOOL. Merseyside County Museums.		F	****		**			400

MUSEUM.	EXHIBITS.		RESEARCH COLLECTIONS.			
	RECENT.	FOSSIL.	RECENT.		FOSSIL.	
			SIZE.	TYPES.	SIZE.	TYPES.
LONDON. British Museum (Natural History)	R	F	****	25,000	****	
LONDON. The Passmore Edwards Museum. (Essex Museum of Natural History)	R	F	**			
LUTON. Luton Museum and Art Gallery.			*			
MANCHESTER. Manchester Museum.	R	F	***	500	****	300
NEWCASTLE UPON TYNE. Hancock Museum.			*			
NORWICH. Norwich Castle Museum.	R	F	****	600	***	7
OXFORD. Oxford University Museum.	R	F	***		****	
PLYMOUTH. City Museum and Art Gallery.	R		**		****	
PORTSMOUTH. Cumberland House Museum and Aquarium.			*			
READING. Museum and Art Gallery.			*			
SCARBOROUGH. Woodend Museum.	R		***		**	
SHEFFIELD. Sheffield City Museum.	R	F	**		**	
TAUNTON. Somerset County Museum.	R	F	*		**	
YORK. The Yorkshire Museum.		F	**		***	103
SCOTLAND.						
DUNDEE. Dundee Museum and Art Gallery.	R		**			
EDINBURGH. Royal Scottish Museum.	R		****		***	
GLASGOW. Hunterian Museum.					***	

MUSEUM.	EXHIBITS.		RESEARCH COLLECTIONS.		FOSSIL.	
	RECENT.	FOSSIL	RECENT.	FOSSIL.		
			SIZE.	TYPES.	SIZE.	TYPES.
<p>WALES.</p> <p>CARDIFF. National Museum of Wales. (Amgueddfa Genedlaethol Cymru)</p>	R	F	***	2,500	***	4
<p>IRELAND.</p> <p>BELFAST. Ulster Museum.</p> <p>DUBLIN. Department of Zoology, Trinity College.</p> <p>DUBLIN. National Museum of Ireland.</p>	R R	F	*** * ***		*** * *	

KEY

R, Recent F, Fossil

Size of research collections;

* less than 1,000 specimens

** 1,000 - 10,000 specimens

*** 10,000 - 100,000 specimens

**** over 100,000 specimens

X present, but size not known

The number of type specimens is included only where known.

A METHOD OF SYSTEMATICALLY ARRANGING A COLLECTION OF
MOUNTED BRITISH BIRDS

The collection of mounted British birds held by the Grosvenor Museum, Chester, has recently been catalogued and systematically arranged. Specimens are stored, for economy, in unit size cardboard boxes in vertical 'runs' on open shelving. The systematic basis for arranging the collection is the 1971 B.O.U. checklist.⁽¹⁾ Unlike its 1952 predecessor⁽²⁾, used by Steel⁽³⁾, this is unnumbered but gains from being an inexpensive authoritative guide to the status of British and Irish birds; in itself a useful addition to the curator's bookshelf. From this a system for locating a specimen's position and importance has been evolved. This facilitates use of the collection by persons who are neither familiar with the taxonomy of British birds nor with the value of individual specimens.

Each species has been allotted a unique code group as outlined below:

Order	:	capital letter e.g. A
Family	:	roman numeral e.g. I
Genus	:	arabic numeral e.g. 1
Species	:	lower case letter e.g. a
Sub-species	:	suffix to above e.g. aa

The sequence of lettering and numbering follows the B.O.U. checklist and is exemplified by:

A	:	Order <u>Gaviiformes</u>
I	:	Family <u>Gaviidae</u>
1	:	Genus <u>Gavia</u>
a	:	Species <u>Gavia Stellata</u> (Red-throated Diver)

- b : Species Gavia arctica (Black-throated Diver)
- c : Species Gavia immer (Great Northern Diver)
- d : Species Gavia adamsii (White-billed Diver)

The species code group may be followed by suffixes which indicate the sex, variety and importance of the specimen:

- ♂ : Male
- ♀ : Female
- A : Albino
- R : very important specimen; for example the only one taken in Cheshire.
- R : important specimen; for example one cited in a work on the local avifauna.
- (S) : specimen without data; suitable, when replacement data specimens of the species are obtained, for use by the Educational Services Officer. Hence it will ultimately be placed in category S.
- S : specimen without data; suitable for use by the Educational Services Officer.

When no suffix concerning the specimen's importance follows the species code group it is one having complete data but is a 'recent' acquisition. Such specimens are used only for display purposes, unlike those in category S which may be handled by the public.

A typical code group might be A.I.1a.♂.R. - an important specimen of a male Gavia Stellata (Red-throated Diver).

Each specimen has an attached swing tag bearing the species code group and all the known data pertaining to it. They are wrapped in unsealed polythene tubing and, when possible, have been mounted on wooden bases. Each box, which has a packet of naphthalene flake inside, is labelled with the species code group, taxonomic and common name, and accession number.

Indexes of collectors, donors, localities, species and individual specimens have been prepared. The latter contains all the known data for each bird. The species index allows a rapid appraisal of the collection's contents to be made.

Computing the numbers of specimens in each of the specimen importance categories (R, S, etc.) into percentages has indicated the importance of the collection. For example some 20% of specimens are in categories R and R.

The system also has the advantage of being easily adapted for use with IRGMA cards; the taxonomic number becoming the storage number.

It is hoped that the system outlined above will commend itself to others who may find it necessary to catalogue and rehouse, on a limited budget, a collection of mounted British birds.

References

- | | |
|---|--|
| (1) British Ornithologists' Union,
Records Committee, (1971). | <u>The Status of Birds in Britain
and Ireland.</u> |
| (2) British Ornithologists' Union,
List Sub-Committee, (1952). | <u>Check-list of the Birds of Great
Britain and Ireland.</u> |
| (3) Steel, C. A. B., (1970). | <u>Museums Journal</u> , 70 (1). 10 - 12. |

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As the result of a casual enquiry, some interesting insects have been collected in some numbers near Bolton at the end of November. These are some very large aphids originating from the Middle East which by continuous dispersion/migration have reached England following the remarkable summer we experienced. Tuberolachnus salignus (Gmelin) has been observed in some abundance in this country in 1947, 1955 and 1959. It was so different from any aphid species that I have seen before that it had to be sent to Dr. Stroyan of the Plant Pathology Laboratory who returned the following notes on its distribution and biology:

"The species forms vast colonies on the wands of various Salix species of the willow and osier groups, and these are often much attended by wasps during October. The biology has always been a bit of a mystery, but my own interpretation of it, for what it is worth, and based on what I know of its occurrence both here and in North America, is as follows:

The species probably has a number of 'epicentres' in the eastern and western hemispheres, where it can multiply continuously through the year. As far as Europe is concerned the main centre is probably in the Middle East, perhaps in the marshes of the Tigris and Euphrates. By examining the earliest dates in any given year when the species is recorded in a given country we get a picture of progressive waves of migration moving outwards from the Middle East in a northern and western direction. Starting with the Middle East in about February we find the aphids beginning to be abundant in the Balkans by about April, Central Europe by midsummer and north-west Europe from July onwards. The aphids are rarely reported in this country before August, and become abundant only in October and November. When the population peak is reached the whole of the colonies become alate, and thereafter disappear. We have tried keeping the alatae through the winter in a cold house among leaf litter to see if they can hibernate and re-emerge in the spring, but they cannot; the body of the alate is small and the embryos in it are undeveloped; and there is only very little fat-body tissue. In other words, the alatae are adapted for long-distance migration and not diapause. Ideally they would disperse from the willows here in about November and move on to pastures new, but of course by that time the temperature has dropped so far that they simply can't fly, and the population is exterminated. No production of sexual morphs has ever been recorded, and there is no other host but willow. In North America the pattern is rather similar, but there the 'epicentre' is probably in Central America, from which the aphids disperse both north and south, ultimately reaching (for example) the U.S.A. or even Canada in one direction, and Argentina and Chile in the other."

As I have made up about half a dozen tubes containing one alate form and several immature, though large individuals, I thought that some other museums may not have this species in their collections, as we did not. These are available on application, but preferably exchange for any odd lot of crane-flies, with data but not necessarily identified.

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ENVIRONMENTAL RECORD CENTRES

Members will have seen an announcement in the December Museums Bulletin about a meeting to be held in March on 'Record Centres - their purpose, formation and operation' chaired by K. Barton. B.C.G. Committee will be making appropriate comments in the hope that any resolutions submitted to the next M.A. Conference will have a practical approach to the problem.

Part of the initial impetus behind the formation of B.C.G. was the hope of coordinating the activities of previously independent record centres, and it now seems to be a suitable time to review progress. In the next Newsletter I hope to include a Report on the March meeting, an article from Dr. Perring of the Biological Records Centre, Monks Wood, and news of a forthcoming Conference on Record Centres.

If the network of Centres is going to be effective there is a need for sympathy and commitment from museum staff and museum authorities. We would be most grateful to hear where these do not exist.

Editor.