

The Biology Curator

The Publication of the Biology Curator's Group

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Diary Dates

GCG Seminar and Field Trips

September 1999

Camborne School of Mines

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Paris, GCG Study Visit

October 1999

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Why Museums Matter: Avian Archives in an Age of Extinction

Joint BOU/BOC/NHM/Birdline conference

12-14 November 1999

Green Park, Aston Clinton, nr. Tring, Hertfordshire

Contact : BOU Office, c/o The Natural History Museum,
Akeman St., Tring, Herts., HP23 6AP

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Workshop on Increased Co-operation between Museums

14-15 November 1999

The Natural History Museum, Tring

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Return to Leiden, BCG Study Trip

November 1999

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GCG AGM and Seminar

3-5 December 1999

Trinity College, Dublin

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BCG AGM and Meeting

April 2000

Scarborough

St. Petersburg, BCG Study Trip

October 2000

Contents

Collections Research.....	2
Conference Report.....	5
Exhibition Event.....	6
Information Exchange.....	7

Deadline: All items for next publication to reach
Editors by 8th September 1999.

The University of Leeds Natural History Collections - Part 2

THE MUSEUM AND ZOOLOGICAL COLLECTIONS AT THE UNIVERSITY OF LEEDS

R A Baker

University Biological Collections have, despite their potential educational value, been largely neglected over the last 50 years. The current system of university funding threatens university museums, many of which are at crisis stage (Pickering, 1997) and unless their potential is recognised several will disappear. In the nineteenth century, they were an essential component of any reputable biology department and collections were constantly used as a teaching resource. However, as biology became more experimental and laboratory-based in the first half of this century and, since the 1960's, more cellular and molecular, these collections became less important. Nevertheless, with the current national and international emphasis on biodiversity, wildlife conservation and the environment, their importance is once more being recognised. Universities are again turning their attention to developing interests in these areas and are beginning to acknowledge the value of such collections, particularly in the teaching of whole organism biology. There is a need therefore for a reaffirmation of the role of university natural history museums, for the documentation of their biological holdings and to publicise their contents so that the value and potential of these collections (Nudds and Pettitt, 1997) can be fully realised.

The University of Leeds zoological collections, now in the School of Biology, date from the foundation of the Yorkshire College of Science in 1874. During the early years there was a close link between the College and the Leeds Philosophical and Literary Society Museum. The teaching of biology began in the College in 1875 and in 1876 Louis Compton Miall was appointed Professor of Biology (Baker and Edmonds, 1998). Prior to this he had been Curator of the Leeds Philosophical and Literary Society Museum and many

of the early classes were held in the Philosophical Hall in order to make full use of the Society's valuable collections. Miall continued to act as Curator of the Philosophical and Literary Society Museum until 1891, and remained their Honorary Curator until 1908.

The biology department (botany and zoology were separate departments from 1907 to 1988) of the Yorkshire College was originally housed on the second floor of the Baines wing and gradually spread, including a new building for botany in 1908, until 1997, when new purpose-built accommodation, named the Miall Building, was opened. Originally, the zoological museum was housed in the corridors and around the sides of a laboratory in the Baines Wing, but when alternative accommodation was provided for the new Botany department in 1908, the old botanical laboratory was taken over as the Zoological Museum. Over a long period the museum remained much the same and without any proper curation. Nevertheless, the department dealt with Gerrards, a company of biological preparators in London, from whom they purchased material and sent specimens for cleaning, repairing, mounting and replacement.

During the early part of 1997 the cabinets and contents of the museum were crated up, transported, rehoused (Figure 1), arranged by John Altringham and displayed in the new building. For the first time the collections were brought together. In addition to a new zoological museum, a separate room was available for the extensive entomological collections, which had previously been widely dispersed across the University. A preparation room and store rooms were also available, while the herbarium, housing in excess of 50,000 specimens, was allocated a separate and adjacent room (Edmonds, 1998).

The zoological collections were assembled primarily as a teaching resource and are still used for this purpose (Figure 2). However, various named collections, some of which were donated by former members of staff, form valuable collections for research purposes (Kate Arnold-Forster, 1993). These extensive teaching and reference collections include spirit specimens, taxidermy mounts, and the skulls and skeletal material of vertebrates. The invertebrates are represented by spirit specimens and dry material such as corals and shells. There are also comprehensive microscopic slide collections and lantern slides dating from the nineteenth century. The collections are currently used for teaching biodiversity, vertebrate comparative anatomy, form and



Frontispiece

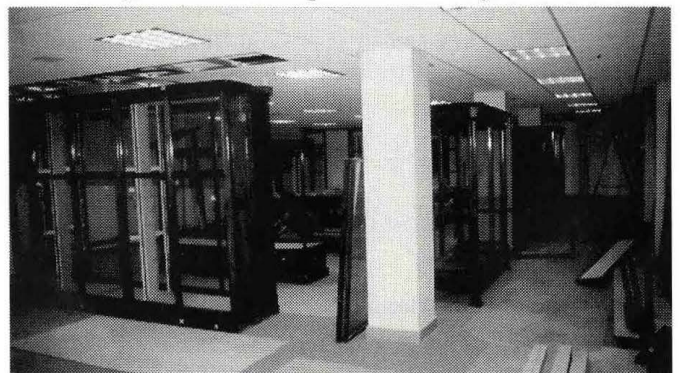


Fig. 1



Fig. 2

function and entomology. Also, final year undergraduate students are increasingly using the collections for their individual project work.

There is a museum accessions book dating from the early twentieth century, which refers back to 1898 and mainly documents the vertebrate collections. A card index exists for the entomological collections with a separate one for the invertebrate groups, though all of these are incomplete.

One of the earliest deposits came from the Leeds Medical School and consists of a large spirit collection of fish from the Wheelhouse Collection. Cladius Galen Wheelhouse (1826-1909) lectured in the Leeds Medical School from 1851 to 1873 and had travelled abroad during the earlier part of his career at sea. Other vertebrate material includes - amphibia (spirit and skeletal), reptiles (skins, spirit and skeletal) including a Monitor lizard and cast of the Tuatara lizard of New Zealand, birds (skulls, skeletons and wings) including whole mounted skeletons of the Kiwi, Tufted Duck, Ostrich and Shoe-billed Stork and rarities like the Kakapo. The mammals include articulated and disarticulated bones, skulls, articulated skeletons and taxidermic material (Figures 3 and 4).

A rich variety of mammalian skulls are displayed including those showing hominid evolution. There are whole articulated skeletons of the Tapir, Tree Shrew, Marmoset and Tarsier and the marine mammals are illustrated by the mounted skeletons of the Common Seal, Porpoise and West Indian Manatee. Monotremes are represented by the Duck billed Platypus and Spiny Ant-eater and the Marsupials include the skulls of the Tasmanian Devil and the extinct Tasmanian Wolf. The mammals have constantly been added to with material coming from the Philosophical and Literary Society Museum, the City Museum (including the skeleton of an Indian Elephant and a Porcupine) and from Dr L. Lloyd, a former member of staff who supplied material in 1914, following an earlier career in Africa. This includes the jaws, antlers, skulls, limbs and horns of about 30 mammals from Africa such as the Duiker, Brindled Gnu, Oribi, Black-backed Jackal, Lynx, Eland, Waterbuck, Sable, Hartebeeste, Reedbuck, Bushpig and Water Hog. There are 32 boxes of skulls and disarticulated bones in storage.

An important parasite collection came to light during a final trawl through the old building in 1997. This belonged to Dr R Wynne Owen who joined the zoology department in

1952 and died in 1985. It consists of approximately 500 tubes of parasites from invertebrates, amphibia, reptiles, birds and mammals but is particularly rich in fish parasite material (roughly 150 tubes). This collection remains to be fully documented.

The entomological collections consist of 29 cabinets and around 40 to 50,000 specimens from all over the world. Some have been collected by members of staff, and research students, while others have been purchased or donated. In the latter category are the personal and noteworthy collections of Diptera (R H Meade), Lepidoptera (J W Boulton, A H Clarke and M Sykes). There is a particularly rich collection of 'exotic' Lepidoptera, containing a very large number of species (Figure 5).

Other invertebrate groups are well represented in spirit collections (Figure 6) or on slides and include a large collection of marine specimens from Naples (1936) together with material from the Discovery expedition of the 1920's which arrived in 1936. Walter Garstang (1868 - 1949) was the first Professor of Zoology at Leeds and possibly because of his special interests in marine zoology and the origin of the vertebrates, the 'protochordates' are well represented in our collections. The latter include Urochordates from Naples and material received from the Natural History Museum, London in 1934 via Dr A Hastings - which includes *Doliolum*, *Salpa*, *Oikopleura*, *Pyrosoma* and *Cephalodiscus*.



Fig. 3



Fig. 4

Additional marine invertebrate specimens, collected at Robin Hood's Bay, Yorkshire by Miss N Eales from Reading, were deposited in August 1937.

Teaching models have been purchased at various times and include Hydra (in section), Anodonta (internal anatomy), chick embryo, rabbit embryo, the brains of several vertebrates including the human, and embryological models demonstrating the development of the frog and chick.

During 1998, a Gap Year student (Victoria Edmonds) began preparing comprehensive annotated museum labels, based on data from both the internet and up-to-date texts, many incorporating coloured illustrations. To date, those for the reptiles and birds and some for the invertebrates and mammals have been completed. The often extensive information included on these labels is particularly aimed at students of biology.

Currently we are investigating the best ways to make fuller use of the collections. We are consulting experts on how to set up a database, selecting specimens and producing labels for display material, sorting and cataloguing the collections and searching for financial support. When many university Natural History collections are facing a financial crisis and are currently at risk, sold, stored, given away or

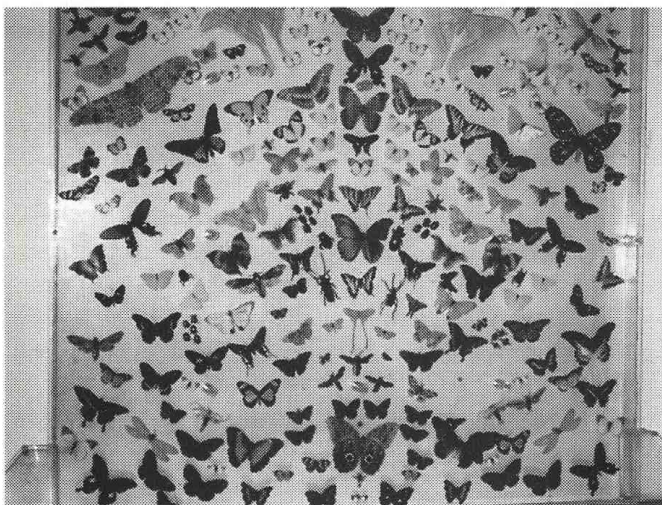


Fig. 5



Fig. 6

lost, we remain optimistic about the future, provided appropriate funding can be secured.

References

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Fenscore News

The FENSCORE Committee has met twice this year, in February and in June. There is now a Website on which you can search the national database of natural science collections go to :-

www.man.ac.uk/fenscore

The individual Collections Research Unit databases may also be searched independently (not all on line yet but soon will be), and there is much other information being added all the time. Of particular note at present is the full text of the North West Collections Research Unit report on the condition of collections in the North West: *Skeletons in the Cupboard*. The expenses of the Website are currently being funded by the Museums and Galleries Commission.

There is also a discussion list, FENSCORE -L. You may join this from the Website, or by emailing either the

Fenscore Webmaster (c.pettitt@man.ac.uk) or the List Moderator (ian@nms.ac.uk). The discussion list will carry up to the minute reports on Fenscore activities, and is intended also as a forum for the discussion of all matters to do with collection research.

At their recent meeting, the Committee decided to apply to the Heritage Lottery Access Fund for a grant to bring all the CRU databases up to a minimum standard of completeness and currency. It is intended the work will again be done on an area by area basis, with local knowledge input from the existing CRU members, although with the help of paid peripatetic surveyors. Visit the Website and/or join FENSORE-L to keep up-to-date on this exciting new development.

Bill Pettitt
email: c.pettitt@man.co.uk

Skin and Bones

Summary of the meeting held on March 25-27, 1999

After some hectic rushing around (at least of a telephonic nature) the skin and bones meeting finally made it to the light of day. It lasted two and a half days, split between London and Margate, and involved talks and tours at both sites, not to mention centrally organised transport and accommodation, an ambitious undertaking that nevertheless went off well, though to say without a hitch would be stretching a point.

DAY 1: Bones

There were four talks on the morning, held at the NHM in London. In the first, Julian Carter gave an overview of the raw material, bones of every shape and size. He covered composition, structure and development of skeletal material, and followed this up with a quick run through the preparation, cleaning and consolidation of bone. However, if one wanted to sum up the latter part of this talk, it would probably be "don't". While we all subscribe to the necessity of using reversible methods wherever possible, the truth is that, like so many things in life, this is really an unobtainable dream.

The second talk, from Adrian Doyle, was, notwithstanding the above, about how to deal with conservation problems, and how to carry out conservation procedures. In accordance with the moral of the first talk, though, he did advocate the use of environmental control as the preferred solution for at least 65% of all conservation problems. However, if you must, there are certain things that you should be aware of. Old attempts may well affect current ones, so specimens must be carefully inspected to see what has been done in the past, and if necessary, remove it. You must always make good records of everything that you do, so that when future conservators come along, they will know straight away what processes have been carried out, instead of having to work it out for themselves. Remember that what you do will change the specimen. For example, filling cracks may well reduce

Local Records Centres (LRCs)

- **Collect/Collate Software development ('Recorder 2000')**

The aim of this project to re-develop/replace Recorder, the standard software used in most LRCs. The design for the new software has been agreed by the project board and is on the National Biodiversity Network web site (<http://www.nbn.org.uk>). For details see: Ball, S. G., 1999. Progress with Recorder 2000, NFBR Newsletter, no. 24, pp. 7-10. Delivery of the finished product is scheduled for September 1999.

- **The Heritage Lottery Fund bid to fund the National Biodiversity Network**

A complex bid of a little under £4,600,000 was formally submitted in autumn 1998. It was withdrawn early this year because it was perceived not to be aimed at the right beneficiaries; voluntary sector naturalists and public users. A new, slimmer bid focussing on these groups will be prepared. Details of the National Biodiversity Network are available on their web site (<http://www.nbn.org.uk>).

- **New Publication**

Developing a Local Record Centre, a new loose-leaf handbook on how to establish or further develop a Local Records Centre as part of the National Biodiversity Network has now been published. Copies are available from: Rachel Hackett, Biodiversity Information Officer, The Wildlife Trusts UKNO, The Green, Witham Park, Waterside South, Lincoln LN5 71R (tel. 01522 544400; e-mail lrc@wildlife-trusts.cixco.uk).

- **Long-term funding**

English Nature has further elucidated its Position Statement on Local Record Centres (originally dated May 1998; for information see English Nature's web site <http://www.english-nature.org.uk>). It seems that long-term financial support for LRCs may be made available through Service Level Agreements. This is potentially very good news for many of the existing museum-based records centres.

- **What should the smart LRC do now?**

Submit your own lottery bid ASAP before the various committees get bored with plans to develop LRCs. Please keep me informed of local bids so that I can keep interested parties advised.

Howard Mendel, Collections Manager, Department of Entomology, The Natural History Museum, Cromwell Road, London SW7 5BD (Tel. 0171 938 8782; e-mail h.mendel@nhun.ac.uk).

Exhibition Event

its ability to respond to environmental changes, and so make the situation worse. Try to be aware of what current practice is, and what materials are currently preferred. In fact, if you must do something, get someone else to do (and then blame them?).

Olly Crimmen gave a talk on preparing fish skeletons, something that most of us might not give any thought to, and if we did would walk away from rapidly. He pointed out that hard information on many of the traditional conservation problems is hard to come by when it comes to fish. Very little preparation of fish skeletons is now carried out, and the traditional methods often destroy much of the valuable methods. He suggested a couple of methods of retrieving this information by less traditional methods, X-ray examination and clearing and staining for small specimens. (The pictures were very pretty, though I don't suppose the animals themselves were too chuffed.) He also mentioned a method for preparing large specimens in the field, which allowed the return of even pretty large specimens, though it did involve having a freezer available!

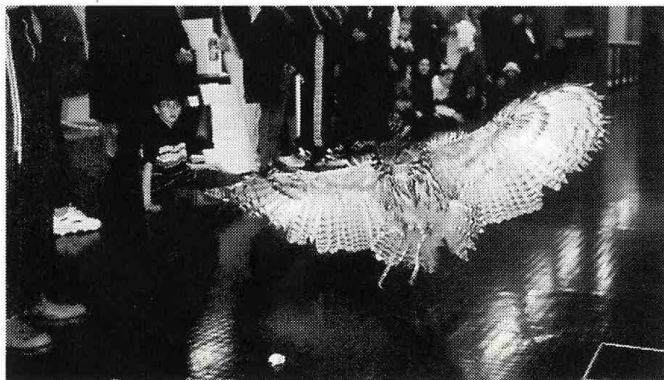
The final talk was from a firm of specialist removal experts, who had been brought in by the NHM to move some extremely large specimens, to wit, a pair of giraffes and a sperm whale, amongst others. It is difficult to describe this without the pictures, suffice to say it was a remarkable exercise, and not one for those of a nervous disposition, (unless, of course, you happen to have a dislike for giraffes!)

The afternoon was given over to tours of the various facilities at the NHM, including the fish collections and the conservation labs. Actually, the NHM does not have a conservation department, so I can only suppose that the large lab, filled with impressive looking high tech equipment, was actually a computer simulation. (I have it! The NHM has a holodeck).

Steve Thompson
Scunthorpe Museum

Live Animals in Natural History Galleries

Having just had a successful launch to Hull and East Riding museums of the new Birds of Prey temporary exhibition with live birds flying in the gallery I was wondering what similar live events other people have had in



their museums. For us the event was a terrific success, bringing in hundreds of visitors and packing out the gallery – I'm sure that live animals in museums could open many a can of worms, but has anyone else had any interesting experiences at such similar events?

To start the ball rolling our event involved seven birds in the gallery with flights every hour and a half or so. Of the birds the undoubted star was the massive Eagle owl who flew without hesitation many times up and down the gallery. Potential problems we considered were anti-hunting/animal liberationists, from birds getting bored and deciding to roost up in the beams of the museum, and the hazards of museum soundtracks with dogs barking. The gallery itself has no skylights or windows that the birds could fly into, and is about 30 metres long, although the birds could have probably flown in a 2 metre long space had they so desired.

The event itself attracted good media coverage with a considerable number of attendees reporting that they had heard about it on the local radio station Radio Humberside. Following the events success four more events for the 22nd of May, 26th June, 10th July and the 28th August were arranged. The only possible near incident was that a child had a cuddly toy that resembled all too closely a potential bird's dinner – however the bird handler noticed it before any incident could occur.

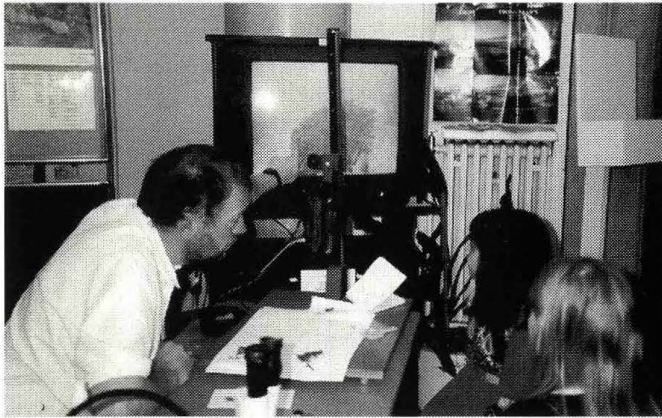
Should anyone be interested in either the exhibition on birds of prey it will be available from September as a touring exhibition, and the live birds came from the Park Rose Pottery, Bridlington.

Matt Stephens
Assistant Keeper of Natural History
Hull and East Riding Museum



Gardening in the Gallery

'A Secret Garden - the hidden world of mosses and liverworts' is the travelling exhibition of the British Bryological Society. It has recently been displayed at Bolton Museum, Art Gallery and Aquarium with additional objects from the museums' collection. These included larger-than-life models of bryophytes (mosses and liverworts) and examples of local peat-bog archaeology. Also included was a section on responsible peat-free gardening and conservation of peatlands.



During the Easter school holidays six days of Garden Workshops took place. Advance publicity targeted family groups who were asked to bring along bryophytes from their gardens. A local expert (recorder for South Lancashire) was in attendance complete with video microscope, conventional microscope and a variety of hand lenses. Mosses were identified on the spot and with a local street map and ordnance survey map to hand these identifications were easily made into valuable biological records.

Peat-free compost (courtesy of B & Q) and cornfield seed-mix (safely contained in plant-pots by cling-film) allowed the children to take home a living reminder with a conservation message.

Patricia Francis
Bolton Museum

Wood End Museum

The Wood End Museum of Natural History in Scarborough is currently involved in a comprehensive 2 year Heritage Lottery funded project to regenerate the zoological and botanical collections in its care.

Improvements are being made in the documentation, access and storage of this important natural history archive. As Project Co-ordinator, it has become increasingly evident to me that a large number of other museums and institutions have been involved with the museum over the last 170 years, and trying to track these interactions down has become a mission!

If any one has any information regarding the collections at Wood End, I would be very glad to hear from you. This may be a definite note on a particular specimen or collection, or a vague memory! We are trying to build up as broad a history of the collections as physically possible and it is often surprising the little gems of information that can be gathered. If anybody has any information, or requires further details please do not hesitate to contact myself at:

Douglas G D Russell
Wood End Museum
Londesborough Lodge
The Crescent
SCARBOROUGH
YO11 2PW
Tel: 01723 367326
Fax: 01723 354979
Email: DTLS@SCARBOROUGH.GOV.UK

Gardening in the Gallery BCG Newsletters

Years 1976-1986 newsletters, as a complete run, offered free if collected or for payment of postage costs.

Nora McMillan
c/o Zoology Department
Liverpool Museum
William Brown Street
LIVERPOOL
L3 8EN
tel : 0151 478 4399

The diary of a provincial curator

being some true jottings from a northern countie by the Revd. Optimus Lingsblow.

January 20th - A cold wind from the north but no great frost. To luncheon a side of mutton, 2 bott.s port wine. At three o'clock comes a ruffianly character to the door with news of martin cats and gledes from the firr wood by the turnpike. As we converse there arises a trilling, as if of birds, and he reaches into his rags to withdraw an instrument of wire-less communication, whereupon he proceeds to converse at length with his mentor from the parish workhouse. He says that his name be Ezekiel Mann and his face was scarred in the recent warrs in the Orient, though they appeared to my eyes to be the scarrs of an alehouse brawl. Dined at five and afterwards entered Mann's observations into the ledger.

Items: To Ezekl.Mann for his pains, a shilling. To mistress Cameron for herbs to dispel the malodour, three ha'pence.

January 21st - North wind still cold. To luncheon, a leg of pork, three bott.s ordny. claret. Comes this day, my man Woodwhit, with news of the man Mann, saying that he is the talk of the alehouse where it is known that he was recently cast from his lodging by the widow there for unseemly behaviour and is fresh from Newgate having narrowly escaped the gibbet for attempted murder. He is also the most incorrigible liar known and many other charges did Woodwhit lay at his door. Now how am I to validate his records and what of my shilling!?

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E.Mail: bolmg@gn.apc.org. *(Please send on disc using Word for Windows or ASCII-file with hard copy).*

Copy Dates: 8th January for March, 8th May for July and 8th September for November

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