The Biology Curator

Title: The University of Leeds Natural History Collections - Part 2: The Museum and Zoological Collections at the University of Leeds

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Source: Baker, R. A. (1999). The University of Leeds Natural History Collections - Part 2: The Museum and Zoological Collections at the University of Leeds. *The Biology Curator*, *Issue 15*, 2 - 4.

URL: http://www.natsca.org/article/422

The University of Leeds Natural History Collections - Part 2

THE MUSEUM AND ZOOLOGICAL COLLECTIONS AT THE UNIVERSITY OF LEEDS

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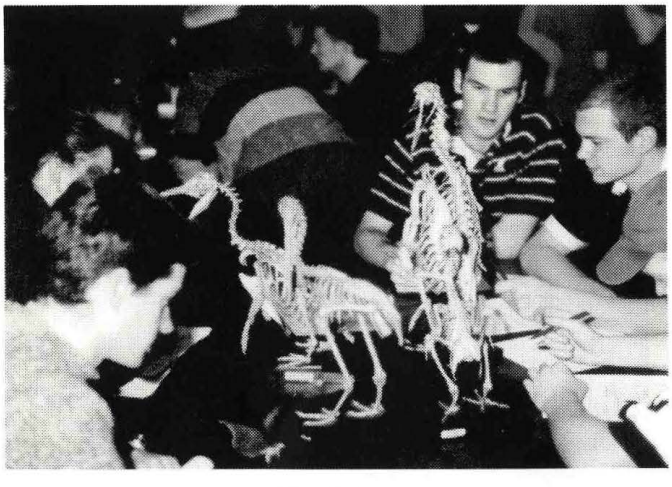
University Biological Collections have, despite their potential educational value, been largely neglected over the last 50 years. The current system of university funding threatens university museums, many of which are at crisis stage (Pickering, 1997) and unless their potential is recognised several 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.



Frontispiece

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

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 Boult, A H Clarke and M Sykes). There is a particularly rich collection of 'exotic' Lepidoptera, cotaining 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 lost, we remain optimistic about the future, provided appropriate funding can be secured.

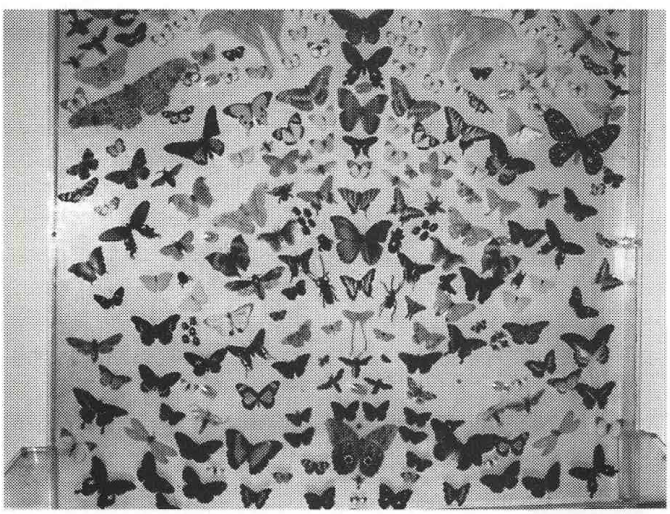


Fig. 5

Fig. 6

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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