The Biology Curator

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Woodcock, UK) and the contributions museums can offer (Jon FjeldsÂ, Denmark). The overwhelming tone was to maintain moderate bench fees, the need for new material and the importance of specimensí series. Jon FjeldsÂ, himself a bird illustrator, collector and curator, seems to be able to offer larger collections of newly collected material from both Europe and further afield. His collections at Copenhagen Museum are therefore some what unique for the general situation in Europe.

Townsend Peterson (USA) promoted the idea of a world-wide avian specimen data-base in his talk ìDistributed Data-bases over the Internetî. Already initiated in the United States he welcomed the inclusion of world-wide institution. With his knowledge and experience European museums will gain valuable assistance in building up a network of their Avian collection holdings. The final two talks touched two completely different aspects: Clemency Fisher and Effie Warr (UK) spoke about ìMuseums on Paperî giving several examples of the importance of the paper/art work associated with specimens and collections; and Les Christidis and Janette Normann (Australia) summarazied DNA studies using museum material. Subsequently a discussion concerning sampling policies developed.

In addition to the high quality lectures, delegates could learn from posters around the conference centre concerning aspects of collections and research in a variety of European museums. Posters covered a diversity of topics including extinct and endangered specimens in the Sofia Museum; specimens of the RÈunion Starling in Italian collections; an overview of the birds collected by Charles Darwin during the voyage of the H.M.S. Beagle; the amount of data attached to specimens at Sarisska Museum (Slovakia); research projects connected with the skeleton collection at Tring (Gibraltar caves/Mascarene Island subfossil bones); microscopic feather identification; and bird communities of the Indian Ocean Islands. Bookshops were also present, representing the British Trust Ornithology, British Ornithologistsí Club and other publishers, offering plenty of literature for the scientific community.

Following immediately from the conference a day-long Workshop was held entitled ìIncreased Co-operation between Museum Bird Collections, especially in Europeî. Approximately 55 professional bird curators, representing almost every major European bird collection as well as others world-wide, remained behind to participate in this more informal but structured discussion. The event proved both stimulating and productive, bringing together people who in some cases had been in contact for years without having ever met.

The main subjects divided into five separated sessions were: the current state of co-operation between collections; the potential for electronic catalogues of types and extinct & endangered bird specimens; the implications of DNA sampling and how it should be regulated; and collecting policies and the importance of adding to the collections. Of the many issues and points raised, the overriding conclusions were: i) to initiate a European network of collection information via the world-wide web; ii) to generate a ëglobalí electronic type catalogue for all bird taxa (to be maintained by the Smithsonian Institution, Washington D.C.); iii) to unify the regulations for DNA sampling policies; iv) to focus on active collecting to enhance species time series and improve ëbreeding birdí representation in collections; and v) to more openly engage in exchange programs between institutions. Already since the conference several institutions have agreed to specimen exchange programs

It was also agreed that an informal common media (e-mail chat group) should be established to share general curatorial issues. This could be based, and even linked to the existing American forum ëAvecolí.

Additional talks introduced other topics for discussion: Sylke Frahnert (Berlin) explained the CETAF network (Consortium of European Taxonomic Facilities); Fausto Barbagli (Pavia) presented the European governmental funded ìExtinct and Vanishing Animalî list, where museums in Europe listed their holdings of rare specimens; and John Cooper (Wildlife Health Service, Wellingborough) asked for more involvement of vet science in museum matters, especially welcoming more material from zoos, bird parks and veterinary surgeries being incorporated into scientific collections.

The conference and workshop were seen to have been very successful and it was agreed that European curators should hold subsequent meetings on a two-year basis. Curators from Bonn, Germany, volunteered to host a 2001 event and Leiden , Netherlands, was suggested for 2003.

A published Proceedings of both Conference and Workshop will appear in 2000. For further information about the conference proceedings please contact Robert Prys-Jones, The Natural History Museum, Akeman Street, Tring, Herts HP23 6AP, e-mail: <rpp@nhm.ac.uk>. Tel: 0207-942-6158.

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Scottish Marine Collections at the National Museums of Scotland

In recent years the National Museums of Scotland (NMS) has acquired several large and scientifically important collections of marine invertebrates. This article outlines the way NMS has collaborated with government, academic and commercial institutions in order to obtain these specimens.

Collaboration with government institutions

The Scottish Environment Protection Agency (SEPA) became fully operational in 1996. Amongst SEPA's many duties is the control of discharges to tidal waters out to a three mile limit. SEPA monitors the environmental effects of these discharges by taking biological samples for laboratory analysis, and therefore collects, preserves, sorts and identifies large numbers of marine invertebrates each year.

SEPA East Region approached NMS directly when a move to new premises made them seriously consider their lack of long term storage space, and within a week they had deposited much of their material with the museum. The size of the SEPA collections obtained means that incorporation into the NMS main collections is a gradual ongoing process. Nevertheless over 1,200 lots have already been incorporated. The success of this collaboration has led to close co-operation between NMS and SEPA on ongoing projects in the Firth of Forth.

A more extensive survey of Scottish waters was made during the Marine Nature Conservation Review (MNCR) - a project set up in 1988 by the Joint Nature Conservancy Council (JNCC) to survey the marine environment of the UK. Amongst the first areas to be surveyed were the Scottish sea lochs, encompassing all lochs from the Solway Firth in the south west of Scotland, to the Shetland Islands in the north and the Outer Hebrides in the west. During the three year programme thousands of animal specimens were acquired and processed at the Millport Marine Laboratory on the Isle of Cumbrae. The data associated with the material were recorded in the MNCR database and the information on habitat and community structure was published in an extensive series of JNCC reports. In 1993, after negotiations between the Museum and the JNCC, it was agreed that the Scottish sea loch samples should be deposited at NMS. When the 10 year project came to an end in 1998 NMS received not only the sea loch samples but also additional samples from the north and east of Scotland as well as all the samples from England. The zoological collection deposited at NMS by the JNCC has now been processed and totalled nearly 2,000 lots.

Collaboration with academic institutions

In 1994 deep sea samples of marine invertebrates from the Rockall Trough, west of Scotland, were acquired. This collection was made by the Scottish Marine Biological Association, based at Dunstaffnage, near Oban. During a 20 year surveying programme the project sampled the benthic community at two deep-sea permanent stations but additional samples were obtained opportunistically. The additional material ranges from as far north as Faroe and the Wyville-Thomson Ridge and south to the Porcupine Bank, allowing the investigators to describe benthic distributions over a very wide area. The extent of the project is illustrated by the resulting published literature which comprises over 100 scientific papers. Representative samples of all phyla are currently being processed and incorporated into the NMS collections. The Mollusca have been completed (by Dr S M Smith who will soon publish a catalogue detailing information on every molluscan specimen obtained) and the statistics derived from this process also give an idea of the scale of the project. Over 7,500 lots of Mollusca were obtained and approximately 560 molluscan species were identified, some of which were new to science.

Another Scottish Marine Biological Association long term research programme looked at the population dynamics of Lochs Creran and Etive on the west coast of Scotland. Work began in 1967 when the benthic fauna of the lochs was sampled using an anchor dredge at 30 stations. This was followed up with a large series of grab samples at the same stations; additional material was also obtained from the intertidal area. Sampling continued at intervals through the 1970s and into the early 1980s. The collection, originally held at the Dunstaffnage Marine Laboratory, was donated to NMS in 1994 by Professor John Gage. In the summer of 1999 the collection was processed, yielding 2,600 lots.

Although the acquisition policy at NMS for the Mollusca and Marine Invertebrate sections focuses on Scottish waters, we recognise the importance of holding comparative material from adjacent areas. In 1999 NMS obtained an important collection of benthic marine invertebrates from the Irish Sea. We made a direct approach to Port Erin Marine Laboratory in the Isle of Man to enquire whether they had any scientific samples that could be given a permanent home at NMS. The collection we were offered results from a study conducted on the effects of scallop dredges which are used extensively in Manx coastal waters. The collection is still in the early stages of processing but it is also expected to yield several thousand lots. We have since been offered further samples currently in storage at Port Erin.

Collaboration with commercial institutions

It is not only government monitoring groups and academics that are interested in the marine environment. The sea around Scotland is big business to the offshore operators and these companies have financed numerous environmental surveys around their oil and gas rigs. The umbrella organisation to these companies, UKOOA (the UK Offshore Operators Association), has recently invested money to collate the data from all past environmental surveys and have pursued a policy of openness with respect to these data, and to the specimens from which the data were derived. UKOOA's openness allowed Environmental and Resource Technologies Ltd, an Edinburgh based consultancy, to donate thousands of samples collected over 20 years from oil and gas fields and other environmental impact sites e.g., the Braer oil spill. Most of the samples are from the North Sea continental shelf and represent a whole host of phyla from sites that have rarely been sampled by the academic community.

In 1996 the offshore operators took their spirit of openness and co-operation a step further when the Atlantic Frontier Environmental Network (AFEN) was formed. This working group included 21 oil operators, the Department of Trade and Industry, the Scottish Office Agriculture Fisheries and Environment Department (SOAFED) and the JNCC, and was created to address the environmental issues facing the expansion of the oil industry into deeper waters. Over 20,000 square kilometres of seabed to the west of the Shetland Isles were mapped and sea floor samples were collected by grab and corer from over 200 stations, in depths varying between 100 and 1,500 metres. The numerous samples were sorted and identified by environmental consultancies before being deposited at the National Museums of Scotland. AFEN then funded a bursary award scheme and many of the samples have now been loaned to leading taxonomists under this scheme.

Our policy

In addition to the large collections detailed above, many smaller donations have been accessioned in the last five years. We welcome, and actively seek, material accompanied by scientific data and/or published research, regardless of the size of the collections, and we endeavour to make all this material accessible through the NMS loans scheme. In many cases access has been the donor's primary concern and reassurance that their samples will always be available both to themselves and others has been sufficient to secure the donation.

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Birds of Essex – A Request for Information

Research is in progress for a new book of the birds of Essex. We are investigating all historic collections of birds, especially where these have been donated to museums. A recent visit to the Saffron Walden Museum was very successful (special thanks to Sarah Kenyon) with an American Bittern specimen shot in 1826 at Wendens Ambo — a new species for Essex!

If your museum should have any bird specimens collected in Essex, we would be grateful for any information and we will visit the museum to confirm identification and all associated details. Full acknowledgements will of course be given in the book.

Contact: Simon Wood (Chief Editor), 18, Memory Close, Maldon, Essex CM9 Tel: 01621 841061

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BCG Web Site

BCG now has a web site **www.bcg.man.ac.uk**

As the URL indicates, the site is hosted at Manchester University on behalf of the Group. Bill Pettitt has set up the basic site, and will continue to advise and help, but the ëWebmasterí is Lindsey Loughtman at Manchester.

However, we will need a deputy Webmaster to back up Lindsey. Anyone who has easy web access can help maintain the site and they can be based anywhere in the country. If you are interested, please contact Bill or Lindsey for more information.

Do have a look at the new site, and give the Webmaster your views. We especially would welcome suggestions for improving or extending the web site.

Bill Pettitt (c.pettitt@man.ac.uk) and Lindsey Loughtman

Making Plants Displayable

Rotherham Museum, Clifton Lane, Rotherham, S65 2AA

Trial Plant Drying & Preservation

In 1995, the existing natural history displays at Clifton Park Museum had been in existence for 21 years having been set up in 1974, so were well over 20 years old, well beyond any reasonable life expectancy of such a display. Not surprisingly, the plant material in the displays were dead, brown and helped to make the displays rather drab. It had been noted that in other museums this was also generally the case. The 'better' displays tended to have freeze-dried specimens that had been painted to preserve their colour, which though achieving what was expected, the results were usually very obviously artificial. In the Museum of today, finance and skilled manpower are in short supply, so solutions to display problems must be cheap, easy and efficient to implement. At the same time, museum customers have a high expectancy of excellence.

The immediate and obvious question was, could fresh-looking plant material be displayed. This was investigated, and the well known answers found. Wax models can be good, but are very expensive and extremely delicate. Plant material can be freeze dried but the colour is lost and again the specimens are delicate and very expensive. An impression of colourful plant can be made by use of photographs but they are two dimensional only, limiting the viewpoint of the visitor and degrading the exhibit.

To fulfil the criteria of cheap and simple, sand drying was considered to be the best practical method of plant preservation. What was less clear was what subsequent treatment could be applied to deter pests and moulds and what would be the rate of colour loss.

The finer the sand, the better. The finest found, and used, was chinchilla dust, which is an extremely fine sand that was purchased from a pet shop in Bakewell and costing £2 per kg bag (two bagfuls were used). This sand is so fine that when poured on and around the most delicate plant parts, there is no deflection of those parts. Another problem found with builders 'sharp' sand is that the edges of the crystals of silica frequently become embedded in the plant surface, marring that surface and need to be removed after drying; this is not a problem with chinchilla dust.