

1986 Meeting Abstracts

The following are abstracts for the presentations given at the 1986 Annual Meeting of the Society for the Preservation of Natural History Collections in Washington D.C., 8-10 June, 1986, Fred Collier, Host.

The Problem of Mazon Creek Type Specimens in Private Collections

Mary Carman, Field Museum of Natural History, Chicago.

The fossils of the Mazon Creek, Illinois, area represent an exceptionally well-preserved biota composed of about 500 species from the lower Pennsylvanian Period. In a review of 100 scientific papers on Mazon Creek published between 1886 and 1986, 300 type, illustrated, and referred specimens were cited as being in 62 private collections. This is compared to all other published Mazon Creek material in 18 recognized institutions. The recommendations of the International Codes of Botanical and Zoological Nomenclatures that all type and illustrated specimens be preserved in permanent institutions are not always followed, especially in the case of Mazon Creek. There are no guidelines for maintenance of referred specimens. Mazon Creek is a prime example of a situation where scientific artifacts have been lost or their whereabouts unknown because specimens were in private collections. Preservers of natural history collections can and should play a role in locating these privately held scientific specimens. Valuable scientific material, such as cited fossil specimens, *should be preserved* in established institutions.

Bird Egg Collections in North America

Lloyd Kiff, Western Foundation of Vertebrate Zoology

Bird egg collecting was a common and traditional hobby in North America from about 1850 to 1940. Although large private and institutional collections were amassed, relatively little scientific use of such specimens was made during the period of intense collecting. Although most major natural history museums housed egg collections by the 1950's, few would accept additional specimens. The Western Foundation of Vertebrate Zoology was formed in 1956 by a group of prominent amateur naturalists partly to serve as a depository for then unwanted egg collections. Subsequently, 250 collections have been brought together from around the world by the WFVZ.

The discovery in 1967 that DDE, a metabolite of the ubiquitous pesticide, DDT, causes eggshell thinning in many species of upper tropic level birds focused attention on long-ignored egg collections, since the specimens, mostly taken before the advent of synthetic chemicals, provide a baseline for presumably normal eggshell quality.

There are presently about 100 egg collections in North America containing at least 200 sets, and total nearly 500,000 sets. Almost all are in public institutions. There are a few other large collections elsewhere in the world, especially those at the British Museum, University of Helsinki, and the Leiden Museum.

A Preliminary Inventory of Botanical, Mineralogical and Zoological Species Occurring in Canada

Daniel J. Faber and Karen Strong, National Museum of Natural Sciences, Ottawa.

Canada has a diverse fauna and flora lived and living within its 10 million sq. km. Almost 200,000 botanical, mineralogical and zoological species are known from Temperate and Arctic regions of Canada. This study was a literature survey in an attempt to document which groups of natural history species are least known. These data will provide information about which natural history groups need further research.

Conservation of Natural History Collections, I. Assessing Problems

Catharine A. Hawks, Carnegie Museum of Natural History, Pittsburgh.

Natural science collections contain a wide variety of organic and inorganic materials subject to deterioration from physical, chemical and biological causes. Both the scientific value and the long term preservation of specimens may be compromised by problems inherent in the original materials, by unrecorded preparation techniques, by subsequent treatments, and by storage methods and materials. Examples of common problems will be used to illustrate various sources of deterioration.

Conservation of Natural History Collections, II. Suggestions for Future Directions

Carolyn L. Rose, U.S. National Museum of Natural History, Washington, DC.

Although the concerns of fine arts have dominated conservation studies for a number of years, recent attention has been directed to problems associated with the preservation of large and multicomponent collections, such as anthropological, historical and archival ones. Many of these findings can be applied to problems extant in natural science collections. In addition, some studies are being conducted on special problems of natural history materials, such as pyrite inclusions in mineral specimens. In order to better address the overall needs of natural history collections, applicable conservation studies and information must be readily available to those responsible for the preservation of these materials. Moreover, the special requirements of natural science collections must be communicated to those who can undertake needed research and experimental studies. Suggestions for pursuing both these avenues will be discussed.

Preservation of Douglas Fir for Museum Display

C. Romero-Sierra and J. C. Webb, Queen's University, Kingston.

A formula and process for preserving Douglas Fir branches has been developed. The treatment consists of immersion of the branches in a mixture of chemical preservatives for a period up to two weeks. The branches are subsequently rinsed in water and placed in a holding solution of water and glycerin for an addi-

tional two weeks or longer. Finally, the branches are air dried. The treatment preserves the needles and prevents them from shedding. This treatment was unsuccessful with specimens of Sitka Spruce but new treatment formulas have been developed.

Improvements in the Construction of Plastic Display Jars for Museums

G. W. Lyons, Queen's University, Kingston.

Due to the increased cost of materials over the last few years, it has become increasingly important to develop methods of constructing museum jars and displaying anatomical material in an inexpensive manner. Described is a method of constructing plastic display jars from transparent plexiglass. The design and construction of a simple bending jig containing a solid heating bar has simplified this task. The re-

sulting product offers the user the advantages of versatility in size, display function and superior quality at low cost from readily available materials.

The Atlantic Geoscience Centre

I. A. Hardy, Atlantic Geoscience Centre, Halifax.

The Atlantic Geoscience Centre (AGC) is a Division of the Geological Survey of Canada, Department of Energy, Mines and Resources. AGC is responsible for conducting long-term basic research and surveys, and short-term mission-oriented programmes along Canada's offshore regions in both the Atlantic and high Arctic. To support this research extensive use has been made of computers to acquire, process, manipulate, manage and display site-specific information for the more than 150,000 geological marine samples comprising the AGC's inventory of collections.