PAPERS

VARIABILITY IN MEASUREMENTS RESULTING MICROSCOPIC ANALYSES OF COLLAGEN SHRINKAGE-TEMPERATURE
STEPHEN L. WILLIAMS
Natural Science Research Laboratory, Museum of Texas Tech University, Box 43191, Lubbock, Texas 79409-3191

Abstract - A statistical study was conducted on the microscopic method of analyzing collagen shrinkage-temperature (T.) to determine its value for studies relating to the care biological research collections. Initial T., T, at time of birefringence change, final T,, and T, range were variables found to be most useful for analysis. Variation of T, measurements attributed to sampling location, sample preparation, and preservation treatments of samples were examined. This study shows that these factors do affect T, measurements, demonstrating the need for standard procedures and the usefulness of adequate sampling. The amount of variability may provide a mechanism of interpreting the thoroughness of preservation treatments of collagen.

USING PARIS DOCUMENTATION AS A RESEARCH TOOL IN PALYNOLOGY
DAVID M. JARZEN
Earth Sciences Division, Canadian Museum of Nature, P.O. Box 3443, Station D, Ottawa, Ontario KIP 6P4, Canada

Abstract - Through cooperation with the Canadian Heritage Information Network, Communications Canada, a database with supporting entry and retrieval programs was developed for the Canadian Museum of Nature to accommodate our palynological research requirements. The PARIS program allows specific questions to be answered through a series of simple searches, thereby serving as an identification tool. Appropriate standards for accuracy, cross-referenced fields, and the ability to search for "unknown" pollen or spore taxa via morphological characters are all accomplished using PARIS.

SUMMARY OF A STUDY TO EVALUATE COLLECTION MANAGER-TYPE POSITIONS
PAISLEY S. CATO Chair
SPNHC Committee for Evaluating Collection Management Positions*; Virginia Museum of Natural History, 1001 Douglas Ave., Martinsville, Virginia 24112

Abstract - An exploratory project was initiated to develop a profile of professionals who directly care for natural science collections as well as a profile of the positions held by these individuals. The primary emphasis was on those positions involving collection management regardless of the formal institutional title of the position. Surveys were sent to 130 individuals working with natural science collections in the United States and Canada; 82.3% of the individuals responded. Analysis of the responses provided
brief descriptions of the institutions represented; the collections with which
the individuals were affiliated; the individual's job, background and training,
professional development opportunities; and a more detailed description of
the tasks involved with the individual's job. Seventy-two percent reported
that collection manager best described their job function, but only 40%
formally held a title of "collection manager." The majority reported a broad
range of responsibilities under the following categories: specimen
preparation; management of specimens, data, and records; personnel
management; service; and general collection support and administration.
About one-third also reported tasks in the areas of research and
publications, teaching, and grant-writing.

MUSEUM COLLECTIONS: FUNDAMENTAL VALUES MODERN
PROBLEMS
H. V. DANKS
Biological Survey of Canada (Terrestrial Arthropods), Canadian Museum of
Nature, P.O. Box 3443, Station D, Ottawa, Ontario K1P 6P4, Canada

Abstract - Collections support scientific enquiries about the natural world
and enhance education. These fundamental values notwithstanding,
resources for collections remain limited despite recent increases in material
stemming from biodiversity itself, from the development of mass collecting
techniques, and from the need to house endangered collections, voucher
specimens, collections preserving genetic diversity, and regional
collections. The pressure on resources can best be met by obtaining more
resources. Knowing biodiversity (and thus understanding the world we
inhabit and living there sensibly) requires the steady accumulation of
information supported by collections, which in turn require essential
infrastructure resources. The support to other branches of science provided
by collections (and by the systematics work they facilitate) must be
explained to those who use this support but do not appreciate its true cost.
Initial project costs should include the means to identify material and
preserve voucher specimens. In addition, existing resources can be used
more efficiently by setting priorities to optimize scientific quality and
resource use. Increasing operational efficiency (collections management
and improved preservation) and division of labour (regional participation,
networks, and data standards) also conserve resources. Modern problems
can be solved by emphasizing the fundamental scientific value of
collections in building knowledge for current and future use.

Reviews

- Index herbariorum, part 1. The herbaria of the world, 8th ed., by P.
  Holmgren, N. H. Holmgren, and L. C. Barnett (eds.).
- The herbarium handbook, by L. Forman and D. Bridson (eds)
- A rhino in High Street, Ipswich Museum-The Early years, by R. A.
  D. Markham