

**Priorities For Natural History Collections Conservation Research:  
Results of a Survey of the SPNHC Membership**

*Paisley S. Cato<sup>1</sup>, Diana H. Dicus<sup>2</sup>, and David von Endt<sup>3</sup>*

<sup>1</sup> Project Coordinator; San Diego Natural History Museum, PO Box 121390, San Diego, CA 92112, USA

<sup>2</sup> SPNHC Conservation Committee Chair; 1415 Camelback Lane, Boise, ID 83702, USA

<sup>3</sup> SPNHC Research Subcommittee Chair; SCMRE, Smithsonian Institution, MSC D2002, MRC 534, Washington, DC 20560, USA

The SPNHC membership was surveyed to develop a list of priorities for natural history collections conservation research. The survey was mailed to 548 individual and institutional members and 229 responses (42%) were analysed. Ten topics were identified by at least half of the respondents with above average priority ratings. Additional topics were rated as priorities for transfer of information, with special attention given to conservation of documentation. These priorities reflect research needs that serve multiple disciplines and complement priorities identified for conservation research in art and historical collections. This paper represents the report submitted to the agency that funded the study in fulfillment of the grant requirements.

**Disaster Recovery in the Herbarium**

*Debra S. Baker and Caleb A. Morse*

R. L. McGregor Herbarium, University of Kansas, 2045 Constant Ave., Lawrence, KS 66047, USA

In conjunction with developing a disaster preparedness and recovery plan for the R. L. McGregor Herbarium, we staged a mock disaster and recovery in which herbarium specimens of nine taxa were damaged by mud, by fire, or mechanically. Each damage treatment involved water. Recovery involved either immediately freezing the specimens, or waiting 24 hours before either press drying the specimens with either heated or unheated forced air, or air drying the specimens on a newspaper-covered table. Most of the damaged specimens required some minor repair. Mechanically damaged specimens fared best. The exsiccatae of the remainder of the specimens either needed to be transferred to new sheets as soon as possible, or were stable enough to transfer at a later date. Freezing further damaged the specimens. Air drying resulted in specimens inferior in quality to press-dried specimens, and is not an acceptable method. Of the specimens dried in presses, there was no difference in quality between those dried with heat versus without heat. The most important lesson that we learned was that in the event of a disaster, there would not be enough time to recover the entire collection. Thus we have prioritized the collection for recovery.

**Fire Recovery at the Royal Saskatchewan Museum: Part I - Initial response and implications for disaster planning**

*Fiona Graham<sup>1</sup> and Sarah Spafford<sup>2</sup>*

<sup>1</sup>Ministry of Citizenship, Culture and Recreation, 400 University Avenue, 4<sup>th</sup>

Floor, Toronto, Ontario M7A 2R9, CANADA

<sup>2</sup> Fraser Spafford Ricci Art and Archival Conservation Inc., 2276-134 Street, South Surrey, BC V4A 9T9, CANADA

On February 16, 1990, a fire burned in an unfinished gallery of the Royal Saskatchewan Museum in Regina, Saskatchewan. The result was extensive soot deposition on all surfaces of the building and its contents. Museum conservators gained a deeper understanding of fire prevention/suppression and were alerted to the importance of smoke suppression and containment during a fire involving modern fire-retardant materials. The disaster recovery process involved not only museum staff but also a multitude of external inspectors, managers and commercial firms. Within the context of the fire in Regina, conservators investigated the role of such external agencies in the vital decisions and procedures following a museum fire.

### **Fire Recovery at the Royal Saskatchewan Museum: Part II - Post-disaster Clean-up and Soot Removal**

*Fiona Graham<sup>1</sup> and Sarah Spafford<sup>2</sup>*

<sup>1</sup>Ministry of Citizenship, Culture and Recreation, 400 University Avenue, 4<sup>th</sup> Floor, Toronto, Ontario M7A 2R9, CANADA

<sup>2</sup> Fraser Spafford Ricci Art and Archival Conservation Inc., 2276-134 Street, South Surrey, BC V4A 9T9, CANADA

A fire at the Royal Saskatchewan Museum burned for over an hour, depositing soot throughout the building and its contents. Cleanup of collection and displays was carried out within the building while it was being cleaned and refurbished. Over months of cleaning, a cleaning technique consisting of refined stages was adopted to deal with the factors specific to soot removal. To clean soot-covered feathers, a vacuum wand nozzle was designed. Testing was undertaken for vacuum, dry and wet cleaning of soot from delicate feathered and fur-bearing mounts.

### **Length Changes in White Sturgeon Larvae Preserved in Ethanol or Formaldehyde**

*Jennifer M. Bayer and Timothy D. Counihan*

US Geological Survey, Biological Resources Division, Columbia River Research Laboratory, 5501A Cook-Underwood Road, Cook, Washington 98605 USA

We examined the effects of two preservatives on the notochord and total lengths of white sturgeon (*Acipenser transmontanus*) larvae. White sturgeon larvae that were one, seven, and 14 days old were measured live and then preserved in 95% ethanol or 10% formaldehyde. Length changes were then determined at 20 and 95 days after preservation. We found mean length changes ranging from 0.4% to 3.4% shrinkage. Length changes varied with preservative, age of larvae, and length of time preserved. Constant length correction factors are provided for 10% formaldehyde or 95% ethanol valid for larvae between 1 and 14 days old preserved for less than 100 days.

### **A Study in Team-Building: The Collections Managers' Group at The Royal Ontario Museum**

*Susan M. Woodward<sup>1</sup> and Sheila C. Byers<sup>2</sup>*

<sup>1</sup>Centre for Biodiversity and Conservation Biology - Mammals, Royal Ontario Museum, 100 Queens Park, Toronto, Ontario, Canada M5S 2C6

202-1024 West 7th Avenue, Vancouver, British Columbia, Canada V6H  
1B3

The Collections Managers' Group (CMG) was initiated at the Royal Ontario Museum in April 1992. The group was developed by collections managers to establish a forum to openly discuss and effectively disseminate collections management information. By March 1996, the core participants of the CMG included collections managers from natural science, art, and archaeology departments, and representatives from conservation, registration, preparators, the library, and the discovery centre. Initially the CMG focused on preservation, storage and maintenance needs of research collections of arts, archaeology, and science disciplines. With further professional awareness in preventive conservation, members of the group were motivated to broaden their traditional approach to collections management and strive for a greater level of quality of collections care within their respective disciplines. By 2000, museum-wide concerns that have been addressed include 1/ pest management, 2/ standardization, documentation and conservation-testing of materials and supplies, and, 3/ development of emergency management (disaster preparedness) plans. This group promotes a collaborative workplace for collections managers to ensure the long-term, safe-keeping of the museum's most valued asset - its collections.