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## The Biology Curator

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Title: The Reconstitution of Dehydrated Museum Specimens III

Author(s): Vogt, K. D.

Source: Vogt, K. D. (2001). The Reconstitution of Dehydrated Museum Specimens III. *The Biology Curator, Issue 21*, 15 - 16.

URL: <http://www.natsca.org/article/607>

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told how he sees the treatment of infestation using a pesticide as useless unless the source of the infestation is also located and eradicated.

The strong message throughout the conference was that the best method of controlling pests is to take steps to deny them access to the area in the first place. Lydia Egunnike told how in the State Library of Queensland there are designated eating areas and employees are not allowed to eat in the areas near the books so that the pests are not attracted to these sensitive areas. Another way of reducing the presence of pests is to try and remove the areas that harbour them. Val Blythe of the V&A told how the likely areas known to be attractive to pests are dead spaces, for example under cabinets and under false ceilings, and areas with links to the outside like heating vents; she suggested that if possible there should be a physical barrier so the pests cannot blunder their way in. Quarantine of incoming material is also important as it can stop any infected material getting into an otherwise pest free environment. The best procedure is to isolate and freeze the material before allowing it into the collection area. Janet Berry from the Department of Museum Studies at Leicester University explained the plan of action they took for the treatment of a pest infestation in the mounted mammal collection at Liverpool Museum from the initial examination of specimens for pest activity to the wrapping of the specimens and transportation to the Conservation Cold Room for programmed freezing.

The need for monitoring pest activity was strongly emphasised, otherwise by the time you notice that you have a pest problem there may have already been significant damage to vulnerable material. The pest monitoring of historic houses was presented by Amber Xavier-Rowe, the Head of Collections Conservation for English Heritage. Training courses are set up for the staff at these houses where they are instructed in the importance of pest monitoring and are trained to identify pests that they might encounter; this makes the task of monitoring pests in different locations much more efficient.

The final message at the conference was to reiterate the importance of pest control and pest management strategies as these pests can literally destroy the invaluable collections of a library or museum if left to happily chomp their way through unchecked.

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## The Reconstitution of Dehydrated Museum Specimens III

**Kenneth D Vogt**

The evaporation of preservatives and subsequent dehydration of specimens is an on going problem in many zoological collections. Vogt (1991) reviewed existing methods and proposed a method of reconstituting specimens based on an acidic solution. Vogt (1998) provided a method based on a less acidic pH (6.5) for small specimens (larval and juvenile fish). This paper describes a method based on high pH (pH 10) for large specimens.

### Methods

A wet weight of fifteen specimens of fish, amphibians, and squid was taken to the nearest hundredth of a gram on a Metler balance. Specimens were air-dried in a fume hood for four days. An additional nine fish specimens that were found dehydrated were also used in this experiment. Specimens were placed in individual containers with a solution containing one pH 10 buffer tablet per 100mls of water. The buffer tablets were produced by Micro Essential Laboratory, Brooklyn New York. Specimens were kept in the buffer solution for three weeks then transferred to a water bath for three weeks. A Kruskal-Wallis test (Conover, 1980) was used to compare the weight gains of large specimens in the Vogt (1991,1998) techniques and the technique reported here.

### Results

The wet weight of specimens ranged from 191.06 to 387.75 grams. The dried weight of

the already dehydrated fish specimens ranged from 15.08 to 186.97 grams. The specimens showed an average gain of 91% of the original wet weight. Fins and jaws were malleable in the fish specimens; digits and jaws were malleable in the amphibian specimens. Arms and tentacles were malleable in the squid, but still retain much of their schivled appearance. The eyes did rehydrate and assumed a similar shape to the originally preserved specimens. The fish specimens that were discovered dehydrated showed an averaged gain (from dehydrated wet to wet weight) of 80%. Weight gains in specimens of similar weight were significantly higher than in the Vogt (1991) technique ( $P=0.046$ ) and the Vogt (1998) technique ( $P=0.003$ ).

#### **Discussion**

The buffer method lends itself to use with a variety of specimens. The preservation history seems to have an affect on the recovery of wet weight in this technique and in those reported previously (Vogt 1991, 1998). Specimens, which had the highest recovery, were either preserved in 70% ethanol or a commercially available glycol based solution, such as Carosafe or Wardsafe. Specimens that had a history of preservation in 50% or higher solutions of isopropanol and showed the typical hardness or brittleness did not show the same gains in wet weight as the specimens preserved in ethanol. The buffer tablets do not require any special storage procedures as acetic acid would and are available from most chemical supply companies. Dean (1995) lists the necessary chemicals to make one's own buffer solution if one have access to the chemicals.

#### **Acknowledgements**

I wish to thank the Department of Biology, University of Alaska, Anchorage for access to old instructional specimens and the use of laboratory facilities.

#### **Literature Cited**

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## **The Future of Collecting Collections of the Future Opportunities & Expectations**

**Oxford University Museum,  
April 18 –19<sup>th</sup> 2001  
Joint BCG & NSCG Conference**

A number of reports have come out over the last few years detailing governments expectations for museums in areas such as social inclusion, life long learning, developing audiences and working with schools and community groups. Many of these address museums role as institutions, but what of museums defining element, their collections? How are biological collections being used and developed to meet these more explicit agendas?

The conference looked at how biological collections are used and cared for and how collections are being developed for more applied uses, rather than just repeating the mantra of what a marvellous resource collections are. The theme was a timely one as Resource had recently set up the Regional Museums Task Force seeking to develop a more unified strategic vision for museums. Their report is now out and an initial response from one BCG member can be found on page three.

The following are some of the papers presented at conference.