SPNHC

The Society for the Preservation of Natural History Collections

Collection Forum
Fall 1987, Volume 3, Number 1 & 2

MICROFIL INJECTIONS OF SMALL VERTEBRATES: AIM ADJUNCT TO CLEARING AND STAINING

A. P. RUSSEL, A. M. BAUER and R. L. WALKER
Department of Biological Sciences, University of Calgary, Calgary AB T2N IN4
Museum of Vertebrate Zoology, University of California, Berkeley CA 94720

The practice of clearing and staining small vertebrates is widespread in the study of morphology and systematics. Such techniques are generally employed in the evaluation of skeletal characteristics but, if fresh material is available, they can be augmented by the treatment of certain soft anatomical systems. The injection of the circulatory system with Microfil' and the subsequent examination of the topography of the component vessels, either by way of clearing and staining or by radiography is one approach. We outline the method by which such injections are achieved and provide details of the visualization of the circulatory system and its relationship to skeletal elements and nerves. The method can be applied to specimens of a relatively small size. Once injected and cured the medium is stable and specimens may be stored in alcohol for extended periods and need not be cleared immediately.

BIOMASS LOSS IN WET-PRESERVED REFERENCE COLLECTIONS

D. V. ELLIS
Department of Biology, University of Victoria, Victoria, BC V8W 2Y2

Specimens of invertebrate and vertebrate animals held in liquid preservatives present a subtle problem for future use in ecological research. Where there is possibility that such future use involve weighing specimens for estimates of biomass and ecosystem indices, certain procedures would increase the value of the reference collections. The problem arises from the rate of leaching of materials from the specimens, hence loss of weight, which is usually a function of type of preservative and duration of storage. Specimens commonly are fixed in neutralized formalin and transferred after a few days to alcohol of various concentrations. Quality controlling this leaching effect is so inadequate at the moment that biomass productivity estimators generally will not accept values derived from preserved specimens. Adoption of standardized procedures for quality control would increase the value of wet-preserved specimens for long term retroactive analysis of ecosystem productivity changes based on reference collections in museums. It is suggested that museum records include original (wet weight) biomass values, a record of preservatives, dates and adequate quality control of preservative concentration, for sets of specimens held.

IMPROVEMENTS IN THE CONSTRUCTION OF PLASTIC DISPLAY JARS FOR MUSEUMS

G. W. LYONS
Department of Anatomy, Queen's University, Kingston ON K7L 3N6

Due to increased cost of materials over the last few years it has become increasingly more important to develop methods of constructing museum jars and displaying anatomical materials in an inexpensive manner. A method of constructing plastic display jars from transparent plexiglass is described. The design and construction of a simple bending jig containing a solid rod heating bar has simplified this task. The resulting product offers versatility in size and function. This may be accomplished at low cost from readily available materials.

"CASED" BIRD SKINS - AN ALTERNATE OPENING INCISION

S. A. HALFORD
Department of Biological Sciences, Simon Fraser University, Burnaby BC V5A 1 S6

In the preparation of ornithological study skins, an opening incision running from each thigh to the vent - similar to that used to prepare a 'cased' mammal skin - is useful. This method reduce the risk of stretching, possible tearing of the skin, and restoring the lay of breast feathers. This method will be particularly useful for pattern-breasted and long-legged specimens.