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Biology Curators Group Newsletter

Title: Disaster Planning and Emergency Treatments in Museums, Art Galleries, Libraries, Archives and Allied Institutions

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11. Emergency treatment of biological materials

11.1 Biological materials can be divided into two categories; dry specimens such as skins, furs, feathers, pinned insects and herbarium material, and wet specimens which are normally stored in 60-95% ethyl alcohol.

11.2 Large dry vertebrate specimens which have been saturated with water should first be allowed to dry out (see Part III, 3.7-8). This is continued until a relative humidity of 60% is achieved, which is the correct environment for these materials.

11.3 The dry specimens should then be cleaned using fine-haired paint brushes, or a vacuum cleaner with a cloth baffle over the hose, to remove dirt and mould.

11.4 To prevent the growth of mould the specimens are treated in a cabinet with thymol or chlorocresol crystals (see Part III, 4.14). For large specimens a 10% solution of either sodium pentachlorophenate or sodium orthophenylphenate in ethyl alcohol or industrial methylated spirits (NOT household "methylated spirits") can be applied as a spray using a garden spray gun. A spirit soluble fungicide must be used so that the relative humidity of the environment is not increased.

11.5 Pinned insects that have become wet should be dried fairly rapidly at a temperature no greater than 40°C. In this way they can be dried before any mould growth can occur. Should there be any hold up in the drying due to the amount of material that is wet the bulk of the material should be held in a freezer. Either thymol or chlorocresol may be used to prevent mould growth where immediate drying or freezer space is not available.

11.6 Should mould have developed on specimens it may be readily removed, after drying, by immersing the specimen for a short time in chloroform and then cleaning off the remaining mycelia with a fine camel hair brush as the specimen dries.

11.7 Dried herbarium material, usually in paper folders, should be treated in the same manner as library materials (see Part III, 4).

11.8 The majority of wet specimens are stored in ethyl alcohol contained in glass jars or tubes. If these containers are broken care must first be taken to retain all identification labels with the correct specimens if this is possible. Provided the specimens have not dried or shrivelled they should be washed, first in clean water, then in a fresh mixture of the preservative in which they were stored. They may then be stored, in preservative, in a new jar or tube.

11.9 Should the specimens have become dried or shrivelled, more especially the exoskeletons of invertebrates, they can be completely restored by soaking them in Decon 90 (a surface active agent) for about 16 hours. Following this they should be thoroughly rinsed and immersed in water until restoration is complete. They may then be stored.

from Upton, M.S. & Pearson, C. (1978) *Disaster Planning and Emergency Treatments in Museums, Art Galleries, Libraries, Archives and Allied Institutions*, The Institute for Conservation of Cultural Material Incorporated, Canberra.

As it is unlikely that any survivors of a global nuclear war would be very interested in reconstituting museum collections, this booklet is no doubt intended to rescue specimens after tornado, volcanic or other extremes of nature have passed through one's museum. Your editor can think of some museums not one hundred miles from his own in which this sort of advice is necessary yet there has been no civil war for several hundred years. This booklet contains some sound methods for treatment of material which has suffered from neglect as well as disaster.

ANY IRISH STOAT SKULLS?

James Fairley of the Zoology Department, University College, Galway, would like to know of Irish specimens of the skulls of stoats (*Mustela erminea hibernica*) in collections and be able to measure them. This is a continuation of his work on this subject, e.g. New Data on the Irish Stoat, *Irish Naturalists' Journal*, 17(2); 49-57 (1971) and has already examined the specimens from Dublin and Belfast Museums. Fairley is, of course, getting much material in the flesh from gamekeepers but needs as much data as possible in order to look into regional variation within Ireland.