

### Proposed wet bone conservation method for the East Milford Mastodon

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Upon arrival at the Nova Scotia Museum, the bones of the East Milford Mastodon (Grantham and Kozera, 1993) were placed in temporary storage between two layers of polyethylene sheeting, creating a cocoon. This was to ensure they were kept as humid as possible while awaiting conservation.

A simple washing facility has been set up in the Nova Scotia Museum's Natural History lab which is equipped with running water and a silt trap. Because of a severe fungal problem, several precautions have to be taken, such as use of respirators and disposable clothing. The cleaning of the bones will take place in two stages. The first stage will be an overall cleaning of the bones which should remove about 90% of the enclosing clays and other material. The second stage, involving a more detailed cleaning, should remove most of the remaining material.

Once the bones have been cleaned, they will be placed in humidity chambers. The humidity in these chambers will be kept as high as possible, maintaining at least 90%, while the bones await conservation.

The bones will in turn be placed in stainless steel tanks, which will be filled with a consolidating solution of Acrysol WS-24 (15%) (Trademark of Rohm and Haas, Limited) (as recommended by the Nova Scotia Museum conservator Chris Lavergne), ethanol (40%) and water (45%). This is the first

use and publication of this formula and these procedures for wet bone conservation. Soaking will take from one week to one month, or longer, depending on the size of the bone.

The bones will then be placed on a wheeled rack inside the first of a series of six drying chambers, each with a controlled relative humidity. The first chamber to receive bones will have a humidity of approximately 80 to 90%. The bones will be weighed on a daily basis to note the weight loss while drying. When there is no further weight loss the bones will be transferred to the second chamber, which will have a relative humidity of approximately 70 to 80%, and so on until the last chamber is reached having a relative humidity of 30 to 40%. In order to minimize handling of the bones, the walls of the humidity chambers will be removable and the rolling racks will be easily moved into the next chamber. This procedure will continue through to the last drying chamber with the lowest relative humidity, at which time the bones will be dried and conserved. At present it is estimated the conservation of the mastodon bones will take over three years.

GRANTHAM, R.G. and KOZERA, K.A. 1993. The East Milford Mastodon, its Discovery and Excavation. Abstract, Atlantic Geoscience Society Annual Meeting, February 12 and 13, 1993, Citadel Inn, Halifax.