

## FOSSIL MAMMAL TYPE COLLECTION HANDLING GUIDELINES

The AMNH Fossil Mammal Type Collection was surveyed, photo-documented and re-housed in 2006/2007 as part of a National Science Foundation supported project (NSF DBI-545155). Prior to re-housing, the fossils were stored using inferior materials (i.e. acidic boxes, acidic tissue and cotton batting), were poorly supported, were over-crowded (i.e. trays were too small, too many specimens within a drawer, etc.) and were poorly organized. The re-housing efforts have reduced most of these risks and we ask that you follow the handling guide below to help preserve the collection for future researchers.

### IDENTIFYING A TYPE SPECIMEN

The type specimens can now be identified throughout the collection by a series of markers:

*Red cabinet door label:* Red identifying charts have been placed on the outside of all cabinets where type specimens are housed. The charts indicate the specimen catalogue number, specimen name, drawer number, and whether it is a holotype or genotype.

*New, archival trays and boxes:* Type specimens are housed in custom-made blue board boxes or white stock boxes, now lined with Ethafoam.

*Red specimen label:* All re-housed type specimens have a red label accompanying the fossil to indicate its classification as a type, and to provide important publication information. These labels should help guide any scientific research being done and should be kept with the specimen at all times.

### REMOVING A SPECIMEN FROM THE COLLECTION

Yellow tags:

When, a specimen is removed from its storage area (drawer/shelf/cabinet), a yellow specimen tag must be completed.

Part one, with borrower's name, destination, date, specimen name and number is left in the collection drawer from which specimen was removed

Part two, filled in with name, number, and door and drawer number) is kept with the specimen.

Part three is left on the outside of the cabinet door

Handling:

Most specimens can be removed from their location without removing the entire drawer.

In some cases the specimen is either oversized or in many different pieces and the mount has been built into the drawer itself. In such cases, please ask for assistance in removing the drawer for study.

Check before pulling out any drawers. Often specimens are tightly packed and are in contact with the bottom of the drawer above. If you need to remove an entire drawer, make sure that you can support the weight of the drawer. Drawers are often of differing depths – pull the drawer out slowly and be aware of when you are nearing the end of the runner.

When removing an individual box/tray for examination, use two hands keeping the entire enclosure well balanced and secure. Take care to ensure that no other fossil is hit or damaged when removing the single specimen and note protuberances within the specimen.

Lift Indicators: When removing the fossil from its storage mount for closer examination, the small hand diagrams should be followed closely as guides for the safest and most stable areas to lift. These areas were deemed the least fragile and would ensure the most balanced approach to handling the specimen.

With a larger specimen, try lifting the object an inch or so clear of the surface, then immediately put it down. This will give you a sense of any weaknesses or flexion in the specimen.

Once the specimen has been removed, it should be set on a cushioned surface to minimize damage during study. Make sure that you have cleared the work area before lifting the specimen.

Never examine a specimen in a place where it can fall all the way to the floor. Hold it above a drawer, or tabletop, so that it has less far to fall if you drop it.

Think about how you put specimens down. Don't let the full weight of the specimen rest on a fragile structure.

Never leave specimens out overnight, or for prolonged periods of time – it increases the risk of accidental damage.

#### RETURNING THE SPECIMEN BACK TO THE COLLECTION

Placing the specimen back in its enclosure:

When the specimen has been removed from its box, a clear footprint of the fossil can be seen in brighter white. This footprint mirrors the shape of the specimen and should help you place the fossil back in its correct orientation.

When the specimen is placed properly within its support wedges with the correct orientation, it should feel as though it has "locked into place," ensuring a secure fit.

Ensuring correct placement & identification:

The specimens have been arranged in a specific cabinet and drawer number based on their taxonomic placement. It is essential that the specimen be returned to its original location.

Never force a specimen back into a box, drawer, or cabinet. Take the time to make sure it fits properly.

If you have pulled out an entire drawer, make sure that you return it to the same pair of runners in the cabinet – it is easy to damage projecting specimens by not allowing sufficient clearance above and below the drawer.

The fossil should be returned to its location with the catalogue number facing out for easy identification. This small step will reduce handling and potential damage.

The yellow loan tag should also be removed from the specimen, the drawer that it came from, and the outside of the cabinet.

#### DAMAGE DURING HANDLING

Should any portion of a fossil specimen get damaged during handling (or even previous damage

noted) please let a staff member know immediately. The fragments should be contained and kept with the fossil so accurate repairs can be completed. Even the smallest fragment can still be re-attached and used to understand structure more fully.