PREPARATION OF BIOFACTS

Most of the preparation of skulls and bones of our specimens are done in the Bone lab, which is part of the education department. In our current collection of biofacts, we have a wide variety of skulls, bones, pelts, eggs & feathers, almost all of which have come from the many species we have here at the San Francisco Zoo.

A. BUG BOX

The bug box is occupied by a colony of dermestid beetles. These beetles and larvae will eat whatever tissue is not removed from the bone. All of the bones that are put into the bug box must first be prepared. They are cleaned of skin, fur, feathers, or scales and large muscle masses. Depending on the size of the animal this may take many hours. Because the bugs "work" slowly, we also remove the eyes and the brain of most skulls to reduce odors. Depending on the size of the skull, it is left from only two or three days to ten days or longer in the bug box. Once the bugs clean the skull, it is soaked in a bleach solution to kill any eggs that may have been laid by the beetles and any residual tissue is removed by hand. This final cleaning may take from a few hours to a week or more, small areas are cleaned by hand with dental instruments and scalpels and washed with a "water pic". Depending on the size and kind of bone final bleaching is done with hydrogen peroxide or a bleach solution, the bone is then left to dry for several days. After drying, thin areas and the teeth are reinforced with glue, and a label and inventory number are attached.

If a bone is too large to fit in the bug box it is buried, but size isn't the only reason why we bury bones. Large bones contain a large amount of oil and grease; when buried, the microorganisms in the ground clean the bones and the sand absorbs the grease. Although this produces a better specimen it may need to stay buried several months and requires much more cleaning. Instead of soaking larger bones get pressure washed with a hose and then any remaining sand or small roots that have invaded the bone ate removed with tweezers. This is a very time consuming process and with a skull as large as a giraffe or rhinoceros may take several weeks.

B. Pelts

The hide is removed from the animal taking care to remove as much flesh from the hide as possible. The inside is then covered with rock salt and taken as soon as possible to the tannery. The commercial tanning process takes three to four months.

C. Eggs

A small hole is drilled in the egg and air is injected with a syringe, this pressure forces the contents of the egg out. The egg is then rinsed with a bleach solution and left to dry for a few days. Our collections of eggs range from regular chicken and bird eggs, to the more exotic, like those of an ostrich, penguin, and snake.

All specimens are marked with an inventory number that will help you identify when the animal was added to the collection. This is a five digit number, the first two digits are the year the specimen died, 79 would indicate the year 1979, 00 indicates the year 2000. The next three digits indicate the sequence the animal was added, 012 would be the 12th animal added that year. The entire number is preceded by a letter indicating if the animal is a mammal “M”, bird “B”, reptile “R”, or amphibian “A”.