## the very fine art of TAXIDERMY

By Ernst A. Gramatzki
Chief Taxidermist
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A mounted mourning dove sits under "wraps" to ensure that the feathers stay in the proper position while the skin dries. During the Museum's Members'
Nights last month, a colorfully
unconventional man was pondering one
of several skulls sitting around the
Taxidermy Division. He looked up and
into my eyes—which sit beneath a
balding head—and asked, "How do
you clean your skull?" It broke me up,
and as the visitor puzzled at my
reaction I was tempted to reply, "With
a washcloth and soap." He finally
recognized the ambiguity of his inquiry,
and joined in my laughter.

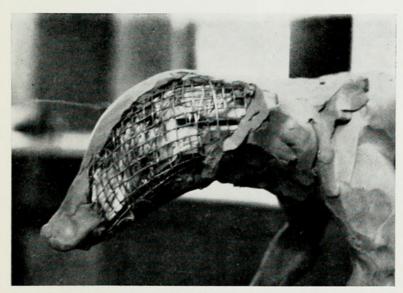
But his interest in what goes on in this room on the Museum's fourth floor is shared by many. The layman finds that what happens behind the scenes is not only interesting, but mysterious: interesting because, somehow, dead creatures are made to look so alive; and mysterious because the visitor begins imagining how exciting it must be to go on collecting trips to far corners of the globe. While collecting trips abroad were quite common at the beginning of the century, when museums obtained most of the specimens they currently display, one is more apt to find today's taxidermist at the local zoo skinning a recently deceased giraffe than on safari in Africa. This is not to say that modern taxidermists never go on field trips, but to point out that many of the Museum's large specimens are much appreciated donations from local sources. The world-famous gorilla, Bushman, is a former attraction of Chicago's Lincoln Park Zoo, and the Giant Panda, Su-Lin, is a donation of the Chicago Zoological Society. Obtaining animals this way helps to conserve the diminishing numbers of live animals in their natural habitats. I hope the day never comes when the only "wildlife" to be found is in the dim halls of a museum.

Taxidermy has a long and exciting tradition, especially in the Field Museum. In 1896 Carl Akeley was appointed the Museum's first Chief Taxidermist. His work is known not only through numerous habitat groups

still enjoyed by everyone, but also because of the very up-to-date basic techniques of taxidermy that he employed. His best known contribution to the Museum is probably the Museum's "centerpiece"—the fighting African elephants in Stanley Field Hall. Leon Pray worked with Akeley on many projects, and other past members of the staff, whose works are still on display, include C. J. Albrecht, Julius Friesser, F. C. Wonder, and Arthur G. Rueckert. The Museum's

taxidermy studio was the scene of the development of the celluloid reproduction process of taxidermy, or the "Walter's process" in honor of Leon C. Walter. Today, in addition to myself, the division includes Richard Berndt, Assistant Taxidermist and two volunteers, Gertrude Silberman and Louva Calhoun.

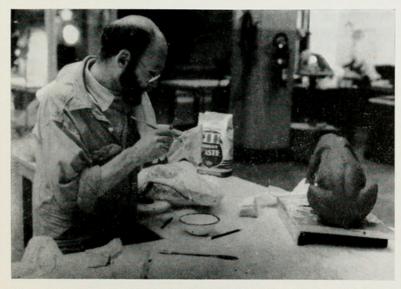
Many of us began to work in taxidermy as a hobby, attempting to mount our own hunting and fishing trophies. The more inventive became skilled enough to open their own shops where their sons and other persistent novices picked up the trade by just hanging around and absorbing as much as possible. Some of the most skilled taxidermists were hired by museums where the opportunity to study in detail a vast number of animals helped to further refine their skills. For them, the *continual* study of the anatomy of freshly skinned mammals, birds, fish, and reptiles is a must. They must



The mounting of larger mammals begins by fashioning a wire mesh frame and molding a clay body around it . . .



 $\ldots$  but since the clay sculpture is too soft to be used as the animal's body, a plaster mold is made from the clay figure.



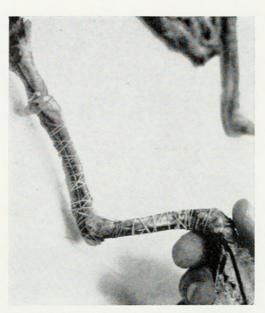
Using the plaster cast, a papier-mache process is imployed to form the hollow body of the animal. Here the author is seen cleaning the plaster cast after its removal from the clay figure.



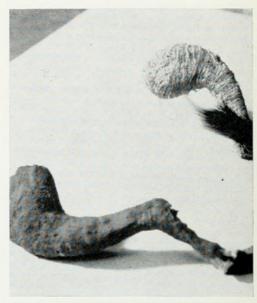
The skin of the animal is fitted over the papier-mache form, then sewn closed.



Using both a cat and a raccoon to demonstrate the main steps in mounting small mammals, the taxidermist begins by fashioning a body with excelsior, attached to the animal's skull, then wrapping the excelsior with twine.



The skeletal bones of the limbs are reinforced with wire to keep them in the desired position, and wrapped with twine.



Before the animal's skin is sewn around the limbs, the limbs are covered with a glue that, in the photograph, resembles putty.

know what muscle moves which part of the skeleton; how skeletons function; and how each movement not only changes the outer physical appearance of the animal, but its attitude—its mood—as well.

The taxidermist must also have an in-depth knowledge of how an animal looks and behaves in its natural environment. He can learn this from direct observation in the wild and from spending many hours at the zoo making hundreds of drawings, photographs, and sculptural sketches. It takes constant practice and much time in addition to the regular workday. Most of the taxidermists I know were fortunate to have grown up in the country where the presence of farm animals gave them a basic attitude towards all animals.

Necessary to taxidermy, of course is the handling of a large variety of tools and equipment, and the knowledge of many trades and materials. In spite of this, the taxidermist is still often called a "stuffer," even though the process of "mounting" an animal has nothing to do with stuffing. But there have been people who would use just about any material to stuff their trophies with. There is the story of an amateur who was proud of his first mounted squirrel—until his sister examined the job closely and recognized one of her socks in the open-mouthed creature and demanded that it be returned to her.

Today the taxidermist is required to skin the animal; tan the hide (if it is a mammal); sculpture a clay body; take a plaster mold of the clay model; cast the final form in papier-mache, plaster and burlap, or fibre-glass; and sew and glue the tanned hide around this hollow lightweight but strong form. These are only the main steps.

A method quite different is adopted for small mammals. Parts of the mammal's skeleton, such as leg bones and skull, are used. Excelsior is wrapped around these bones to simulate the muscles and body. This is then covered with a special paste to glue the hide tightly onto the mannikin. Birds are prepared similarly. Wire, cotton, and hemp are used to anchor parts of the legs, wing bones, and skull into a wrapped

excelsior body. Fish and reptiles, for the most part, are fibre-glass reproductions, made in a mold taken from the actual specimen. The most tedious part is then painting every scale to match the specimen. But no matter what the animal, they are all fitted with hand-painted glass eyes.

A new method of preservation is by freeze-drying in a vacuum chamber, which extracts the body moisture while the animal is in a frozen state. This method has been satisfactorily applied to insects, plant material, invertebrates, and various reptiles, but I have yet to see a good specimen of a bird or mammal preserved by this method. Yet many museums have had to rely on this method in presenting fauna in their exhibits because of the general absence of trained taxidermists in this country.

Most of the taxidermy profession's finest "artist-naturalist-craftsmen" developed in museums. For the museum taxidermist the art aspect of his training (drawing, sculpture, design, and the ability to visualize) is important as he creates his life-like



The skin is sewn around the four legs and tail. The artificial body is ready to be anchored into position.



With the body in position, the legs and tail are firmly attached to it. The skin is then sewn closed around the body.



After a few finishing touches, the animal looks as alive as though he was preening in someone's living room. This cat, however, is sitting encased in Hall 15.

models and as he relates them to the total exhibit. He often works closely with designers and must be able to visualize how the model fits into the overall scheme of the case or hall. Often his work includes making botanical models to complement his zoological ones, such as plants for birds to perch on. Thus the area of taxidermist and preparator often overlap. The final installation of most groups in the Museum was done by very few people. There were, obviously, a background painter, and one or two taxidermists—one concentrating on animals while the other handled the foreground and needed accessories. Sometimes one person did the entire display.

Today the changing nature of museum exhibits makes the art aspect of taxidermy even more important than it was in the past. Many of the older halls in Field Museum contain collections or groupings of related creatures, or have cases of the "picture postcard" variety. Halls which illustrate a broad overall concept are a modern trend in museum design: "Color in Nature," currently on display,

is a step in that direction. Planning this kind of exhibit calls for more imagination and cooperation by script writer, scientist, exhibit designer, and taxidermist than was necessary in the past. Gone are the days when a stuffed duck was just a stuffed duck, placed with so many other stuffed ducks, or set in a case silhouetted against the sunset. Today that duck can be used to illustrate any number of concepts: concealed coloration, sexual plumage, food chains, seed dispersal, etc.

Once the concept has been chosen, the taxidermist must do more than just make the animal look alive; he must decide how to arrange it so that it best illustrates the concept, or message. He must be aware of the visual potential in a proposed display. His training as an artist, plus his sense of the dramatic, tell him that a cheetah in action, in pursuit of its prey, will make a far more interesting display than the big cat just sitting there with its kill. Furthermore, it will demonstrate speed, the cheetah's unique characteristic. Thus it is very important for the taxidermist to examine the many

design possibilities, such as setting and pose, for a creature before mounting it for a specific display. The animal must be arranged in an interesting and artistic, as well as realistic, manner.

Perhaps it is this versatility required, plus the long training time, the lack of places to train, and the hesitance of some "old-timers" to share their knowledge, that account for the current lack of highly skilled taxidermists. To my knowledge there is no place in the United States where a prospective taxidermist can get the type of training outlined in this article. Museums and commercial firms are seeking good taxidermists. If a comprehensive training program were to be organized the prospect would brighten that museums and other institutions would be able to find qualified taxidermists. Until such time the field for the skilled taxidermist is wide open.

Oh—and as to that question about how to clean a skull: remove the flesh from the bone (dermestid beetles will finish the job for you), then bleach and degrease it. Any more questions?



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