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PREPARATION AND EXHIBITION OF BLUE BABE

Blue Babe was found in the summer of 1979, just weeks before I was to begin a year's leave from the University of Alaska. Because European and Soviet paleontologists work with many of the same Pleistocene species and problems I do, I planned to travel to Europe and the Soviet Union to study museum collections and talk with colleagues. In addition, I wanted to see firsthand the Mammoth Steppe species portrayed in European Paleolithic art. In Alaska we have bones and mummies of these animals, but Germany, the Soviet Union, France, and Spain have drawings and sculptures of them. As soon as the bison was excavated, I deposited the entire carcass and many samples of silt from the site in a large freezer at the university. Locking Blue Babe away in a deep freeze for a year was frustrating—we had hardly taken a good look at him—but I knew it was important to establish a thorough program of analysis and preservation before thawing the carcass. I had never worked on such a well-preserved Pleistocene mummy, nor had anyone else in North America. I needed to correspond with and visit Soviet experts to learn from their work with Siberian frozen mummies. The sabbatical gave me the time I needed to think about the bison mummy and provided contacts with Soviet mammalogists and paleontologists so that I could do the best possible job with Blue Babe.

Scientific analysis of the carcass and sediments was more obvious to me than what to do with the mummy afterward. No large frozen Pleistocene mummy had ever been exhibited in North America in a mounted condition prepared by normal taxidermy methods, as are the Beresovka and Dima mammoths in the Zoological Museum in Leningrad. Furthermore our bison's skin was not complete, and much of the hair was missing. When I flew to Europe on sabbatical, Blue Babe was a gray-brown ball of frozen mud. Although various people were enthusiastic about mounting and exhibition, I suspected they envisioned a richly pelted creature just taken from clear

ice, when in fact Blue Babe was a scavenged assortment of grime and mud. I was less than enthusiastic about a simple assignment to a conventional taxidermist.

American taxidermy was at its zenith around the turn of the century. Carl Akeley at the Chicago Natural History Museum and others at the American Museum of Natural History were pioneering methods to produce amazingly realistic forms. Akeley's new approach was to finely sculpt a clay mannequin of the original animal and then make a permanent cast of the mannequin in plaster and burlap. Tanned skin was stretched and sewn over this model of the animal, creating a lifelike mount. And although this technique spread throughout the world, the art of making original mannequins has all but been lost in the United States. "Stuffed animals" have gone out of vogue in large natural history museums and have been largely supplanted by ecology and Space exhibits. New exhibits that do contain mounted specimens are usually contracted to firms outside the museum. Few museums in America now have a full taxidermy staff; skills of mounting that once existed have been lost. The economics of production has forced most private taxidermists to send out skins to commercial tanneries and to use precast mannequins available in small, medium, large, and extra large. Labor is expensive, and a custom-made mannequin is a luxury few can afford. Thus, anatomical sculptural skills are unpracticed.

All of this left me in a quandary. I had done enough taxidermy to realize some of the problems this bison mummy might present. Fortunately for Blue Babe and myself, Bjorn Kurtén in the Department of Paleontology in Helsinki introduced me to Eirik Granqvist, who was then conservator at the Zoological Museum in Helsinki. The Helsinki museum operates on a low budget, but has one of the better large-mammal exhibits in Europe because of Eirik Granqvist's skilled hands. He is a taxidermist trained in the classic method, doing everything from beginning to end by himself: collecting the animals, skinning, tanning, model building, casting his mannequins, and all other processes of taxidermy. Granqvist also ran a school at the Helsinki museum, training apprentices for careers in other museums or private business. He was a good self-trained anatomist and biologist and was most enthusiastic about working with the bison. While he agreed to travel to Alaska and do the taxidermy work to mount Blue Babe, finding funds for the job proved difficult.

I would remind the University of Alaska museum director several times annually that we needed to mount the bison mummy soon, but the museum had no extra funds available. Funds were sought from the Alaska State Legislature to no avail. I kept writing

Granqvist that I hoped to find money soon. During the necropsy I had removed the skin where it was still attached to the head, legs, and lower part of the thorax (sternum and ribs) and, on Granqvist's recommendation, had put the skin into large vats of 80% ethanol. After literally years of delay, finally, in exasperation, I came to the unilateral conclusion that the skin would soon harden in the alcohol and that mounting had to be done in the next year or the specimen might be tragically ruined. At last some museum acquisition funds were reallocated for work on Blue Babe. We contacted Granqvist. A UNESCO-funded short course for African taxidermists in the Sahara and Sahel had fallen through when the U.S. had withdrawn from UNESCO, so Granqvist had an opening in his schedule for the spring of 1984. The Institute of Arctic Biology was willing to provide space and support for the taxidermy work as no space was available in the museum. The institute also contributed housing for Granqvist while he worked on the mummy.

During the time we waited for museum funding, I sculpted a three-dimensional scale model of Blue Babe using anatomical data from the carcass, pictures from European Paleolithic art, and a lot of trial and error and fussing. I sealed the plasticine clay model and made a mold of PVC rubber, into which a wax positive was poured. This wax bison was then cast in bronze by the lost-wax process.

When Granqvist arrived we took the bronze bison in hand and had a long session on how to mount Blue Babe. We concluded that a simple pile of head and skin, like the Dome Creek bison mummy on exhibit in the Smithsonian, was not sufficient, nor did we want a full standing mount. We decided that the position of the bison when it died, prone with legs gathered underneath, might be a good compromise.

With the scale model, Granqvist quickly used his artistic talents in laying out a plywood silhouette onto which he wired remaining limb bones and plywood cutouts of missing ones. He shaped chicken wire in the approximate contours of the body, and over this he sculpted a clay form of Blue Babe as he would have looked at death (fig. 11.1).

Granqvist made a rough plaster cast of the skull to attach to the life-sized clay form (see fig. 11.2, which diagrams the following description). I helped cast epoxy horns for the exhibit using PVC rubber molds made from Blue Babe's real horns because I wanted to keep the actual head and horns frozen, available for future research.

During this time Granqvist also thoroughly cleaned and split the skin so that the thinned outer portion could be stretched over the plastic form he was about to produce. It was during this splitting

Fig. 11.1. Preparing the museum exhibit. Eirik Granqvist is shown here modeling Blue Babe's form in clay, using a small bronze study by the author for reference. (Photo by Don Borchardt)

that Granqvist found the carnassial tooth fragment of a lion lodged inside the thick fibrous dermis of the skin. Alcohol was washed from the skin and the hide was placed in an acid bath tanning solution.

Once Granqvist was satisfied that his life-size sculpture was accurate, he made a plaster piece-mold about 1.5 inches (35 mm) thick over the entire body, without undercuts (fig. 11.3). When fully set, this was removed and the model dismembered. Granqvist then reassembled the plaster mold and commenced to line it with a plaster coat backed with strips of burlap dipped in wet plaster. These added strength to the plaster, producing a strong, thin-walled mannequin over which to stretch the split and tanned skin.

After being tanned, the skin was treated with a commercial preservative that chemically locks open protein bonds, making it difficult for insect or microbial decomposers to attack the hide. The skin was then treated with a relaxant to maximize its stretchability

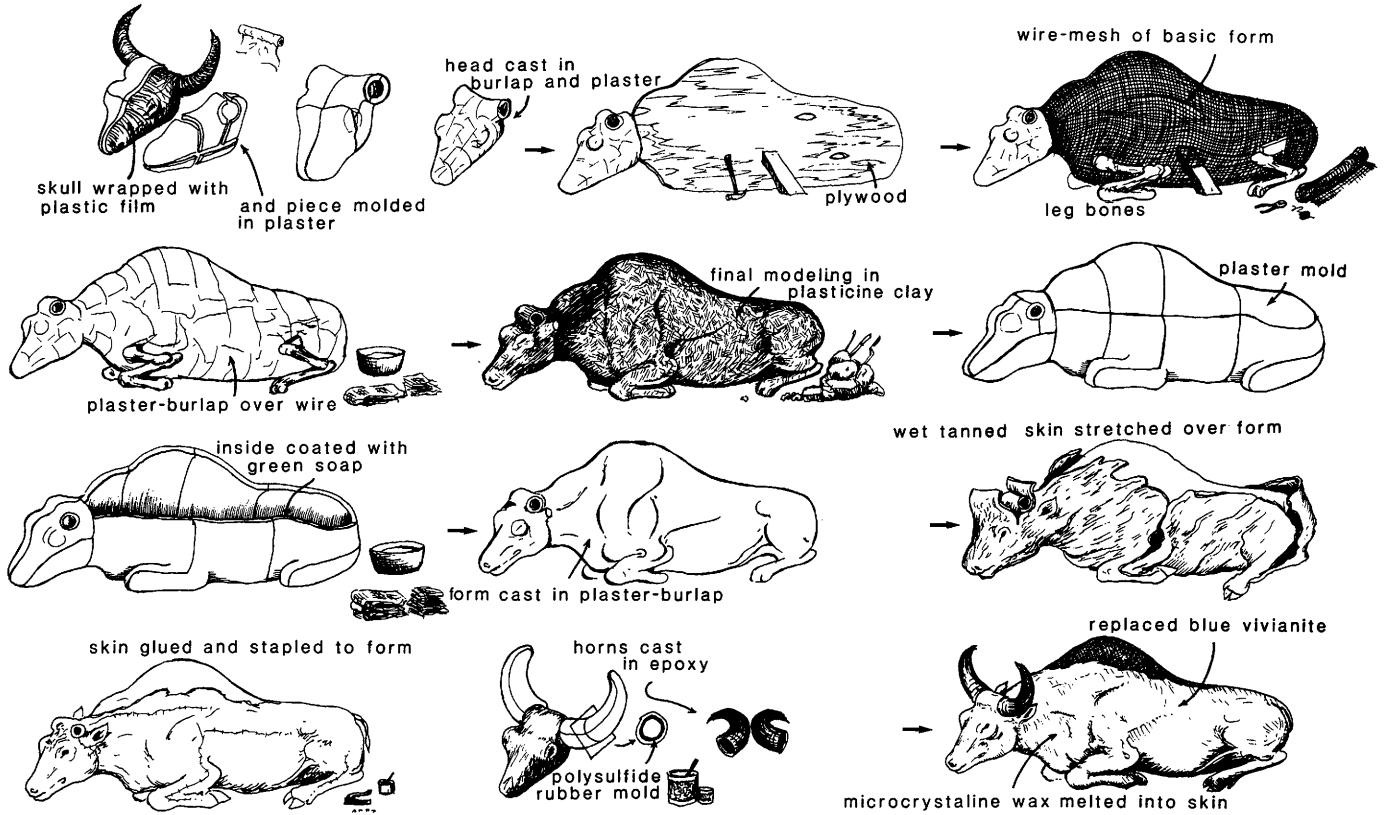

Fig. 11.2. Mounting Blue Babe for exhibition.

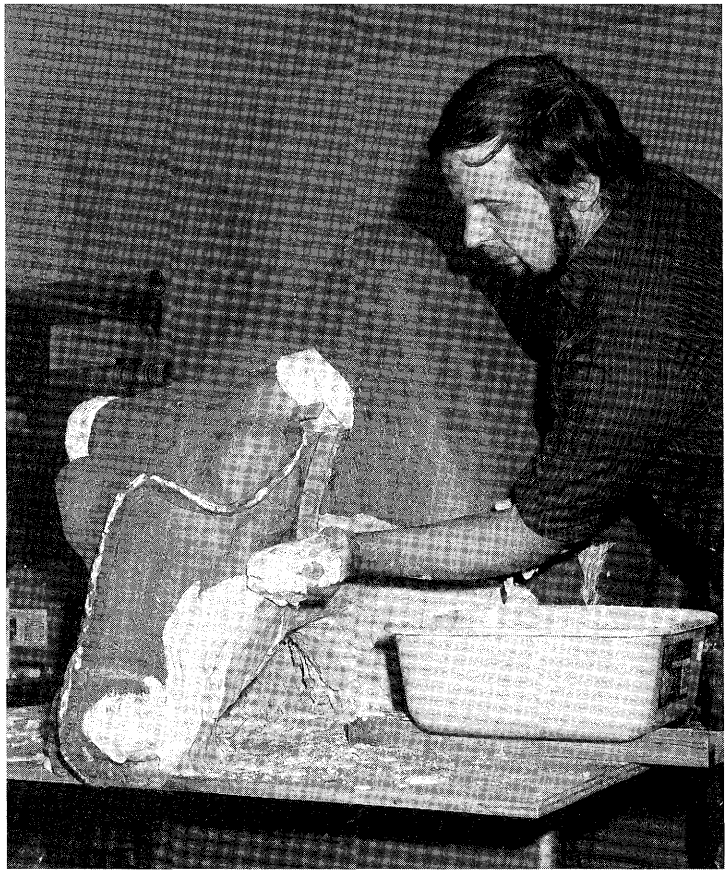

Fig. 11.3. Making the plaster mold. Once the clay model was finished, a plaster mold was constructed in which to cast the final plaster and burlap form. Blue Babe's tanned skin was then mounted on the completed form. (Photo by Don Borchardt)

and was finally pulled over the bison mannequin. It fit, almost. Some skin pieces were missing at the dorsal surface, where carnivores had first opened the carcass. But after the skin was relaxed and stretched it was obvious that there was more skin than I had first reconstructed, so I had to change my drawings. Thus, mounting directly helped my reconstruction. Granqvist tacked the wet skin in place with galvanized staples and allowed it to dry partially (fig. 11.4). A melted wax mixture was painted onto the skin and heated with a hair-dryer, causing the mixture to penetrate the dry skin. The

Fig. 11.4. Blue Babe mount nearing completion. The wet, tanned skin was stretched over the form, tacked in place, and allowed to dry. (Photo by Don Borchardt)

Fig. 11.5. Blue Babe on permanent display at the University of Alaska Museum, Fairbanks. (University of Alaska Museum photo)

wax filled spaces in the skin fibers and made the skin less likely to shrink or crack later. It also gave the skin a fresher appearance. Then we installed the cast horns and sealed their seam with wax. Seams in the skin were filled with colored wax, and the bison was ready to be recoated with vivianite, which had been removed when the skin was cleaned of its mud. Once again blue, the bison was carried across the street from the Institute of Arctic Biology to its case in the museum (fig. 11.5). Granqvist's work was done.

To climax and celebrate Eirik Granqvist's work with Blue Babe, we had a bison stew dinner for him and for Bjorn Kurtén, who was giving a guest lecture at the University of Alaska that week. A small part of the mummy's neck was diced and simmered in a pot of stock and vegetables. We had Blue Babe for dinner. The meat was well aged but still a little tough, and it gave the stew a strong Pleistocene aroma, but nobody there would have dared miss it.