In the past, elephants were "stuffed" for museums. The huge, thick, heavy skin had to be cleaned, stripped of fat and preserved, an artificial body made and the skin fitted onto it. Somehow all the wrinkles had to be worked into the right places to make the mounted animal look as natural as possible. No wonder there are so few "stuffed" elephants in the world's museums!

In 1971 the National Museum pioneered a new, easier method of making museum elephants. The end product really looks "real". Come and see the proof of it - the big bull elephant in the National Museum! The method was devised by Sep Roos, chief artist at the Museum at that time, and first used early in 1968 on a young bull rhino that died at the Bloemfontein Zoo. A couple of years later a rhino cow provided further opportunity to practise this method.

For Operation Elephant a team of Museum staff went to Skukuza in the Kruger National Park to cast an elephant in plaster of Paris. At 19:30 on Thursday 27 July 1971 they were presented with a culled elephant bull of about 25 years old and weighing 5 000 kg. Holes were bored through its backbone and head, and iron pegs, designed to open up under the backbone, were inserted. At 23:00 the elephant was at last hoisted up by means of a block and tackle, to hang by the pegs from a crossbar. It then had to be forced into a natural position, using vehicles to pull its legs straight before pegging them down with wires. This took the rest of the night, since the corpse had already stiffened.

Then the elephant had to be scrubbed clean and painted with soft-soap to prevent the plaster from sticking. It was also marked out in 35 sections, each to be cast as a separate mould. Casting began with the underneath section, to form a "table" which would support the rest. It took twelve hours to cover the whole elephant in layers of plaster of Paris, reinforced with cheesecloth and sacking. About 1 500 kg of imported plaster of Paris was used. Each section's mould had its edges sealed with soft-soap before the adjoining section was done. The removal of the moulds from the elephant on Saturday was easier than expected because the corpse was decomposing and, as it swelled, the moulds separated of their own accord at the soft-soaped joints. The 35 moulds were then transported to Bloemfontein where the rest of the casting would be done.

Sep worked on the principle that the more perfect each step of the process was, the more perfect the end product would be. His finished product should not have any blemishes or visible joints. Thus, the first task was to repair any imperfections in the moulds and any damage inflicted during their removal from the corpse or while in transit to Bloemfontein. Repairs were made with plasticine. Small patches of skin were cast in rubber and these small rubber moulds used to impress natural skin texture on the plasticine.
repaired. The fit of the moulds against each other was also checked and corrected where necessary. This had to be perfect to avoid visible seams.

To ensure that they could eventually be removed from the fibre-glass cast, each mould was painted with two or three layers of soft-soap solution to seal the plaster, and then a couple of layers of a blue releasing agent which would form a water-soluble layer between the plaster mould and the fibre-glass. This was no simple painting job, since Sep did not want the complex texture of the elephant’s skin destroyed by the peeling off of soft-soap or releasing agent on the mould.

Next, each mould was lined with layers of polyester resin and fibre-glass. This was no easy task because the material had to be carefully worked into the skin texture. Also, the resin and fibre-glass had to be kept away from the edges of the moulds. The moulds were reinforced with strips of softwood worked into the final layers of fibre-glass.

Who did all this work? Mainly staff of the Art Department and Workshop, all under Sep’s strict supervision. Other staff members also lent a hand from time to time.

To join the moulds, fibre-glass powder was mixed into resin to form a sticky paste which was plastered thickly onto the narrow band left open around the edges of the moulds. The moulds were fitted together before this mixture set and Sep, working on the inside, smoothed the paste over the joints and then reinforced them with ordinary fibre-glass and resin, thus making invisible seams.

The elephant was put together in several parts, but the final joining of the parts had to be done in the Museum, since the completed elephant would be too big to fit through doorways.

The tusks were cast separately and the fibre-glass tusks fitted into the fibre-glass elephant.

Sep inserted the glass eyes and once the moulds were removed, touched up the area around the eyes and mouth. Any imperfections in the final cast were filled with epoxy putty and skin texture impressed into it. Now the artist in Sep came to the fore, as with great skill, he painted the white fibre-glass cast to look like a “real” elephant, using ash and mud with the paint to make it look even more realistic.

Serendipity also played a part in making the Museum’s elephant more perfect than even Sep could have planned. The sparse body hairs of the original elephant and its eyelashes were stuck in the plaster moulds and the hair roots became embedded in the fibre-glass. Thus, the original elephant’s hairs were unexpectedly transplanted to the final fibre-glass model.

The elephant display was officially opened on 13 April 1972 by the Administrator of the Orange Free State, Mr Gabriel Froneman.

FURTHER FIBRE-Glass MODELS MADE AT THE NATIONAL MUSEUM

The success of Operation Elephant led to Operation Hippo in 1973. Nineteen Museum staff members, under the leadership of Sep, went to Skukuza again and used more than 2,000 kg of plaster of Paris to cast three hippos (a bull, cow and baby), a 4.4-metre-long, 405-kilogram crocodile, and an elephant head to use for making the head of the famous Hapoor for presentation to the Addo Elephant Park.

Hapoor was the chief elephant bull at Addo for 24 years. In 1968 he had to be shot after breaking out of Addo in frustration when dethroned by a younger bull. His corpse was, of course, no longer available (although his skull and tusks were preserved), so a large look-alike bull was called to be used as his model. Back at the Museum, the final cast was altered as necessary (with the aid of photographs) to look like Hapoor. To get the appearance of the “hap” (notch) in his ear correct, a paper template of the ear of the fibre-glass cast was made and hung on the wall. Then a photo of Hapoor was projected onto the template so that the projected ear fitted the template. I was then given the task of climbing a stepladder to trace the outline of the “hap” onto the template, from where it would be transferred to the fibre-glass ear and cut out. It was truly awe-inspiring to stand on a stepladder up against the life-size projection of this huge elephant!

In 1985, Homley, the well-known Asian elephant at the Bloemfontein Zoo, died and a taxidermist made a fibre-glass cast of the head. This head now decorates the Museum’s stairwell and gives visitors a chance to compare the African and Asian elephant.

Some years later two baby elephants were also cast in fibre-glass. The original little elephants, aged two and three years, were at the Bloemfontein Zoo for a short time. Despite receiving all possible care and attention, they never recovered from the trauma of their capture and died from a stress-related illness.

Casting in fibre-glass also came to be used for hairy animals. Firstly the skin is removed, while the body is held in shape by the membrane beneath it. The skinned animal is posed in a natural position and cast like the elephant. The hollow, fibre-glass body has a better shape than most artificial bodies made using older methods. The preserved skin is then fitted onto the fibre-glass body.

Most of the human figures in the Museum were also cast in fibre-glass by Sep, in much the same way as the elephant, using actual people (Museum staff and their friends and relatives) as models. Of course the method had to be slightly modified for use on live models!

References


Personal recollection.