

How to repair the rhino specimen?

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Abstract Based on the Sumatra Rhinos specimen in the National Science Museum THAILAND, the author combined with his own practice, explained the repair process in detail, summarized the experience from it, and discussed the operation skills of animal specimens.

Keywords Sumatra Rhinos, specimen restoration, National Science Museum THAILAND

The first real Museum of Natural History in Thailand was opened in Bangkok in the year 2000. The National Science Museum THAILAND has three museums and one center: the Science Museum, the Natural History Museum, the Information Technology Museum, the Science Square. One of the greatest problems for them was that there did not exist any educated museum taxidermists at all in the country.

At the annual meeting of International Committee for Museums and Collections of Natural History in 2009. Pichai that was the director of the National Science Museum THAILAND learned to know me. When I then, later in the fall, the same year was teaching in Shanghai, I got to my pleasant surprise the visit of Pichai together with a delegation of nine other persons. They visited the museum but the main reason for their visit was to ask me if I could come and teach museum taxidermy also to Bangkok. I answered: Yes! The result was that I went there already in 2011 for the first time and again in 2015.

When teaching modern natural history museum taxidermy at the Natural Science Museum THAI-

LAND in 2015, I got a great surprise one day when a female Sumatra Rhino was brought to the museum for to get restored by me and my students. The rhino was in a very bad condition, because it had not been made by professional taxidermists when it had died accidentally in Dusit Zoo in 1986 only five months after her arrived. She was a gift from the king of Malaysia to the king of Thailand and named Lichong by the Queen Sirikit. When the rhino died, it was only four years old.

As shown in Figure 1, the skin of rhino was not correctly tanned and had split at many places. The taxidermy was made like when just filling a hay-bag. We should anyhow not blame the "stuffers" because they had made their best without any real professional knowledge. However, Lichong was also interesting in the way that she had her both horns well preserved even if they had been quite worn down.

It was believed that the Sumatra rhino was already extinct in Thailand in the wild as in all the Malacca peninsula in the 1960th. It was then a sensation when fresh rhino tracks had been found and



Figure1 The damages on the poor rhino

photographed in the wild in Thailand at the end of the decade. This was published in a French zoological review that I happened to read when working at the natural history museum in Orléans, France.

In Copenhagen Zoo of Denmark, I had been fortunate to see a live specimen of a Sumatra Rhino that was brought there from Sumatra in 1959 and died in 1972. It was then made well in taxidermy by the taxidermists at the Zoological Museum in University of Copenhagen and is preserved in the mentioned museum. Just imagine my surprise when a pretty fresh but very badly preserved rhino of this species was brought to me at the museum in Bangkok for restauration! I do not know how many specimens of this species that are preserved in museums around the world, but they are not many.

Since the skin of the rhino had not been properly tanned and was very hard, it was no idea to try to soften it and tan it. It had been too risky. It should probably just stay hard and it was also possible that it had then been broken into pieces and fallen apart. Since there has not existed any real natural history museums anywhere in moist, tropic areas in the world, there was also not any literature to find about these problems. I had only to find out myself how to do the preservation and how to do proper taxidermy also with fresh material under these conditions.

I decided to just scratch away the material with

which the damages had been tried to repair the cracks in the skin. I repaired the damages with a kind of two component plastic called "Araldit" and just made the surface so much as possible looking like the real skin. This was a success when the skin later was colored correctly. Since I had lots of other things to do, I gave my students the duty to do the main work. I just followed their work and gave them the necessary advice.

The hoofs were almost destroyed and had to be remodeled. Especially one of the legs was in a very poor condition. When the leg was in this condition, how make it looking real and beautiful again?

Unfortunately, I had myself very much to do with other works and the teaching and time was running out. Anyhow there was enough time for to teach how to save this very precious animal in the museum for the future. It is otherwise a very interesting fact that the Sumatra Rhino is the closest still living relative to the extinct Woolly Rhino that probably developed also in Asia, but at the Tibetan highlands and therefrom spread to all northern Asia as well as to Europe during the Ice Age. The Sumatra Rhino does in fact as the only still living rhino have a lot of body hair even if not so much as the Woolly Rhino.

The Sumatra Rhino is the most endangered species of all rhinos although there might still be more of them in the wild than of the Java Rhino. The good side however with the Java Rhino is that in the Udjung Kulon nature preserve at Java they are well and strictly guarded. Their last counted number there was about 67. A few years ago, a very small population was found surprisingly in Vietnam where they are unfortunately probably again gone extinct. Of the Sumatra Rhino there are may be still existing more than 200 in the wild, but they are very widespread with some specimens on Borneo and the rest at Sumatra.

In November 2019, we learned that the last Sumatra Rhino in Malaysia should have died. It is

however not totally sure that there might not still exist a few Sumatra Rhinos in Thailand and at the Malaysian side of the border on the Malacca peninsula. I was at the National Science Museum THAILAND also fortunate to see pretty fresh photos taken of rhino footprints in 2014 in southern Thailand by the mammologist Dr. Dome. He had then together with the wildlife expert Sunate Karaphan published this finding in Thai language.

As an unexpected student, I got one day the curator Emma Burns from Otago Museum in New Zealand. I did not once know who she was because I was only asked if she could be allowed to look at when we were working with my students. I asked her if she wanted to help my students with the repairing of the rhino and she said that she would do it with pleasure. Several days later, I learned that she was a museum professional. Then I tried to take care of her a bit better. Anyhow she was pleased to do the work and told that this experience was very useful for her as a curator.

When the damages in the skin of the rhino were repaired, I decided to at first treat the skin with a

layer of thin shellac before the students should recolor the rhino again. This work was done after that I had left Bangkok, but the final result was good.

If you have a very damaged skin of an ancient and primitively made piece of taxidermy to restore and to prevent from cracking, then you can use the following method that is very effective. This especially for thick skins with very little hair or better completely without hair. Just melt pure paraffine and put it on the surface of the outer side of the skin in a thin layer with a brush. Then take a hairdryer and melt the paraffine with it so that the paraffine sick's into the skin. So the skin will not crack anymore because it is fixed. This method you can use especially well for crocodiles, other great lizards and fishes. If you use the method on a skin with hair like a monkey face, you can wash away the extra paraffine with normal benzine. The surface of the skin will become a bit white but just then take the hairdryer again and heat the surface of the skin. Then the paraffine will melt on the skin surface and just disappear into the skin again.

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