

Amandine Péquignot¹ & Michel Van Praët²

¹Centre de Recherche sur la Conservation des Collections
Muséum National d'Histoire Naturelle, apeq@mnhn.fr

²Inspection générale des Musées,
Direction des Musées de France, michel.van-praet@culture.gouv.fr



Baudouin p.13 : Description de la partie du cabinet du Roy qui a rapport à l'Histoire naturelle de l'Homme, de Seve inv. Babel sculp. *Histoire Naturelle* (1749)

During 18th century, voyages of discovery to exotic parts of the world offered opportunities for museums and collectors to acquire a wide range of natural curiosities.

Attesting to this are the old specimens of the "Cabinet du Roy" (1729- 1793) at the Muséum National d'Histoire Naturelle (MNHN) in Paris.

Through archives research combined to high analytical technologies, it was possible to first re-identify some famous specimens, to observe 18th century taxidermy techniques and to better understand degradations of some specimens.

Re-identification of "Jocko", Buffon's chimpanzee

During his lifetime, Buffon had a chimpanzee called Jocko which passed away in 1740s. The specimen was preserved in the collection of "Cabinet du Roy".



Jocko still preserved at the Museum

In 2001, the status of this specimen was doubtful. Regarding to inventory two "Jocko" specimens were present in the collection ! And one of them was de-accesionnated in 1898.

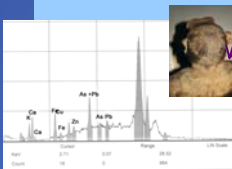
The question was:
Do we still have the real Buffon's chimpanzee in collection ?

Back to *Histoire Naturelle* to have more informations about the specimen itself:

Buffon (G-L) [Leclere Comte de] & Daubenton (L.-J.-M)
Histoire Naturelle (1749) - t. XIV, pp. 130.
N° MCCXCI : Jocko's skin

*This skin was stuffed, we left the extremity of phalanges [...].
The stuffed skin shows a seating Jocko.*

The X-ray radiographies of the specimen confirmed the description of Jocko done by Daubenton. We were able to certify that the specimen preserved at the Museum was Buffon's chimpanzee.



XRF analysis done on skin (shoulder area)



Relating to the tanning
XRF analysis shows that arsenic and lead were employed.
And combined to X-ray, this gave us some clues to better understand the actual state of preservation of the specimen.

Values of Collections

Historically, natural history collections were used by naturalists for the determination of new species based on anatomical and morphological descriptions.

Today ancient and present collections have become very valuable for scientist community for molecular informations (proteins, DNA...)



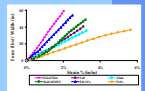
Thylacinus cynocephalus « Type de Buffon »

The preservation of collections for these new investigations requires an understanding of historical and actual preparation techniques that could be a cause of molecular degradations.

Science for the Preservation of Natural History Collection

Research in preservation involves several aspects: preservation (fluid collections), conservation, health hazards (arsenic, mercury and lead detection), and collections use.

Fluid collections :
different colors...
different degradations on skin properties (mechanical resistance or amino acids degradations).



Health hazards :
to set up some detection and removal techniques (for arsenical residues present in natural history collections).



De-accessioned bird prepared in 1812 (MNHN), tanning with arsenic .
SEM-EDS of arsenical on feather.



Investigations are important to understand any deterioration process occurring in these collections and the impact of past treatments.

The protection of nature and the rapid extinction of species have given increased value to natural history collections for researchers and for society.

Today, there are important issues regarding preservation and conservation of our collected resources in the natural sciences.

Research in preservation of natural history collections is necessary to understand how materials deteriorate and to ensure specimens are available in the future.