La peau est un paysage

skin is a landscape

Regards croisés sur les squamates

Ways of seeing squamates

avec Anne Larouzé, céramiste

16.10.2021 — 26.06.2022

English texts of the exhibition
INTRODUCTION

The exhibition “Skin is a landscape – ways of seeing squamates” is the result of a dialogue between scientific teams from the Museum and the ceramist Anne Larouzé about the skin of lizards and snakes (which belong to the Squamata order).

Invited to delve into the details of squamates’ skins, each could see, at every scale of observation, new marvels, new landscapes.

From a scientific point of view, the skin of squamates is an interface on which biological and behavioural characteristics are “inscribed”. Just as we can read traces of humans or time in a landscape, skin carries information on the animal’s environment and its habits. By looking more closely using macro- and microscopic images, astonishing diversity emerges and the biological processes which give rise to it can be identified.

Over centuries of art history, depiction of landscape moved from decoration to subject and became a distinct genre. The pieces created by Anne Larouzé are landscapes which have elevated the details of an animal’s skin into a work of art in and of itself. Inspired by her observations of our collections, she chose the event of metamorphosis to express and share her fascination for the infinite variety and biological complexity of the skin of squamates. During the artist’s visits, guided by research into what makes a material appear to us to be ‘of life’, skins become universes that flout the frontier between the living and the lifeless.

This excursion to the heart of matter is the result of exchanges between the scientific and technical teams of the Museum and the artist. Special mention must be made of Andreas Schmitz, reptile specialist, who made his expert knowledge and the herpetological collections available, and also special thanks to André Piuz, in charge of the electron microscopy scanning platform. The exchanges began in 2019 but intensified in the autumn of 2020 during the residency of Anne Larouzé as part of an award from the Bruckner Foundation of Carouge.

A ceramic showcase parallel to this one will be presented simultaneously at the Ariana Museum, Geneva, from October to December 2021.
There are no fragments in nature. The smallest morsel is still the whole. Each crumb is the universe

Pascal Quignard, les Ombres errantes, Grasset 2002

Gaze at the fascinating complexity of scales and their endless variation at each level of observation, for each species and for each animal.

Imagine a specific morphogenesis for each piece to transcribe the biological history behind the formation of the skin. Design a pattern and make it “grow” into a frame, then overlay frame with frame and accept the unexpected and the mishaps, bring movement back to the creation.

What constitutes a trace of life?

WHAT’S A SCALE?

The scales of reptiles are horned. They are composed of several layers of keratin which is produced by the epidermis. They protect the body from dehydration, in particular by retaining water, but also from the rigours of the animals’ habitat, weather damage (such as ultraviolet light) and possible prey, predators and parasites.

THE BINOCULAR

It’s not easy to look through a binocular microscope as Anne Larouzé discovered during her days visiting the Museum collection. Here is «The binocular», a diptych offering a light-hearted look at the little mishaps of scientific research...
THE ORIGIN OF SCALES

There are very few paleontological data on the scales of the first reptiles. We don’t know what markings resulted from their adaptation to the rigours of life on earth.

The long-running scientific debate on the origin of skin appendages, such as the scales of reptiles, feathers or fur, has recently been enriched by research at the Geneva University LANE laboratory. Researchers there have discovered that all appendages develop from the group of cells called placodes which have the same developmental genes (composed of the protein ectodysplasin-A or EDA) in the embryos of reptiles, mammals and birds thus indicating their common origin.

THE GREAT VARIETY OF SCALES

Squamates (lizards and serpents) develop scales of all shapes and sizes: smooth, streamlined, spiky, bulbous... the result of the evolution of this group of animals over 230 million years.

Amongst the lizards in particular, different types of scales can be found on the same animal depending on whether they are on the head, back, breast or feet because they may have different functions against abrasion, predator attacks and so on. Scientists use the differences to identify the families of the group, even the species.

In the case of snakes, it is rather the form and arrangement of relatively similar scales that give information on the different families and species.

The morphology of scales can provide informations about the habitat of the animals and also of their movement. For example, scales which are rough along the edges help the animal to adhere to the surface it is crossing.
MICROSTRUCTURE OF SCALES

Zooming in on a scale reveals microstructures that are invisible to the naked eye. We see that scales are not generally smooth, in fact they turn out to be very rough and porous. The further we penetrate, the more unexpected details we find: «scales» within scales.

The microstructures have as great a variety of forms as the scales themselves.

Their function is still not well understood but it is thought that there may be a link with the animal’s environment and ensuring good surface hydration.

THE PLANETS

A topographer’s skills are needed to portray the complexity of the structures and microstructures of the skin of squamates in orderly and complex worlds, the result of specific morphogeneses: gestures, rhythms and serendipity.

ZOOM BY SEM!

Scanning electron microscopy (SEM) yields very high resolution images of the surface of matter.

For Anne Larouzé's research, a scale from squamates was extracted from a specimen and then covered with a thin layer of gold in order to conduct electricity and evacuate electrons.

Then the surface of the scale was revealed through zoom after zoom: «scales» within scales.

Matter revealed by gold, such as that which you can find here and there in the ceramic pieces on display.
MOULTS & METAMORPHOSES

Look at the metamorphosis of the animal’s skin during the moult.

The exuvia, an ephemeral object by nature, showing traces of the body which carried it and from which it is now eternally separated, its destiny to disappear. A living thing become lifeless, a strange spoor.

Then, play with the transformation cycles of matter. A living thing transformed into stone as a fossil, or into the skin of a squamate in clay under the hands of the ceramist. Living or inert, organic or mineral, transitory or durable, biological or artistic…

Finally, our thoughts run between the folds and re-folds of skin for a different metamorphosis : hills and vales, mountains and dunes : Landscapes.

META MORPHOSES OF CLAY

Clay is a material which changes its state incessantly.

Malleable and labile when it is raw and damp, its ephemeral nature becomes fixed into a material approaching rock, solid and permanent when it is fired.

Such versatility, in the eyes of an artist, sets off a gradual displacement of the scaled skins towards other territories. Through a geographical lens, the skin changes into a landscape, a “genre” painting challenging the frontiers between life and lifelessness.

WHEN NATURE «CREATE S» SCULPTURE

Biology also has its metamorphoses. Fossils are living organisms transformed into rock by a long process of mineralisation.

The phenomenon of petrification, from life to inertia.

Did you know that the word *fossilis* in Latin means «drawn from the earth» ?
WHY DO THE SQUAMATES MOULT?

The moult is a phase in the life of a squamate which is hugely important. As the animals grow, they become larger but their external envelope remains the same size. At a certain moment their scaled skins become too tight, so moulting occurs regularly to allow the animal to renew itself.

The old skin becomes «waste»: a moult also called exuvia.

Moults occur regularly and at certain important events such as birth, the end of hibernation, egg laying…

THE MOULT PROCESS

This occurs in different phases:

Preparation phase:
The moult begins by a special nutritional regime during which the snake or lizard generally stops feeding and becomes particularly vulnerable.

Keratinisation phase:
The deep layer of the epidermis divides and the snake’s old skin begins to harden and detach. The transparent scale which covers the eyes of snakes and lizards without eyelids becomes opaque making the stressed animal more aggressive.

Moult phase:
The old skin becomes detached but stays on the animal. A transparent liquid separates the skin from the body. Lizards shed their skin in strips which they often eat (the reason why they are rarely found), while snakes usually shed their skins in one piece like an inside-out sock. It will then serve as food for other animals such as insects.

MOULTS

To capture in clay the ephemeral instant of the moult, the moment the skin becomes exuvia, the memory of an abandoned body, the distortions which are born of separation, the fragile passage from life to lifelessness.
Born in 1979, Anne Larouzé toured the world with her family then in books before beginning her studies in political sciences at Science Po Strasbourg.

Her first career was in the realm of culture between baroque art and the museum world. At night and at other times, she worked independently: photography, writing, dance and painting. Then, in 2008, she began to learn the art of ceramics.

In love with Marseille, in 2014 she opened her professional gallery there. Driven by the urge to experiment, she alternated art and design projects, increasing the links with other disciplines.

Her work was noticed and supported by the Hermès Foundation and the Bruckner Foundation of Carouge. She received the Swissceramics prize in 2017 for the Narcissus mirror.

«Skin is a landscape» is part of a long-term research project on the transcription of animal matter in clay. Her work can be seen at www.annelarouze.com