



The difference between life and rock

The classic characteristics of life such as reproduction, inheritance, information, metabolism, growth and self-regulation naturally distinguish it from rock. But what is it that fundamentally links all these characteristics together and separates them from the world of crystals and rocks? Answering this question helps in the search for life outside the Earth, where life forms could be organized quite differently.

A view from the perspective of physics provides insight here. Crystals and living beings then only appear as different but characteristic states in the spectrum between order and chaos, energy and information.



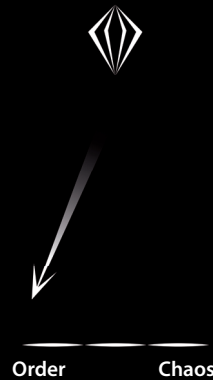
The difference between life and rock

This perspective is prepared and explained with the two text flags "What is the difference between stone and life?" and "Crystals, krill and chaos".

A series of 5 aquariums make this perspective a vividly experienceable path:

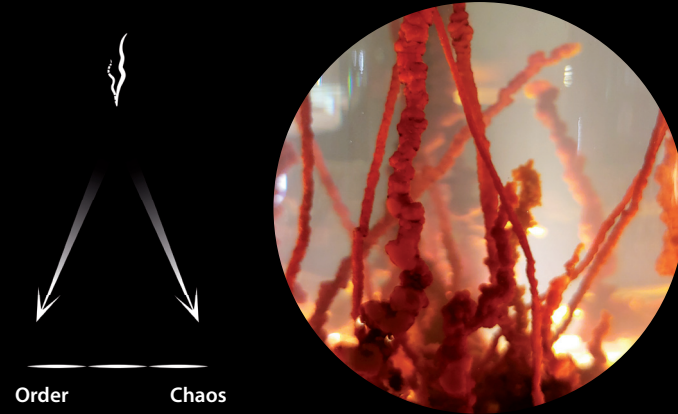
Chrystal

The crystal garden offers a glimpse into a world in which **order dominates**.



Chemical garden

The chemical garden shows a world with a **juxtaposition of order and chaos**.



Vortex

A vortex symbolizes a dissipative system: not an object, but an organized state **oscillating between order and chaos**.



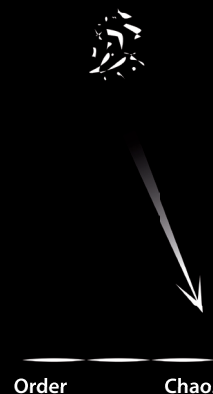
Life

In the living ecosystem, we see an adaptation to the **border area between order and chaos**.



Chaos

The last aquarium shows "garbage" without context, i.e. a **world of chaos**.



Rocky Roads *to Life*



Ries
Krater
Museum
Nördlingen

Special Exhibition

14/3/25 - 15/2/26

The special exhibition **Rocky Roads to Life** is about the close connection between rock and life.

This connection paves three paths to a deeper understanding of life, all of which start from minerals and rocks. These paths are divided into the following main topics:



Photo: marum

From rock to life

What role could rocks have played in the origin of life?



From life to rock

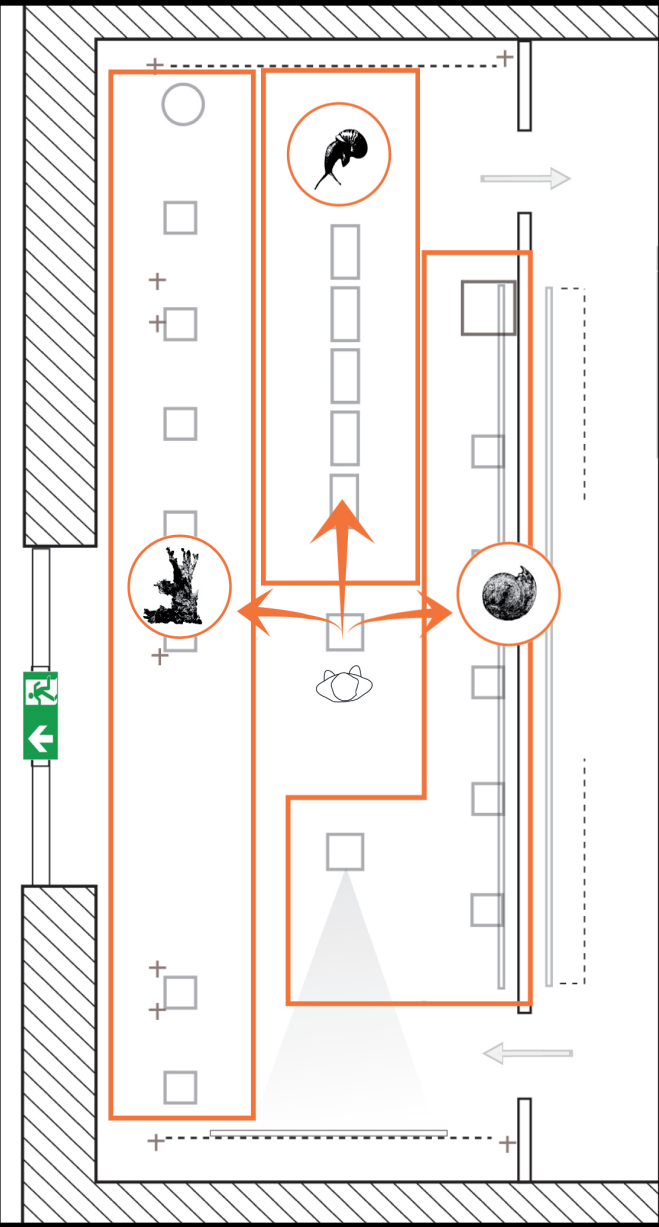
What role does life play in the formation and shaping of rocks?



The difference between rock and life

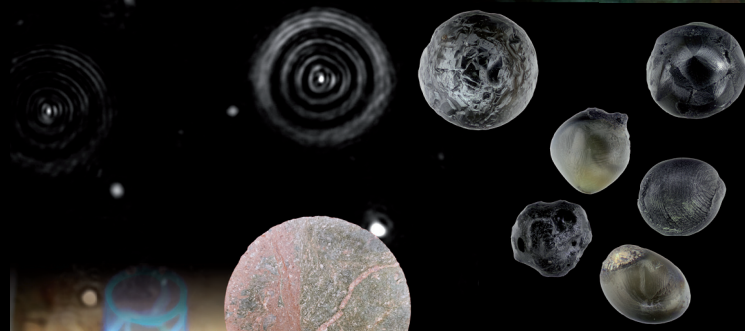
What is the fundamental difference between life and rock?

The three paths in the exhibition space



From rock to life

- Origin in nanofluid water
The role of mineral particles
- Origin through lightning
The role of silicates
- Origin on the land surface
The role of mineral surfaces
- Origin through meteorites
The role of extraterrestrial rocks
- Origin in the deep sea
The role of rock vents
- Origin in the deep biosphere
The role of rock crevices

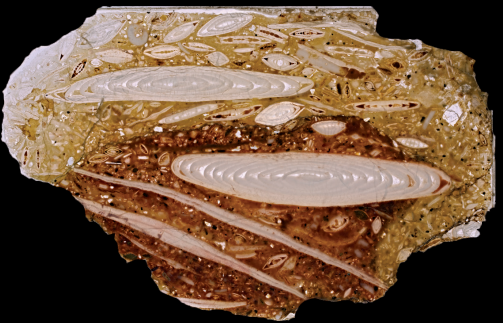


Symbolic image micrometeorites,
Photo: Thilo Hasse



From life to rock

- Mineralization is caused
Lime tuff
- Mineralization is organized
Limestone from fossil protozoa
- Rock is utilized
Stomach stones from dinosaurs
- Rock is worked
Hand axe
- Rock is processed
Cement



Rocky Roads to Life

A special exhibition of the RiesKraterMuseum

Concept / Curation / Texts

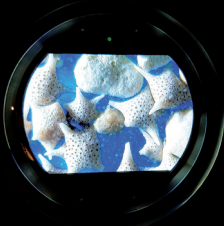
PD Dr. Frank Trixler

Realization

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