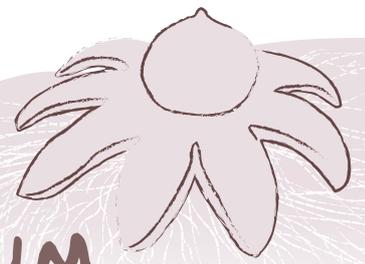


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# ZEMESZVAIGZNE

GEASTRUM



## Pioneers of terrestrial evolution

Diāna Meiere, mycologist

How Long do fungi live on Earth? We probably only know that for a very, very long time. Fungi do not survive as well as, for example, animal bones, teeth or wood because they are built of thin, fragile threads. But there is some evidence from scientists, and some of it is quite surprising.

Perhaps it is thanks to fungi that hundreds of millions of years ago, life from the seas and oceans

was able to come out onto land and fill it. The land at that time was harsh, the composition of the air was completely different than it is now, there was no soil, and the rapid changes in temperature, the vicious storms made life on land almost impossible for organisms of that time.

The first organisms to grow on the water's edge were bacteria, and soon fungi followed. Nothing extraordinary- they began to literally prepare the ground for the great land invasion of plants and animals. Fungi hyphae are delicate but can penetrate and expand through the smallest cracks in a rock with great pressure. In addition, they release enzymes that gradually dissolve these rocks, gradually forming soil. The root system of the first plants was not well developed, and for many millions of years the mycelium of the fungus played its role in supplying plants with water and minerals.

There was a time when the largest terrestrial organisms were fungi. They dominated the landscape as poles 6-8 m in height. When palaeontologists found their fossils, they decided that they were the ancestors of conifers, but it was later found that they were still fungi or lichen, in which the fungus interacts with algae.

Fungi have been around people throughout history. They have served as food and its source or helper in its preparation and storage. They have also played the opposite role in human history: the deliberate poisoning of enemies, famine in large areas caused by parasitic fungi, such as in Ireland, the destruction of potato crop by a fungus, the food base of the population. The multiplication of black grain caused by a fungus has caused serious human illness and there is even a theory that the events in Salem with the witch trials were caused by poisoning with fungi.

More visibly or less so, fungi have existed before us, they are among us now, and, most likely, will outlive us on earth even if people move to other planets.



Drawing: Baiba Soma



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