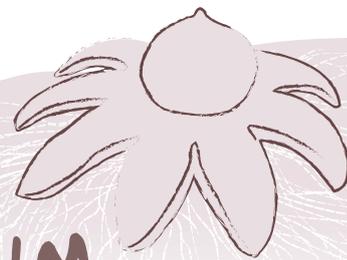


DABAS KONCERTZĀLE 2020.

ZEMESZVAIGZNE

GEASTRUM



A billion small fungi

Diāna Meiere, mycologist

Did you know mushrooms move? Because how do they appear from one place to the next? No, you won't see a stalk climb out of the ground, and start to go for a walk. Mushrooms have something else in mind.

Mushrooms move either as the mycelium grows (fungal colony) or as they spread via fungal spores.

Fungi don't have seeds; instead, they have tiny, dust-like spores. Every fruitbody of a mushroom is just a flower the job of which it is to create and distribute thousands and millions of tiny spores. When they grow, they break away from the mushroom and begin their journey – most often it is on the wind breeze that takes tiny spores and brings them with them. Mushroom spores can soar tens of kilometres above ground, fly many thousands of kilometres away from their origin. Only a few are destined to come to a place suitable for their growth, most of them die. Which is a good thing as one fungus, such as the giant puffball can have up to 7,000 000 000 spores! They are 7 million of millions – an incomprehensible number.

The shape of mushrooms may be different, but the aim is to ensure the best possible conditions for the distribution of spores. For example, the longer the stem of the mushroom, the higher it rises from the ground and the easier it is for the wind to carry away the spores. The gills upon which the spores of a bracket fungus growing on a tree are located are always situated perfectly vertically, so that the ripe spores can be released freely and not get stuck attached to the fungi's walls. Pear-shaped puffballs wait for a drop of rain drop on them, and then a whole cloud of spores will fly out at the top of the opening. But don't think this happens passively. There are special mechanisms that actively "push" the spores out of the fungus, often in large groups which makes it easier for them to start their flight. Later they can only rely on the wind. This is very evident in cup fungi. Leafy fungi and bracket fungi also actively "push out" their spores.

The record holder is the smallest fungus only a few millimetres large that grows in an insignificant place – among animal droppings. It throws its spores at a speed of 4-20 metres per second, with an acceleration higher than anything else witnessed in nature – both in the plant and animal world. Just a few millimetres of the big "hat thrower" (the literal translation of the Latin name of this fungus) can catapult the disc of spores up to a distance of 2.5 m.

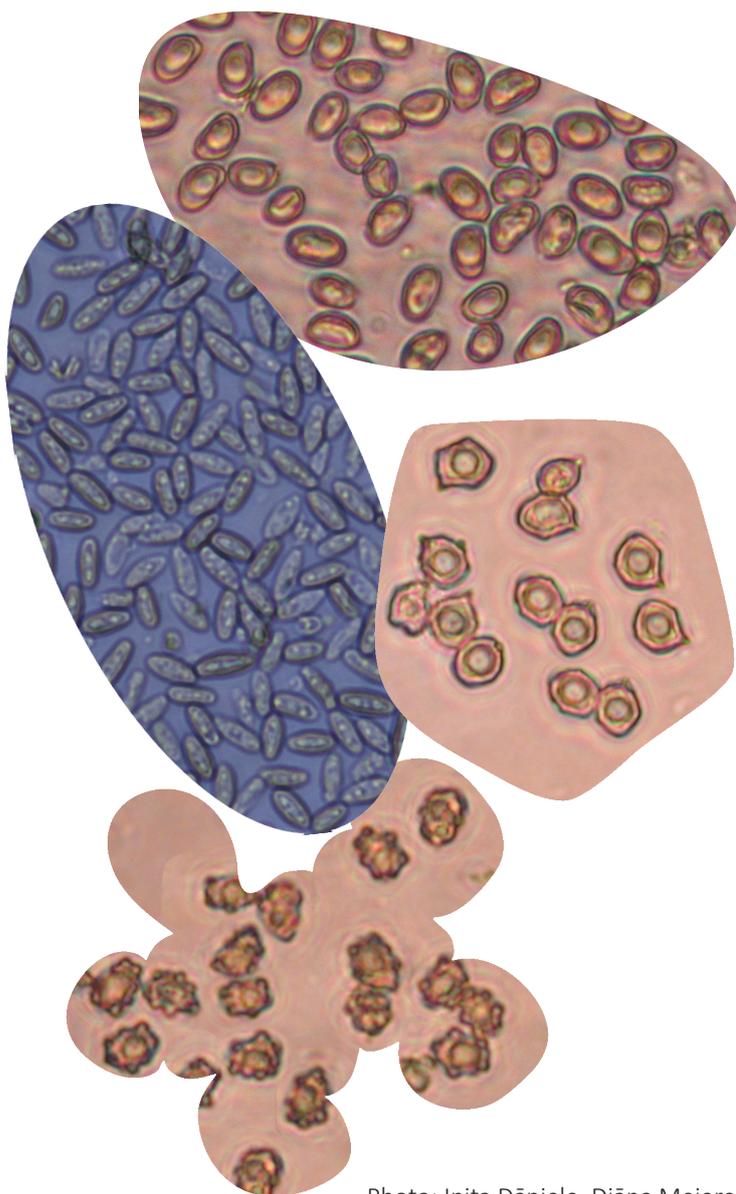


Photo: Inita Dāniele, Diāna Meiere

STEP-BY-STEP – Create spore prints

Some spores are very small, but they can be seen in a thick layer, and this layer can be seen by forming a spore print. It is very simple to create a spore print and the result are very interesting. Usually, spores are germinated from under the mushroom caps to the ground where we will never see them, and the smallest flow of air can carry them away. But if the germination of spores is controlled and on paper, you can get a beautiful spore print in a relatively short time.

1. Pick mature mushrooms. With a sharp knife, cut off the cap from the stalk, trying not to damage the gills or ring.
2. Choose a different colour paper because spores can be white, green, brown. The first time you will need to experiment to figure out the visually best result.
3. Carefully place the mushroom caps on the paper. You can cover them with a container so that the air flow does not interfere with the process of spores dropping from the cap onto the paper.
4. Wait a few hours. But remember that when lifting the cap from the paper, it is almost impossible to replace it in the exact same place, and then this can damage the print that has already been created. Therefore, for the best result, you can wait for about 10 hours.
5. Now you have a print of a whole bunch of beautiful mushroom spores (or at least you know how to make them), and you ask yourself what to do with them. Whatever you decide, the obtained spore print is so fragile that even a small gust of air could carry it away. Therefore, it should be fixed by carefully spraying it with hair spray from a distance.
6. The rest is a creative process. You can simply frame the spore print and put it on the wall, take a photograph and make fabric prints, or anything else.



Photo: Andris Soms

