



## **Mycorrhizae**

Imagine you are so small that you can crawl among the teeny tiny particles of the soil. Keep on crawling until you end up beneath the ground. Here you can start to observe life in the soil. Next to you is an extensive network of tree roots and mycelia that meanders around the soil.

Trees and fungi can form mycorrhizae together. Mycorrhiza is a structure, where the mycelium of the fungus grows on top of the thin root of the tree. The mycorrhiza is a hotspot for the active change of ingredients important for both of its partners: the tree gives sugars to the fungus, which the fungus cannot produce itself. The mycelia of the fungus collects nutrients from the soil, such as nitrogen and phosphorus, but also water, and then hands them over to the tree. The tree and the fungus live in symbiosis with one another, which is an interaction where both partners benefit.

Some of the fungi species live in symbiosis with only one tree species while others form mycorrhizae with many different types of tree species. Not every kind of symbiotic relationship between the trees and the fungi is known yet. The mycelia of the fungi unite tree roots into an underground network. One individual tree may have various kinds of mycorrhizae in its roots, formed with different kinds of fungi.

Some fungal species that form mycorrhizae grow a mushroom on the ground surface in order to reproduce. However, mushrooms that are seen on the ground, like bolete or fly agaric, are only a small part of fungi individuals living in symbiosis with the tree. Moreover, some of the mycorrhizal fungi live completely underneath the ground.