Mushrooms in Lynn Canyon

A Lynn Canyon Ecology Centre Information Sheet

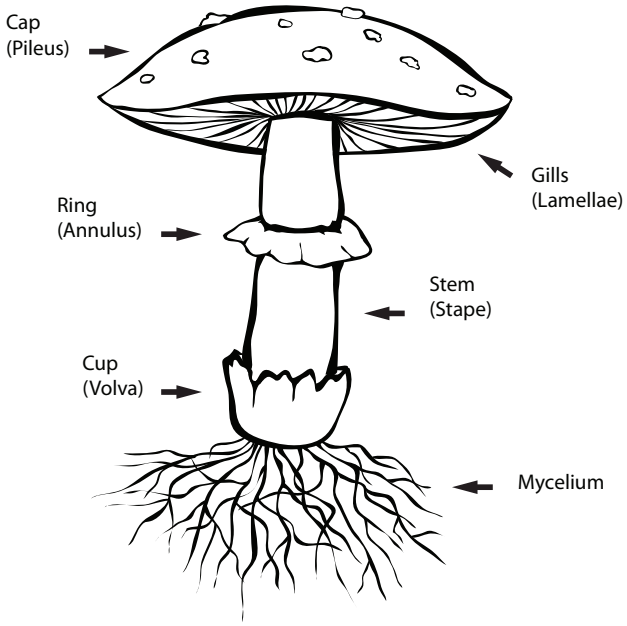
Scientists have learned that humans are more closely related to fungi than to plants!

Introduction to Mushrooms

You have probably stumbled across mushrooms while out in the forest, or even in your front yard; there is much more to these fascinating organisms than what first meets the eye. The mushrooms poking out of the soil are only a small part of a larger organism growing under the ground. What you can't see, and what most of the fungi is made up of are hair-like filaments called hyphae that spread throughout the soil and into rotting vegetation. The hyphae grow together to make up a mass called the mycelium, which you can sometimes see if you dig into the soil. When the weather is just right, the mycelium grows together to form the fruiting structure, a mushroom!

In the past, fungi were considered primitive plants because they weren't able to photosynthesize. New technology that has allowed scientists to study the genetics of fungi has led them to classify fungi in their own separate biological kingdom. In fact, scientists have learned that humans are more closely related to fungi than to plants! And there certainly are a lot of fungi out there. Some scientists have estimated there are around 1.5 million species worldwide, but actual numbers are difficult to determine because many species of fungi are so small they can only be seen with a microscope. In the past mushrooms were classified according to their appearance. More recently, molecular and genetic research has shown that two mushrooms may look the same but have completely different genes. Edible mushrooms can have deadly poisonous look-a-likes. There are no simple tests which tell you if a mushroom is poisonous. This is why you should never eat a mushroom unless you are absolutely sure of its identity.

Anatomy of a Mushroom



Fungi Reproduction

A mushroom is produced when two different strains of fungi meet in the soil. Most mushrooms in Lynn Canyon may be found from the end of September to November especially after periods of rain. Although there are some, like the bracket fungi, that can be found all year. There are also some species which come out during the spring rains in May and June, although the diversity is less than in the fall. Mushrooms can be thought of much like budding flowers. The mushroom's cap and gills contain millions of spores, which are like microscopic seeds. The tiny spores are easily dispersed by wind, rain or animals. If lucky, a spore lands in an area with the right conditions and develops into a new fungus.

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Mycorrhizal Relationships - Fungi and Plants

The relationships between plants and fungi are tightly linked. Fungi are natures' recyclers. Without fungi, dead plants and animals would not decompose and release nutrients back into the soil. But fungi do more than just break down dead organic material. Many plants form close relationships with fungi through connections in their root systems. The fungi will literally wrap around the root of a plant, and in some cases even grow right into the root. While this may seem strange, the fungi is actually helping the plant by breaking down organic material and passing it through the root system so that the plant has access to more food than it could get on its own. In return, the fungus receives nutrients from the tree that it cannot make on its own.

Mycorrhizal fungi surrounding a plant root.

Mushrooms In Lynn Canyon Park

Mushrooms are most commonly seen in the spring and fall. However, some fungi like the woody bracket fungus, *Ungulina marginata* can be found on dead or rotting trees all year-round. A young woody bracket fungus looks like a light coloured bubble coming out of the tree bark. As the fungus ages, it looks more like a shelf, with a white underside and dark brown top. Another common species seen in the fall is the deer mushroom, *Pluteus cervinus*. It is a favourite food of our native banana slug.

Mushrooms don't always look like mushrooms! The apricot jelly fungus, *Phlogiotis helvelloides* is common in the fall and looks like little lobes of apricot coloured flesh sticking out of the gravel. In Lynn Canyon Park you can find apricot jellies on the Access Road Trail. Elphin saddle fungi, *Helvella compressa* are often found alongside trails, looking like little grey saddles on top of thin white stalks. The bird's nest fungus, *Cyathus stercoreus* is a tiny and very distinctive mushroom that looks like a little nest filled with small round eggs. When the rain hits the nest-like structure of the fungi, the little egg-like fungi pieces are splashed out of the nest and if they land in a favourable site they will develop into new Bird's Nest fungi! Explore Lynn Canyon Park and you'll be amazed at the diversity of fungi.

Morel and other small mushrooms.

NORTH VANCOUVER DISTRICT

The Lynn Canyon Ecology Centre is operated by the District of North Vancouver Parks Dept.
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