MUSHROOMS IN FORESTRY

Amanita muscaria — Poisonous

Forestry Canada
Forêts Canada

Mushrooms

All nature lovers are familiar with the great profusion of mushrooms that pop up in the forests as the fall season progresses. Somehow their ephemeral appearance suggests that they are not an important part of the scene, and even their names suggest they are related rather to an unknown half-world of goblins and magic. Few people realize that they have several essential roles in the forest, performing jobs that no other living thing is equipped to do; and some people do not know accurately what a mushroom is or how it performs its job.

Naematoloma fasciculare — Poisonous

What is a mushroom?

What is a mushroom? It is merely the fruit of the "fungus plant" that produces "seeds" (spores) and then fades away. The "fungus plant" itself consists of an unseen network of microscopic threads (mycelium) that interpenetrates the habitat-soil, wood, duff, etc. Unlike the fruit that passes away quickly, the mycelium persists, often for many years, doing its job and sending up its annual crop of mushrooms.

Boletus granulatus — Edible

Gymnopilus spectabilis — Poisonous

What does it do?

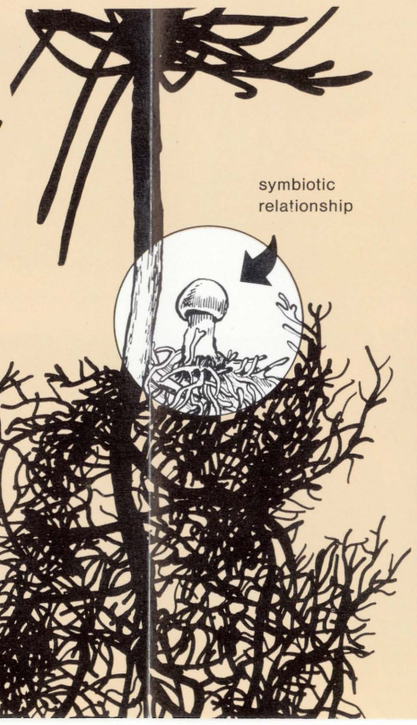
What are the jobs that the mushroom performs? The most obvious work is in the area of recycling. Vast amounts of forest debris (fallen trees, branches, leaves, etc.) are continually being turned back to the elements and cleared from the forest floor. Imagine, if you can, a forest in which no debris decays, building up year after year to make an almost inaccessible fire hazard, not to mention the lack of recycled minerals for continued growth of the trees. The group of mushrooms responsible for recycling have the power to penetrate and breakdown lignin and cellulose by enzymatic action.

Boletus zelleri — Edible

Do they help trees?

Another group of mushrooms form a partnership with the roots of the living trees. This symbiotic relationship, known as mycorrhiza (=fungus root), is not obvious to the casual observer, but if roots are exposed, it can be seen that the fungus has woven a mantle about the roots. Through this mantle and its widespread network of mycelium, the fungus does the job of absorbing water and minerals for the tree. The tree is greatly benefitted by this relationship, but the fungus also "takes its pound of flesh", using up to 10% of the tree's photosynthate to produce its crop of mushroom fruits.

In a few cases, mushrooms have turned to a parasitic existence and cause root rot and decay of living trees. The "Shoestring Mushroom" (*Armillaria*) is one of these, usually attacking weakened trees and then spreading out by means of black, stringlike rhizomorphs to neighboring trees.

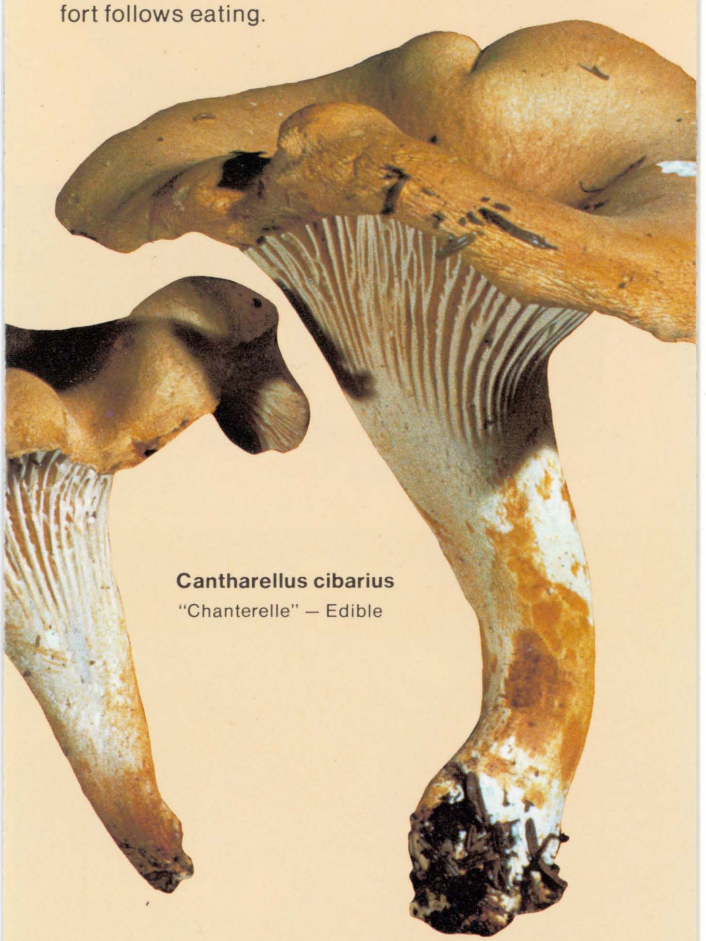


Armillaria ponderosa
"Pine mushroom" — Edible

Can you eat them?

The bonus of gastronomic value for human consumption is also being realized, as the Chanterelle and Pine mushrooms are gathered commercially. The casual collector is warned, however, that mushrooms are not to be taken for granted and that, without accurate identification, there could be "death in the pot".

Contact your local poison control group if discomfort follows eating.



Cantharellus cibarius
"Chanterelle" — Edible

Canada

Pacific Forest Research Centre,
506 West Burnside Rd., Victoria, B.C., V8Z 1M5

Ramaria sp. — "Coral Fungus" Slightly poisonous

Amanita pantherina — Deadly

Lepista nuda — "Blewits" — Edible

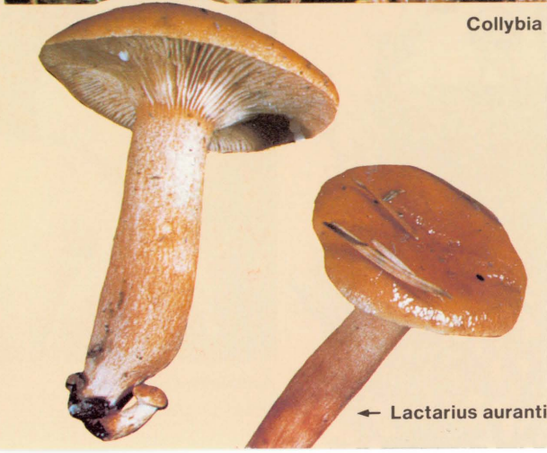
Armillaria mellea — Slightly poisonous to some

Naematoloma capnoides — Edible

Collybia acervata — Edible

Amanita muscaria — Poisonous

Pholiota destruens — Nonpoisonous



← **Lactarius aurantiacus** — Not edible

Pleurotus porrigens — "Angel wings" — Edible

Russula brevipes — Edible →