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MUSHROOM OR TOADSTOOLS?

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People who are not familiar with mushrooms often wonder whether a particular specimen is a mushroom or a toadstool. They think of mushrooms as good to eat and toadstools as poisonous, but botanically, mushrooms and toadstools are one and the same. Other fungi that are well known to everyone are the molds, mildews, and puffballs.

There's no fool proof way to tell an edible mushroom from a poisonous one. If you aren't dead sure, don't experiment. There is no truth to the old wives tale that a poisonous mushroom will tarnish a silver spoon. Neither is it always true that the cap of an edible mushroom peels easily, that insects do not eat poisonous mushrooms, or that all poisonous mushrooms have a bowl or death cup enclosing the base of the stem.

The only sure way to avoid the poisonous mushrooms is to be certain of the identity of any mushroom you eat.

Some of the rules to follow are:

1. Pick only mushrooms that you can positively identify as edible. Learn to recognize a few common edible mushrooms and stick with these.
2. Never pick or eat mushrooms with at least three of these common traits: (1) a central stem with free gills, (2) white spores, (3) a ring around the stem, (4) a cup at the base of the stem, and (5) a stem that is longer than the cap is wide. These traits are common to most poisonous mushrooms. Some edible mushrooms may have one or more of these traits.
3. Pick only fresh mushrooms. Avoid mushrooms that have started to break down.
4. Don't pick unopened mushrooms unless you can positively identify the variety. Some very poisonous mushrooms, when young, resemble edible varieties.
5. Don't eat raw mushrooms--be sure that they are thoroughly cooked.
6. Don't overindulge in mushrooms. They have very little food value and should be considered only for their flavor. Overeating may result in a worrisome case of ordinary indigestion.

Mushrooms are members of a group of primitive plants called Fungi that do not contain chlorophyll and cannot manufacture their food as do the green plants. They develop from microscopic spores which accomplish one of the functions of seeds, namely, reproduction. If the spore falls into a place where nutrients, water, and temperature favors growth and development, a thread-like mycelium arises from the spore and grows through the soil or other material, such as wood, until a vast network is established. When conditions are right, a fruiting body is formed (just what these conditions are is still not known for all mushrooms). This is the structure we call a mushroom, but it is only a small part of the whole fungus plant.

Many fungi, including some mushrooms, cause serious diseases of plants, while others play an important part in nature by helping to decompose plant and animal debris.

The name mushroom is usually restricted to those fleshy fungi that bear their spores on club-like stalks, or basidia, and are included in the class Basidiomycetes. Basidia can be seen only with the aid of a microscope and may be borne on plates or gills, on teeth, or in tubes or pores. Some other fleshy fungi bear their spores in sacs called asci, and these fungi are members of the class Ascomycetes.

Identifying a mushroom is an exacting and difficult job. First, the way the basidia are borne--whether on gills, teeth, or in pores--must be determined. Most of the common mushrooms have gills. Next, spore color, the way the gills are attached to the stem, their thickness, the shape of the cap, its color and size, and many other characteristics must be determined.

What is the best way to ascertain if a particular mushroom is edible or not? First, identify it as accurately as possible and determine if it has ever been regarded as edible. Then there is only one way to confirm its edibility for any one person. That is to eat the mushroom--not all of it, just a piece about the size of a pea. Wait 24 hours to see if there are any ill effects. A piece this size, of even the most poisonous mushroom, is not enough to be fatal, but it will give adequate warning of its danger. If there are no pronounced effects, repeat with a piece about twice the size of the first sample. Remember too, that the same mushroom may have different effects on different people and some edible mushrooms can produce ill effects if an alcoholic beverage is consumed while or shortly after the mushrooms are eaten. Our knowledge of the edibility of every mushroom has been obtained in exactly this way.

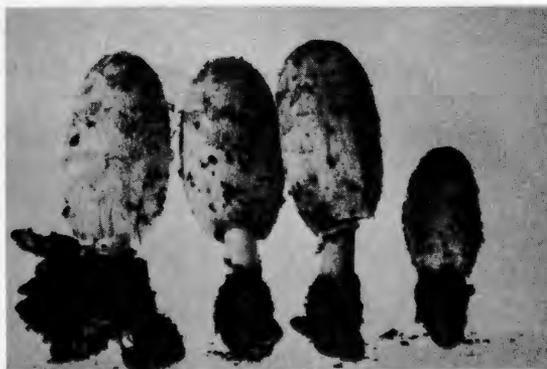
There are a number of excellent books and bulletins that give keys for use in identifying mushrooms. Some of these are well illustrated and provide colored photographs of many common fungi. Some of these publications also give tips on collecting, preserving, and preparing mushrooms for the table.



1. Calf's Brain (Helvella). Common in coniferous woods in spring. Some species are reported to be poisonous but in the Northwest many people have eaten this mushroom with no ill effects.



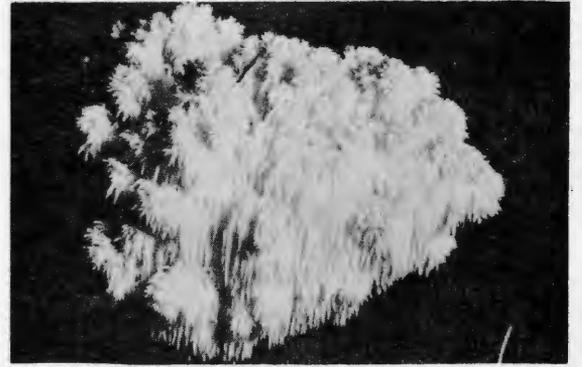
2. Morel or Sponge Mushroom (Morchella). Scattered in woods, on old burns, and along streambanks in spring. This mushroom is so distinctive and so highly rated that it is a good mushroom for beginners to collect.



3. Shaggy Mane (Coprinus comatus). In the late summer and fall, rarely in spring, along country roads and in lawns and meadows. This mushroom has an excellent flavor and is easily identified. It must be collected in a fresh condition since the gills and cap turn into a black viscid mass a few days after the caps emerge.



4. Oyster Mushroom (Pleurotus). In fall on dead coniferous and hardwood trees. This mushroom has an excellent flavor and the lateral stem with gills running to the base of the stem makes it easy to identify.



5. Bear's Head (Hericium). A large fleshy fungus that grows on dead wood. This fungus is distinguished by the spines or teeth which hang down. None of this group of fungi are poisonous and it is a safe fungus for the beginner to collect.



6. Puffball (Lycoperdon). All of the puffballs are edible if collected while they show a pure white color throughout when they are cut lengthwise. This precaution should always be taken to avoid collecting an immature gilled fungus such as one of the Amanitas which may be poisonous.