

6/15/83



Natural History Notes



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MUSHROOMS – TOADSTOOLS



A mushroom, according to popular usage, is any large fleshy fungus such as the common morel or puffball. The term toadstool usually refers to a poisonous mushroom like the destroying angel or death cap. Biologically a mushroom is the fruiting body of a fungus; its purpose is to produce spores. Most of the plant is a network of tiny root-like threads called mycelia which form below ground. When conditions are right the fleshy mushrooms are formed. Usually moisture is the factor limiting mushroom formation. Because of their relatively sudden appearance after a rainstorm, the ancient Greeks believed mushrooms were caused by lightning striking the ground.

Perhaps you have seen mushrooms growing in a circle, called a fairy ring. Once believed to have been caused by witches or fairies, it is actually the growth pattern of the species. As the root-like threads (mycelia) become established, they grow in a circular pattern and the mushrooms are produced from the edges of the circle. A 600 foot diameter fairy ring was reported found in Kansas. Mycelia reportedly grow 18 inches per year. Therefore, that particular ring was about 500 years old.

As the mushroom grows, its cells absorb moisture and expand and slowly but surely the mushroom forces its way upward. It acts as a hydraulic ram and has been known to force its way through asphalt 3 inches thick, lift wine casks off the floor and crack concrete.

Mushrooms produce spores which germinate to form mycelia, which produce mushrooms. Most spores are scattered by wind or gravity. But the stinkhorn, whose name is indicative of its smell, depends on carrion flies being attracted to it and dispersing the spores. The bird's nest mushroom is cup shaped, and raindrops falling into it scatter its spores. The number of spores produced by a mushroom is amazing. The giant puffball is estimated (no one counted exactly) to produce 7,000,000,000,000 spores.

Supposedly mushrooms are edible and toadstools are not, but that is simply a question of semantics. According to some people, there are several foolproof ways to distinguish a poisonous mushroom from an edible one, *but there is no safe way*. It is *not* true that poisonous mushrooms tarnish silverware, a mushroom which "peels" is edible, blanching a mushroom will make it edible, or that a mushroom that turns color is poisonous. Also some mushrooms are poisonous when raw but after boiling in several changes of water are quite safe to eat. This is true for some but not all. In addition, one person can safely eat a mushroom and that same type will make someone else very ill. Also the amount of mushrooms eaten may affect a person. It may take a quart of one kind to have an effect on a person or one tiny bite of the Destroying Angel.

Mushrooms come in all sizes, shapes, and colors. There are green, red, aqua, purple, yellow and spotted ones. They are extremely difficult to identify, especially when young. The color of a mushroom has no relationship to its edibility. So please don't make any judgments on this or any other "foolproof" test. Just assume it's inedible if you have any doubt. This is one instance where it is better to be safe than sorry.