

## Fungi

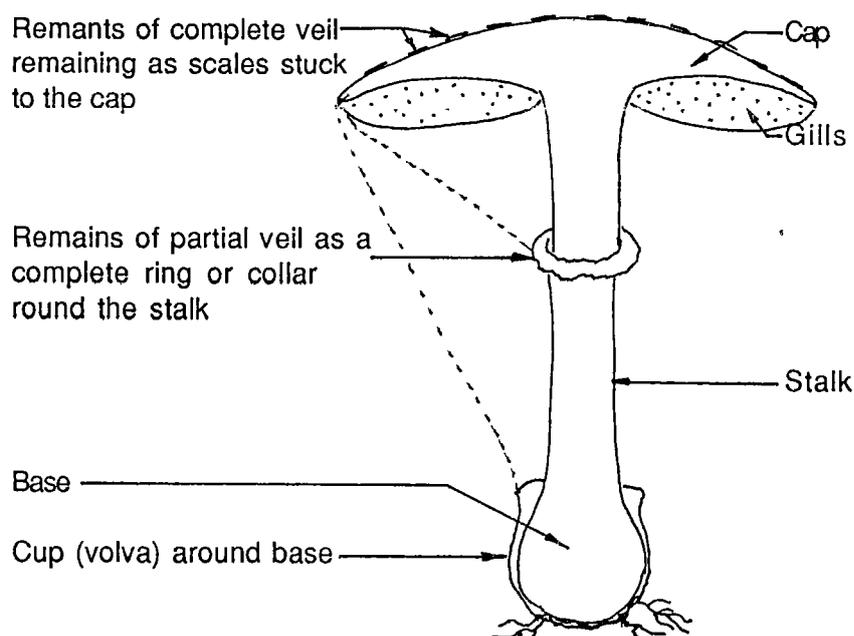
Fungi are a group of organisms that were thought to be related to plants but now are recognised to be very different. They are an extremely diverse group, consisting not only of the well-known toadstools and mushrooms, but also bracket fungi, clubs, jelly fungi, disc and cup fungi and a host of mildews, moulds and yeasts.

The main uniting feature of the group is that they contain no chlorophyll and therefore cannot manufacture their own food in the same way as green plants. Fungi must feed on organic matter, such as by digesting dead organic matter such as fallen leaves or humus in the soil or by attacking living plants and animals. Many toadstool species form beneficial relationships (known as mycorrhizal associations) with the roots of particular trees.

Another feature is that most fungi consist of microscopic threads (or hyphae). They form a mass (the mycelium) which is the body of the fungus. What we see as the cap, bracket, cup or disc is not the main part of the fungus but merely the spore producing structure.

There is no biological difference between mushrooms and toadstools. Commonly, mushrooms are brown-gilled white fungi and all the rest are toadstools. But both are higher (cap-forming) fungi. Correct identification of fungi depends upon recognising the characteristics of the spore-producing structure and noting such features as the colour, texture, shape, presence or absence of gills, their number and attachment, presence of scales, whether the cap peels, smell and even taste. There is no reliable method of distinguishing between edible and poisonous fungi other than by identifying them correctly. Methods such as whether they peel or blacken a silver spoon or not are useless.

A cap of a fly agaric cut open to show a few of the main features:

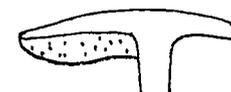


The way that the gills are attached often is a useful feature:

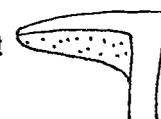
Free



Adnate



Decurrent



A few hints on identifying some of the major groups of cap fungi:

**Amanita** - mostly fairly large with white gills and with whitish scales on the cap (remains of a universal veil), a ring on the stalk and a volva surrounding the base of the stalk.

**Boletus/Suillus/Leccinum** - a group of medium to large fungi that are distinguished by carrying a spongy mass of pores under the cap instead of gills.

**Tricholoma** - medium to large fungi with caps in a range of colours, often with a fibrous appearance. The stalk is characteristically very fibrous and does not break cleanly.

**Lactarius** - a large group of medium-sized fungi with many different cap colours but all, very typically, bleeding a milky latex when freshly broken or cut.

**Russula** - a large group of medium-sized fungi, usually with regular densely-packed white gills and caps often with pastel-like colours. The stalk breaks cleanly - a 'cheesy' break

**Cortinarius** - a large group of medium to small fungi, but all with characteristic brown gills (and spores) and a very thin fibrillose veil, called a 'cortina' - hence the generic name.

**Agaricus** - the 'mushrooms', medium to large caps with brown gills but often wrongly identified.

**Hygrocybe** - small brightly-coloured caps, with gills that are waxy to the touch; in grass.