

## General

Mushrooms belong to a larger group of organisms, known as fungi. Unlike the chlorophyll bearing plants, fungi can not photosynthesize, therefore, they have to feed upon organic substances produced by other organisms.

A few years ago, fungi were considered to belong to the plant kingdom. Today, scientists classify them in their own unique kingdom. The number of their species in nature is estimated around 1.500.000. Of them, only about 75.000 have been scientifically studied so far.

Fungi are classified into three large categories, according to their feeding habits: saprophytes, parasites and symbiotic. Saprophytic fungi depend on the decomposition of dead organic matter of plant or animal origin. Parasitic fungi live upon other living organisms, sucking nutrients from them. Many fungi that are known to cause diseases to humans, animals and plants, fall in this category. Finally, symbiotic fungi have developed a special relationship with other organisms, which is beneficial to both organisms. The fungus obtains readymade organic substances, but also helps its partner in various ways. In the case of plants for example, a special symbiosis is achieved with fungi called 'mycorrhiza'. Through this symbiosis, the plants, among others, are supported in the absorption of mineral substances from the ground. Many mushrooms belong to the category of saprophytic fungi, while others are parasitic or symbiotic.

## What mushrooms are

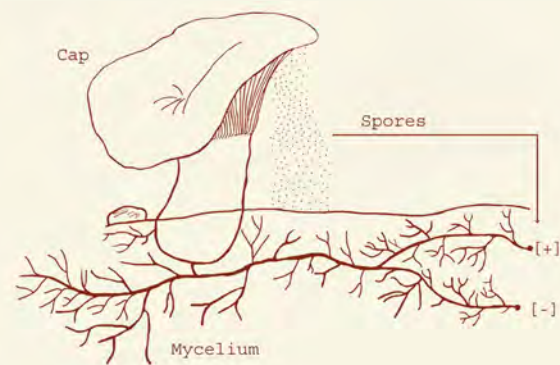
Ancient people could not explain the apparently sudden appearance of mushrooms. They have often linked it with various phenomena like lightning, or traces of the footsteps of witches or even with evil actions.

Ancient Greeks used to know pretty well the characteristics of some mushroom species and they could distinguish between edible and poisonous species. The use of mushrooms as food was very important during times of war and starvation, especially for the ordinary people.

Mushrooms as we see them above soil are the visible part of a group of fungi, specifically the fruiting body of the fungus. The spores, that correspond to the seeds of flowering plants, are found on this part of the fungus. The classification of a fungus as a mushroom is not based on taxonomic criteria, but rather on the presence of the globose or umbrella-shaped fruit body.

## Reproduction of mushrooms

Mushrooms in Nature are reproduced by spores which are produced in vast numbers on the fruit body. At the typical umbrella shaped mushrooms, the spores are born on the gills situated on the lower surface of the cap (figure) and when the fruit body matures, they are released.



When the spores reach a proper substratum e.g. dead organic matter, with suitable moisture and temperature conditions, they grow producing thread-like structures called mycelia. A mycelium in order to be productive, apart from suitable environmental conditions, it also needs two compatible mycelia derived from spores with different polarity to join.

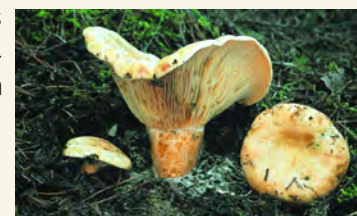
## Mushrooms in Cyprus

Unfortunately, mushrooms have not been properly studied in Cyprus until now with the exception of a small number of species that have been identified by the Forestry Department. However, it is expected that in the following years this gap in our knowledge will be filled.

In many places of Cyprus ecological conditions are suitable for mushroom growth. Most species appear in late autumn, when there is adequate rainfall and the temperature is at appropriate levels. The appearance of mushrooms continues throughout winter, especially at low and medium altitudes and in spring as well. Not rarely, some species appear for short periods of time in summer, at the highest altitudes, after strong rainfalls that preserve humidity of organic matter for at least 15 - 20 days. Some of the most common mushrooms of the various habitats of Cyprus are presented in the following pages, along with certain basic information for each.

## *Lactarius deliciosus* "Saffron Milk Cap"

A common and delicious mushroom of Cyprus. It appears during autumn in pine forests and shrub-beries.



## *Coprinus comatus* "Shaggy Ink-cap"



A common mushroom of Cyprus. It is edible although Cypriots are not very fond of it. It appears during rainy autumns mainly across meadows, forest road edges

and recently disturbed soil.

## *Agaricus campestris* "Field Mushroom"

Common edible mushroom. It appears during autumn in gardens and fields.



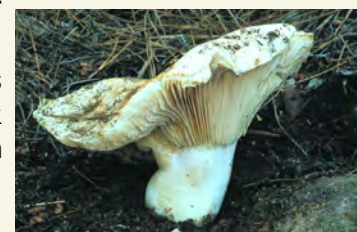
## *Morchella conica* "Morel"



A delicious and plummy mushroom. It appears during spring in recently burned areas, forests, meadows and wasteland.

## *Russula delica* "Milk-white Russula"

A common mushroom of Cyprus. Although edible, it is not appreciated as much as the "Saffron Milk Cap". It appears in autumn in pine forests.



## *Pleurotus eryngii* var. *ferulae* The so called "Giant Fennel Mushroom".

A common mushroom of Cyprus. It is a very delicious and plummy mushroom. It appears during spring and autumn growing on the roots of the Giant Fennel (*Ferula communis*).



## *Tricholoma caligatum*



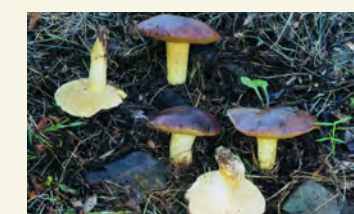
A delicious and plummy mushroom. It appears in autumn in pine forests.

## *Lactarius torminosus* "Woolly Milk-cap"

A poisonous mushroom especially if consumed raw. It looks like "Saffron Milk Cap", however, at the upper part of the cap it bears hairs and the color of the latex remains white. In contrary, the "Saffron Milk Cap" is glabrous and the latex is orange-coloured.



## *Suillus granulatus*



A common mushroom of Cyprus. Although edible, it is not considered of good quality. It appears in autumn in pine forests.

## *Chroogomphus rutilus*

Edible mushroom but not very much recommended. It is unusual in Cyprus and appears in autumn in pine forests.



### *Ganoderma applanatum* "Bracket"



This is a hard, woody and perennial mushroom which parasitizes (also saprophytes) on planes and other trees. Due to its large size the production of spores reaches astronomical numbers.

### *Volvariella speciosa* var. *gloiocephala*

It is an edible mushroom of Cyprus. In the past it was a common species but presently it seems that its numbers have been reduced. It appears during autumn in gardens and fields.



### *Rhizopogon luteolus*



The fruit bodies of this fungus are spherical and are produced below the surface of the ground emerging during maturity stage. Although edible at the younger stage it is

not considered of much importance. It appears in autumn in pine forests.

### The Collection of mushrooms

Cypriots are generally keen collectors of wild mushrooms as they consider them very delicious titbits. Not rarely they drive along great distances to reach a location where mushrooms have appeared. It is noted that certain village inhabitants sell them and receive a good, additional yearly income. The most commonly collected mushroom is 'Saffron Milk Cap' (*Lactarius deliciosus*), the 'Milk-white Russula' (*Russula delica*) and the so called 'mushroom of the Giant Fennel' (*Pleurotus eryngii* var. *ferula*). The less collected ones are the *Tricholoma caligatum*, morels (*Morchella* sp.), and 'Field Mushrooms' (*Agaricus campestris*).

The collection method can negatively affect both mushroom populations and collectors. For this reason, the

following rules should be followed:

- Only edible mushrooms should be collected and as such should be considered the mushrooms that are traditionally collected. Experiments and speculations like "edible mushrooms are those which are affected by worms" or "those mushrooms that produce a milky liquid when cut are poisonous" are very dangerous and can be fatal.
- Only the mature fruit bodies that have already given out their spores for reproduction should be collected; the young, unripe mushrooms should be left intact.
- The removal of organic matter should be avoided since it results in the drying of the mycelia and their exposure to the sun and air. Mushrooms should be carefully removed either by cutting them off with a small knife or pulling them off the ground by moving them back and forth.
- The use of a rake to remove the organic matter over a large area so that a number of mushrooms are brought to surface is unacceptable and catastrophic. This method damages the reproduction process of mushrooms in the affected area and shows lack of respect to nature and the ecosystem.

### Mushrooms edibility

Mushrooms are divided into three groups according to their edibility: the edible ones, the uncertain and the poisonous.

Edible are the mushrooms that when consumed do not affect human health. The safer way to identify them is the verification of their species by an experienced collector. The use of books for the identification of species is acceptable under certain conditions, but can also be dangerous. Empirical methods such as taste and smell can be even more dangerous, since some poisonous mushrooms have pleasant taste and smell. Uncertain are the species that when eaten cause disorders to health. The severity of symptoms varies from case to case.

Even though the very poisonous species of mushrooms are few, they have caused, not unjustifiably, fear amongst people. Their resemblance to certain edible species is in some cases great and the collector may very easily be confused. The kind of their poison does not generate symptoms right after their consumption, but after some time (often after 48 hours) when poison is already in the blood. Attempts are being made to find anti-poisons, with no satisfactory results till now. It is very

important to know that in case of mushroom poisoning, we should immediately seek medical advice. Our first actions should be the following:

- Cause vomit.
- Keep vomit so that the kind of poison is identified and to proceed with the right therapy.
- Record the details of the development of symptoms.

### Epilogue

Mushrooms like every other living organism, have their own, very important role to play in nature. We therefore have to appreciate their value and importance and we should act in such a way so that we contribute to their protection. The best way to show our appreciation is to avoid disturbance of their habitats by handling them correctly. The key to their protection is the understanding of the natural environment's functions, something that requires both study and training.

The information contained in this leaflet is general and should not be used as an identification guide for mushrooms.

# MUSHROOMS IN CYPRUS An unknown world



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MINISTRY OF AGRICULTURE,  
NATURAL RESOURCES AND ENVIRONMENT  
FORESTRY DEPARTMENT  
[www.moa.gov.cy/forest](http://www.moa.gov.cy/forest)



P.I.O. 153/2008-5.000

Published by the Press and Information Office

Printed by: Konos Ltd