



Recognising edible field mushrooms

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When cooler weather and the first rains arrive, many people start thinking about collecting mushrooms. To avoid poisoning, it is important to be able to correctly identify them in the field. Most people collect the field mushroom (*Agaricus campestris*), the similar horse mushroom (*Agaricus arvensis*), or *Agaricus subrufescens* and similar edible mushrooms with small scales covering the cap which pop up in metropolitan open spaces and in backyards. However, people should be aware that there are a small number of different species which can be confused with field mushrooms; these are either inedible or poisonous. This Gardennote describes some tips to help distinguish edible mushrooms from their inedible look-alikes.



Figure 3. *Agaricus subrufescens*. Photo © Neale Bougher



Figure 1. Field mushroom (*Agaricus campestris*). Photo © by Georg Mueller.



Figure 2. Horse mushroom (*Agaricus arvensis*). Photo © by Georg Mueller.

Field mushrooms

When unsure about correct identification, people sometimes use simple 'tests' which have been found to be unreliable, for example, 'peeling the cap' or 'dipping a silver spoon in the cooking pot to check for blackening'. Fungi with a neat, clean appearance are not necessarily edible, and ugly or messy fungi are not necessarily poisonous.

To help correctly identify field mushrooms, look for these three main features :

A large fleshy cap (4 to 16 cm across), the top of which can vary in colour between white and brown, but does not have gold or yellow tones.

Gills, which in the young field mushroom are pink, and in the horse mushroom, cream, but which **change with age from pink to dark brown**.

A veil of skin over the gills when the mushroom is young and in the 'button' stage, which splits as the cap expands and remains attached to the stem as a small ring of skin (Figure 7).

It is important to realise that in any flush of mushrooms there may be a range of ages present from the 'button' stage with very pale gills to old 'flats' with dark-brown, almost black gills. If only 'buttons' are present it is safer to keep them until the next day, to be sure the pink-brown gill colour develops, typical of a mushroom.

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Look-alikes

Yellow stainer mushroom

Be cautious about the yellow-staining mushroom. In all appearances it is similar to the edible mushroom species except that its flesh, especially of the stem, when bruised or split open, immediately turns yellow. It may also have a strong, rank smell and on cooking gives off a yellow juice. Although some people can eat this species, it will make many others ill.



Figure 4. Yellow stainer mushroom (*Agaricus xanthodermus*)

Death cap mushroom

The Death Cap mushroom is extremely poisonous and is responsible for 90 per cent of all deaths caused by mushroom poisoning. It is currently not known in Western Australia but has been accidentally introduced into eastern Australia from overseas and may appear elsewhere in future. The Western Australian Herbarium is interested in any sightings of the Death Cap and should be contacted on 08 9334 0500.

The Death Cap can be easily recognised. The cap is light olive-green to greenish in colour. The **gills** can range from white to pinkish in mature mushrooms. In young specimens, a white, membranous **partial veil** tissue extends from the edge of the cap to the upper stalk (Figure 4), covering the gills. The **stalk** is white, up to 15 cm tall, with a large rounded bulb at the base. The bulb includes a white, cup-like membranous sheath at the base of the stalk (volva). The base of the stalk and the tell-tale volva are often buried in the soil. **If you find a mushroom in its button stage and are unsure if it is edible, dig out the base of the stalk. If it is surrounded by a cup-shaped sac it is likely to be poisonous.**



Figure 5. Immature Death cap mushroom (*Amanita phalloides*). Photo © by Georg Mueller.



Figure 6. Mature Death cap mushroom (*Amanita phalloides*). Photo © by Georg Mueller.

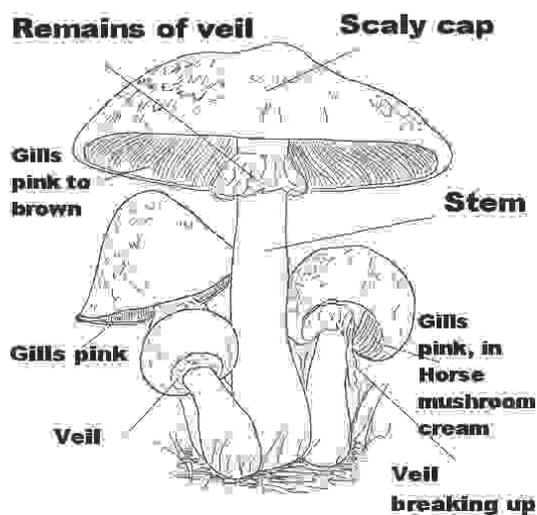
Some other mushroom species found in Western Australia are also edible. These include some species of the genera *Macrolepiota*, *Morchella*, and *Suillus*. However, before considering eating these, you should have them positively identified. The Department of Agriculture's AGWEST Plant Laboratories, 3 Baron Hay Court, South Perth, provides this service for a small fee.

Caution: If you have any doubts at all about the identity of a 'mushroom', don't eat it.

In all instances avoid eating older, perhaps maggoty or mouldy mushrooms. Many cases of supposed mushroom poisonings actually are due to bacteria or mould growing on older mushrooms – not due to the mushroom itself.

Do not collect mushrooms from sites where they may accumulate high levels of dangerous elements, e.g. by the side of a busy road or near toxic waste dumps. Immediately seek medical advice if you suspect poisoning after eating mushrooms.

Figure 7: Parts of edible field mushrooms



For further information, please phone the Pest and Disease Information Service on 1800 084 881.