



wild mushrooms



Edible wild mushrooms, from left: chicken of the woods, wood blewit, chanterelle, morel, hedgehog fungus.

what are they?

Mushrooms are fungi, which have their own kingdom within biology - they aren't plants as they have no chlorophyll and so can't manufacture their own food (and so don't require sunlight). They have to absorb food from elsewhere, by:

1. being a parasite: feeding off elements in trees.
2. being a saprophyte: feeding on dead things - leaf litter, tree stumps, dead branches.
3. having a symbiotic mycorrhizal relationship with plant roots: the plant supplies water to the fungus, which breaks down matter and provides nutrients to the plant.

There are millions of fungi species, most of which are micro-fungi like yeasts and moulds. There are around 15,000 species of macro-fungi - mushrooms, but also puffballs, bracket fungi, earth stars, morels and subterranean fungi like truffles, none of which are technically mushrooms. Of those 15,000, 100 or so are edible, 200 poisonous, and 50 deadly. Some of these can be found in the UK.

The history of eating wild mushrooms goes back millions of years to before there were humans (which is bit mind-boggling), so knowledge of poisonous species would have been passed down through the generations. Problems would have occurred when humans migrated to areas with unfamiliar species. Obtaining new knowledge would have been haphazard and dangerous.

what are the benefits?

- They play a vital role in ecology; they're nature's recyclers; their main foods are lignin and cellulose, which they break down, enabling decomposition and soil development on a huge scale. Also, the mycorrhizal relationship allows plants to survive in otherwise hostile conditions.
- They're a delicious and free gift from nature.

- They're nutritious and healthy - they contain vitamin B, potassium, selenium, protein, fibre and virtually no fat.
- Foraging encourages an interest in nature, and walking in the great outdoors is healthy in itself.
- It's a very ecology-friendly form of foraging. The main body of the fungus is the mycelium, in the soil or in the tree, and so you're not damaging the host any more than picking apples.
- Fungi often have amazing colours, and have been used to produce natural dyes - as have lichens, but lichens are slow-growing and you have to collect the whole organism.

what can I do?

Safety: be careful. Deadly mushrooms are relatively rare, but they do occur - randomly, so sooner or later a forager will come across them. Only pick mushrooms if you're sure what they are. Knowledge gained in one part of the world can't be taken for granted in another - some mushrooms that are edible in one country have deadly lookalikes in others. A Thai woman died after collecting and eating death caps on the Isle of Wight in 2008. Death caps are not found in SE Asia, but look just like 'paddy straw' mushrooms which are, and are commonly eaten.

Don't pick young mushrooms - firstly because they haven't had chance to drop their spores, and secondly, they're more difficult to identify. Young specimens can be saturated with colour, which fades when it grows and the cap spreads. Also, don't cut or snap off mushrooms, but pull the fruiting body out whole - some identification features can be found right at the base.

Fungi concentrate contaminants, unlike plants, so don't collect from places that may be contaminated, like roadsides, as there may be lead or particulates in the soil - but also, a city park may have previously been the site of a factory, and mushrooms may contain mercury or

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other toxins. Sorry to drone on about this, but with this topic, it's far and away the most important point. We don't want to lose you.

Collecting: once you understand the dangers, you have to take time to gain identification knowledge. Attend foraging courses to experience mushrooms in the wild, then back up and refine your knowledge with good books or websites - compare drawings and photographs in different books / websites rather than relying on just one.

There are 4000 species of larger fungi in the UK, so it's probably better to focus on the most common species - edible ones like porcini, chanterelle, hedgehog fungus, field and wood blewits, parasol and shaggy parasol, morel, champignon, puffballs, horn of plenty and chicken of the woods (as long as it's not growing on yew trees); but also make sure you can recognise the most common poisonous ones, with scary names like death cap, destroying angel, satan's boletus, poison pie and the sickener.

Get to know your local sites well, and in different seasons - you'll find different species in woodland and pasture. If you find good locations, mushrooms will fruit there year after year. Get to know your local tree species too - host trees can rule out some fungi species when it comes to identification. We stress the local though, because driving the length of the country to go foraging negates any environmental benefits.

Autumn is the best foraging time as it's the mushrooms' work season. They appear in large numbers because it's wet, and leaf fall after the summer means they have lots of food. Never collect in plastic bags, as it makes the mushrooms

sweat and accelerates decomposition. Baskets are best, as they allow air to flow.

You need to ask permission if the land is privately-owned, but public land should be fine, except for SSSIs or National Nature Reserves, because although you aren't doing harm to the fungus body, you might be doing harm to rare insect species that may use the fruiting bodies for food or for laying their eggs on. This may be fine with a few people collecting a couple of kilos of mushrooms, but nowadays, commercial collectors could have perhaps 20 people out collecting a few kilos each. This is too much of an impact, and the Federation of Wildlife Trusts has banned mushroom collecting completely from SSSIs.

Cooking: keep mushrooms cool, and eat within 2 days of collecting. It's perhaps best not to feed wild mushrooms to children, the old or infirm, as they're less able to tolerate any toxins that may be present. If you're unsure, keep one mushroom in the fridge in case anyone is taken ill.

Find some good recipe books. Simple dishes seem to work best - not so elaborate that they swamp the delicate flavours of the mushrooms. Wild mushrooms work really well with game.

You can preserve / dry / smoke mushrooms if there is a glut. They can be preserved in olive oil or clarified butter, which will extend their life for a few weeks. Cooking and freezing will preserve them for several months - giant puffballs (and others) don't dry well - the flavour doesn't concentrate. The best for drying is probably the cep/porcini, which is great for flavouring pasta, soups etc. Champignons and morels are good too. Dried mushrooms can have a shelf-life of several years if stored in Kilner / airtight jars - but if any moisture gets in, they'll become mouldy and unfit for consumption. Morels are best for smoking.



Wild porcini mushroom and onion tart.

resources

- see lowimpact.org/wild-mushrooms for more info, safety advice, legal aspects, code of conduct, courses and books, including:
- Peter Jordan, *Field Guide to Edible Mushrooms*
- Roger Phillips, *Mushrooms*
- Jack Czarnecki, *a Cook's Book of Mushrooms*
- mycokey.com, fungi identification site
- britmycolsoc.org.uk, British Mycological Society
- rogersmushrooms.com, easy-to-use wild mushroom identification site

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