

Fungi in the Park

Elisabeth Cheesman, with photos by Nigel Reeve, Royal Parks Ecologist

The nature and ecology of fungi

Formerly classified as plants, fungi are now known to be a separate kingdom. There are two types: macrofungi and microfungi. The macrofungi (those such as mushrooms and puffballs that produce easily visible fruiting bodies) have some characteristics analogous to those of plants, such as the root-like "mycelium" (the hidden part) and seed-like spores produced by the fruiting bodies (the visible part). A fungal mycelium can spread over a large area of its "substrate" (the material it feeds on), and can exchange substances through its "hyphae" (tiny thread-like extensions to the mycelium); the fruiting bodies shed their spores to start a new growth. There are also thousands of microfungi in the form of yeasts, moulds and so on.

Fungi are very important for the breakdown of decaying matter, returning it to the environment. They can also form a "mycorrhizal" relationship with plant roots, giving, as well as receiving, nutrients; it is said that many plants could not exist without this relationship. Fungi are food for animals, particularly invertebrates, and are used by humans too.

Types of macrofungi

Macrofungi come in many shapes, including balls, clubs, warts, crusts, and wrinkled or coral-like masses, and in a great range of colours, often spectacularly bright. Smell and texture can be as important as appearance for identification. Stem (typical mushroom- or toadstool-shaped) and bracket fungi can drop their spores from gills, pores or spines; others may release spores directly from a spore-bearing surface, in tiny vessels called "asci".

Some Richmond Park fungi



On grassland we commonly see the traditional mushroom or toadstool with stem, cap and gills, such as Parasol (*Macrolepiota procera*) or Fairy Ring (*Marasmius oreades*). Under trees, especially oak trees, we might find the fungi of tree roots or leaf litter, such as Butter Cap (*Collybia butyracea*) and Lilac Bonnet (*Mycena pura*), and sometimes Puffballs (e.g. *Lycoperdon* species) and Earth-balls



(*Scleroderma* species), which release their spores by bursting open at the top. Don't forget to look up into the trees too, as you may see large bracket fungi such as Beefsteak Fungus (*Fistulina hepatica*) or Chicken-of-the-Woods (*Laetiporus*

surprisingly good for its size. I also use the recent Dorling Kindersley publication *Fungi*, as it gives good habitat information as well as the newly-devised English names.

Foraging and the law

Fungi should never be taken from a nature reserve or Site of Special Scientific Interest (SSSI) such as Richmond Park, except, with permission, for scientific study. The police in Richmond Park are very vigilant and will prosecute. In other places, fungi should only be picked with permission from the landowner, who may impose conditions. The Forestry Commission, for instance, allows one basketful for personal use but no commercial harvesting.

About the writer

I had some grounding in botany as a child, helped by my father who was an art teacher and amateur naturalist. When I retired early from Classics teaching, my botanical skills improved quickly as my love of nomenclature and being out-of-doors seemed to come together. I started on fungi because they mainly occur in the autumn when the plant season is declining. I find them extremely interesting and beautiful, and enjoy the fact that many of their generic names come from Greek, but it is proving hard to learn on my own and I am trying to get as much expert help as possible. I have found local natural history groups very encouraging to beginners, and they can certainly do with our support.

Elisabeth Cheesman

Elisabeth is leading a Friends walk focusing on fungi on November 1st.



sulphureus); these names refer to texture and appearance rather than taste. Most of these do not destroy living wood but co-exist with the ageing process. Even fallen and felled wood is far from dead, and provides food for many fungi, such as Turkeytail (*Trametes versicolor*), Sulphur Tuft (*Hypholoma fasciculare*) and Glistening Inkcap (*Coprinus micaceus*).



Useful books

The most comprehensive field guide is Roger Phillips' *Mushrooms and other Fungi of Great Britain and Europe*, but it is large and the huge number of species can be overwhelming for the beginner. But none of the smaller guides is completely satisfactory, and there is a danger of forcing a specimen to fit their limited range of examples. The Mycological Society recommends the Collins Nature Guide *Mushrooms and Toadstools of Britain and Europe* by Edmund Garnweidner, and the Collins Little Gem is