

Woodland Fungi Survey on Rougham Estate 2020-21 – a summary

Over 117 species of woodland fungi have been recorded in Rougham Estate Trust woodland by volunteer surveyor Juliet Hawkins in a few autumn surveys in 2020 and 2021 – this is a fraction of the species that were present. Whilst most of the species are widespread, some are rarely reported and others are genuinely rare. The accumulated list reflects the range of tree species and deadwood habitat in the Rougham Estate woods.

Overall, there is a good diversity of tree species in the woodland to the south of Rougham Estate, including plantation conifers and hybrid poplars, both of which bring additional species to an otherwise species-rich ancient broadleaved woodland. Despite the lack of really old, veteran trees it was good to see so much dead wood left scattered following felling/coppicing there will provide a lot of dead wood of different species, sizes and orientation.

Woodland fungi recorded in Rougham woodland can be separated into two different 'lifestyles': mycorrhizal and saprobic.



Mycorrhizal fungi

Mycorrhizal or symbiotic fungi live in association with many plants' root systems, and a beneficial exchange takes place between the two. The fungus absorbs carbohydrates from the photosynthesising trees and plants through its network of fine underground 'hyphal' or 'mycelial' strands (the network of hyphae is called the 'mycelium') attached to the tree roots. In return, the fungus provides the plants/trees with minerals that it efficiently absorbs through its extensive mycelium network over a wider area than the tree roots. The woodlands have a number of common, but nonetheless, attractive mycorrhizal species especially with oak which is frequently found in all the woods. Relationships are complex and examples of species recorded at Rougham demonstrate the associations of host-specific fungi with different trees.

- **The *Tricholoma* genus, known as Knights,** are often mycorrhizal with a particular species.



The rare Poplar Knight *Tricholoma populinum* was found with hybrid poplars

- **Lactarius species, known as Milkcaps**, are frequently mycorrhizal with one species only – 7 of the 75 British species were recorded including the Oakbug Milkcap, the Fiery or Hazel Milkcap and the Birch Milkcap. The less common Blushing Milkcap was found with willow.

LtoR: The Hazel Milkcap *Lactarius pyrogalus* is mycorrhizal with hazel. The Blushing Milkcap *Lactarius controversus* is much less common in woodland and is associated with willow.



- **The genus Russula, or Brittlegills**, are particularly colourful and attractive fungi, but are notoriously difficult to identify.

LtoR: The Blackening Brittlegill *Russula nigricans* and Blue-Band Brittlegill *Russula chloroides* are mycorrhizal with broadleaves.



- **The genus Amanita** includes some of the best known, most beautiful and most poisonous species.



LtoR: Five out of the 50 Amanita species in Britain were recorded including The Blusher *Amanita rubescens*, Fly Agaric *Amanita muscaria* and Deathcap *Amanita phalloides*.

Saprobic fungi

As a piece of wood decays, it supports a succession of different fungi. Saprobic or saprophytic fungi live on dead and decaying organic matter – trees, plants, leaf litter - and can be host-specific. Those recorded vary in form and size from tiny slime moulds to jelly fungi, club-like fungi, woodwarts, cup fungi, toothed and gilled fungi, brackets and crusts.

Every combination of sun and shade, moisture content, diameter of leaf, twig, tree trunk or log, species of tree and time of fall offers opportunities for different species of fungus.

- **Some small species grow on small dead twigs and others on large tree stumps** – many are very difficult to identify.



LtoR: Twig Parachute *Marasmiellus ramealis* grows on dead bramble stems and small twigs. Angel's Bonnet *Mycena arcangeliana* grow on dead branches and logs.

- **The Clitocybe genus, known as Funnel Caps,** are saprophytic on leaf litter so are found on the woodland floor and appear as if they are growing in the soil. Eight of the 58 or so British species were recorded at Rougham.

LtoR: The very strong-smelling, blue-coloured Aniseed Funnel *Clitocybe odora* is saprobic on leaf litter of broadleaf trees, mainly beech, but was recorded under spruce in Mellfield Woods. The Two-Tone Funnel *Clitocybe metachroa* is found with conifers and broadleaves.



Several recorded fungi are restricted to very old oak trees such as Oak Bracket. One saprophytic species was recorded that is becoming very restricted due to its host, dead Elm trees, becoming increasingly scarce following Dutch Elm Disease – the Wrinkled Peach.



LtoR: A distinguishing feature of Oak Bracket *Pseudoinonotus dryadeus*, found on a large old oak tree, is that its felted surface exudes amber droplets, most noticeably towards the broad growing margin. The very beautiful Wrinkled Peach *Rhodotus palmatus*, which also exudes droplets, is becoming increasingly scarce as its host tree, Elm, is becoming such a rare sight following its decimation by Dutch Elm Disease.

There are several places where walkers can see fungi growing adjacent to public or permissive footpaths in woodland and grassland. To minimise issues over-picking and picking of rare fungi, dangers of poisoning and conflicts with insects, Rougham Estate Trust discourages picking except for study and encourages walkers to photograph beautiful specimens and leave them for the enjoyment of others.

Rougham Estate Trust is committed to implementing woodland management recommendations that enhance deadwood habitat, retain veteran and non-commercial trees, and maximise the tree diversity so important for fungi.

Juliet Hawkins
Conservation adviser