

TOPIC : FUNGI - 'WHATS THAT FUNGUS DOING IN MY GARDEN'

GUEST SPEAKER : FRANCES GUARD

MALENY GARDEN CLUB MEETING : 25 NOVEMBER 2014

- After rain small fungi appear in lawns for a few hours then disappear
- The fungus you see is the fruiting body which produces spores
- The main part 'substrate' is under the soil or compost layer
- The mass is 'mycelium' which exists in the substrate and produces the fungi
- They are not plants and do not photosynthesise
- Fungi do not have cellulose but have chitin similar to species in the animal kingdom eg insects, crabs etc
- There are thousands of species of fungi which are in effect the decomposers or recyclers, breaking down plant matter to form humus
- Fairy Rings develop on the edge of the mycelium, the centre of which is usually greener due to the nutrients produced
- Most mulch is composed of dead plant matter and when spread can be covered in fungi – not always in mushroom shapes eg the stink horn – some are cage shaped or phallic shaped and all are decomposers. Some of the recyclers attack large pieces of wood
- The tiny birds nest fungi has microscopic spores. They are splash cups which eject the eggs when rain fills the cups. They are usually yellowish brown and are long lived – weeks and months – others last a day or so but produce millions of spores. Some are very photogenic in shape, size and colour. They do not harm plants and are beneficial, breaking down the cellulose in cut lantana to create beautiful humus
- Microporus Xanthopus is a small to medium funnel shaped fungus with a shiny, banded, brown and cream upper surface and a stem attached to its substrate by a small yellowish disc at the base. Its the hard or leathery fungi of the Polypores species and favours fallen branches of the quandong tree. Some fungi are called white rotters 80% and 20% brown rotters in breaking down cellulose
- Mycorrhizal fungi are symbiotic with plants, especially trees. It is estimated that 90% of all land plants are mycorrhizal. The fungi (myco) hyphae form a structure with plant roots (rhiza) and exchange nutrients to mutual benefit. They are protective of plants in respect of parasites and diseases and they kill nematodes. Plants have chlorophyll and produce carbohydrates including sugars which fungi need as food. The fungi in turn extract minerals and water from the soil and feed

these to plants which, if grown in sterile soil do poorly and need their fungal partners to grow normally

- Orchids are the largest plant species in the world and partner with, and are reliant for survival on, orchidmycorrhizae – orchids are parasites on fungi. When an old tree stump dies and dries, the attached fungi dies too as does the orchid
- Algae and fungi and lichens are specialised partnerships. Lichens don't harm plants as they live on the surface
- Ganoderma australe is like a huge horse shoe bracket on trees which have been damaged. It may take 50 years for it to kill a tree and transform from parasite to decomposer
- Myrtle rust is a pathogen which affects lillypillies and eucalypts
- Powdery mildew is a fungus – 1 part milk, 9 parts water in sprayer will control it
- Fungi are food for mammals and invertebrates and are the great recyclers of all plant material. Without them we would be surrounded by debris
- There would be no antibiotics or blue cheese without fungi
- In the garden – don't overuse fertilisers – avoid monoculture – disturb top soil as little as possible – allow leaf litter and mulch to form mycelial mats - create compost: don't burn garden waste, let the fungi do it for you
- Mycologists study fungi
- Yellow stem mould is not a fungus
- There is no definitive guide to edible mushrooms in Australia – unlike Europe and North America with hundreds of years experience
- Better to be cautious and not eat field mushrooms
- Don't inhale spores as some can cause lung disease

**A FIELD GUIDE – 'AUSTRALIAN SUBTROPICAL FUNGI' BY
SAPPHIRE McMULLAN-FISHER, PATRICK LEONARD AND FRANCES GUARD DESCRIBES
115 SPECIES IN SOUTH EAST QUEENSLAND WITH PHOTOGRAPHS. AVAILABLE FOR \$30**