Astonishing local fungi … *Neil Tucker*

We have come to the end of the fungi season for 2016, or perhaps not quite. It has been a wet late spring, which has extended the season this year. There have been 3 recent interesting finds…

The Morel

On the access track over the dunes at Point Roadknight, my partner and grand-niece found a new species of fungus for the district – a morel. Morels are not common – 30 years ago ANGAIR's Mary White found and painted one she called *Morchella conica*, but that name is no longer accepted and it is now included in *Morchella elata*. There has long been disagreement over the naming of morels, and DNA sequencing is slowly sorting them out.

Morchella elata

This is an edible species, although like other morels, some individuals may be allergic to it. *Morchella elata* fruits during spring on soil. Morels contain small amounts of hydrazine toxins that are removed by thorough cooking; morel mushrooms should never be eaten raw. It has been reported that even cooked morels can sometimes cause mild intoxication symptoms when consumed with alcohol. Like flowers, fungi are protected in the wild in Victoria.

The Cannonball Fungus

A visitor at the ANGAIR wildflower show spoke to Peter Crowcroft about a fungus at his place. Peter referred him to me and I went to visit him at Aireys Inlet, where he has a very active infestation of the Cannonball Fungus (*Sphaerobolus stellatus*). When immature the whole fruiting body is a closed sphere about 2 millimetres in diameter. At maturity the outer covering splits radially, from the apex of the sphere, leading to the creation of a toothed cup, more-or-less hemispherical in shape. It consists of a firm outer case and an inner membrane with a single reddish-brown peridiole (a small, discus-shaped parcel of spores) sitting on that membrane. The membrane is attached to the outer cup at the tips of the teeth. Within the cup, the peridiole sits in a bath of fluid. When the fruiting body is mature the inner membrane pops inside out and flicks the peridiole into the air. The fluid in which the peridiole sits acts as a lubricating fluid. It keeps the peridiole loose in the cup, so that it is very easy to flick away.

Sphaerobolus stellata with peridiole

Though the whole structure is only a couple of millimetres in diameter, the force of ejection is powerful enough to shoot the peridiole up to 6 metres away. Once the peridiole has been ejected, the inner membrane can collapse a little. The inversion of the membrane takes between a thousandth and a fifteen-hundredth of a second. The peridiole is shot off with an initial speed of around 3-5 metres per second. The *Sphaerobolus* peridiole is fairly soft. It is composed largely of fatty materials. It compresses when it hits a solid object and stays firmly stuck. Our show visitor has many hundreds of peridioles stuck firmly to his house, shed, carport, car, tree trunks, fence posts, mulch, everything in fact.

The Raspberry Slime Mould

One of our members has an orchid-rich bush block near Bells Beach. She was showing the orchids to another ANGAIR member, when they noticed on a firewood log, some Raspberry Slime Mould, *Tubifera ferruginosa*.

Though not fungi, slime moulds often form spore-bearing structures that resemble those of the true fungi. Although many slime mould species fruit on wood they do not form a penetrating and absorptive mass of hyphae in the wood substrate. Rather, slime moulds can move and engulf particles of food in an amoeba-like manner. Slime moulds creep about over the surfaces of materials, engulfing bacteria, spores of fungi and plants, protozoa, and particles of nonliving organic matter. At some point, on a chemical signal, they come together and convert into spore-bearing structures. *Tubifera ferruginosa* converts into a clustered mass which compresses together but the individuals still retain their identity.

Tubifera ferruginosa