COLOURFUL FUNGI 1989-1990

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Because of the humidity, autumn is the most popular time of year for finding fungi. However, if you are in the right place at the right time, colourful fungi may be found throughout the entire year.

5th June 1989
Riccarton Bush. *Daldinia concentrica.* Host plant *Cordyline australis.* Pitch black formations varying in size between that of a squash ball and a tennis ball. A cross-section reveals dark and light rings like the inside of a beetroot. This fungus develops in the autumn and because it can store water, it remains on the trees until late summer.

1st July 1989
Near Fraser River, south of Whanganui Inlet - West Haven, northwest Nelson. *Entoloma hochstetteri.* Fungus with bright blue cap and blue-grey gills growing in association with *Ascarina lucida.* Also common in the Catlins and Westland.

22nd July 1989
Ngaio Bay near Kaiteriteri. A Nelson Botanical Society field trip. Red earth tongues *Microglossum rufrum* and black puff balls growing on the ground beside each other amongst coastal scrub. The common earth tongue *Geoglossum* is black and only recently has this genus been sub-divided. *Microglossum rufrum* is rare in New Zealand, and my specimen was identified from photographs by Dr Ron Peterson from the United States of America.

20th August 1989
838 Atawhai Drive, Nelson. Most common was *Aseroe rubra* on compost heaps, mulch under fruit trees and in a bed of ornamental conifers. It is like a *Mutinus* - stink horn but at the tip of the horn *Aseroe* produce a ring of bright orange-red tentacle-like structures. I am not sure for what purpose the red tentacles are because the spores are transported by flies which are attracted to the fungus by it's smell. Fungi have all kinds of smells and this species has a most disgusting stench, which is emitted from a substance in the base of a receptacle in which the horn sits - like a candle in a holder.

September 1989
141 Clarence Street, Christchurch. *Agaricus campestris* 'field mushroom' growing at the edge of a compost heap on pea straw. The wild field mushroom is a different species from the commercially cultivated form and it has a far stronger and better flavour. The gills are a delicate pink at first

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but darken as the mushroom matures and are finally a very dark brown in old age. I had sufficient for three meals and they were delicious.

Many people get the field mushroom *Agaricus campestris* and horse mushrooms *Agaricus arvense* confused. *A. arvense* looks like a more robust specimen of *A. campestris,* but as it ages the skin of the cap becomes distinctly yellow. It's gills are greyish when young and not pink as in *A. campestris.*

20th-23rd October 1989
Labour Weekend. Nikau Lake on Puponga Farm Park near Farewell Spit. Nelson Botanical Society camp. *Auricularia polytricha.* Identified from photographs by Marie Taylor. A hairy fungus supposed to resemble the human ear in shape and size but the ones I found were liver brown in colour and they hung down like a string of bells and were approximately 5 cm deep by 8 cm in diameter. They were common in scrub containing rimu, miro, totara, nikau, mahoe, kanuka and pigeon wood. *A. polytricha* is a delicacy in China where it is cultivated commercially.

3rd November 1989
Camp Saddle - Craigieburn Forest Park. Near Broken River ski field road at the commencement of the track in beech forest I found *Trametes versicolor.* Identified by Philippa Horn. An annual polyporus bracket fungus on dead wood. It was about 6 cm across with tiered rows of fawn, brown, grey, green, yellow and black. Marie Taylor's book 'Mushrooms and Toadstools of NZ' has an illustration of this species and other members of the same genus.

In the beech forest I also found *Lepiota rhacodes* 'Shaggy parasol'. It was a very old specimen with a scaly chocolate-purple cap and buff gills. Dr Ron Close, who identified it for me, said that a young fresh specimen should have a bright yellow cap. The stipe was a dirty white, 14 cm long, and it had a double annulus (ring) being the remainder of a veil.

2nd December 1989
Dudley Dobson walkway, Arthur's Pass National Park; University Extension Studies botany course. *Hygrophorus lactus.* Bright orange buttons 2 cm diameter growing on slender stalks amongst sphagnum moss. In 1970 I tested some of these at a fungi foray. I was unimpressed. Find something else to eat; I think they are tasteless.

17th December 1989
Mt Arthur - Nelson Botanical Society field trip. *Cyttaria gunnii;* beech strawberry. Identified by Shannel Courtney. It is supposed to be edible but I have never tried it. There are about 32 species of *Cyttaria* and they mostly live associated with beech in South America. See Moore & Irwin (1978) for detailed illustrations.

24th January 1990
Mt Temple - Arthurs Pass National Park. Temple Basin Ski Club Adventure week. Immediately above the ski huts in wet basins growing in association with sphagnum moss. *Hygrophorus rubro-coccineus*. A distinguishing feature of this genus is that many species are brightly coloured, gills are wide apart, thick, waxy and often translucent. *H. rubro-coccineus* is as the name suggests - it is brilliant red.

24th February 1990
Sign of the Bellbird, Banks Peninsula. My companion Nola Aitchison found *Agrocybe parasitica* growing on *Hoheria angustifolia*. Identified by Dr Ron Close. Later more were found in Riccarton Bush. This big brown gilled fungus 48 x 30 cm finds it's niche on the trunk of Hoheria where the bark has at some time been damaged. This species is edible.

22nd-26th March 1990
Nelson Lakes National Park - tramping trip up the Travers Valley to Cupola Basin with Marlene and Dave Jackson of the Nelson Botanical Society. On the east side of Lake Rotoiti brilliant orange-red *Amanita muscaria* was common in the beech forest but not on the west side of the lake nor in the Travers Valley.

The Travers Valley was rich with fungi. It is a beech forest containing three species of *Nothofagus*. *Russula* is a big genus and the species come in a great variety of colours, black, gold, rust, green, rose, scarlet and purple. Cap is flat or convex and the gills are mostly white or cream. The whole plant is very brittle but the stipe compared with other fungi is easily broken transversely. Most species of *Russula* are edible, but not to my liking. A genus similar in appearance to *Russula* is *Lactarius*. As well as their gills being different, *Lactarius* when broken exudes a white milk which quickly turns brown.

Cortinarius - gilled fungi with sulphur, orange, brown or slate-coloured caps. Is a very large genus with a wide variety of species, but basically they all have a discoloured stipe. They have oblique ring-like belts around their stipe. Some species may have only one while others have several. These rings are caused by veil remnants and the collection of spores clinging to the stipe.

Tricholoma are gilled fungi but not as colourful as *Russula* and *Cortinarius*. They are mostly white, cream or grey. I have read of some *Tricholoma* species as having a veil, but I have never found such a species.

Thaxterogaster - purple tobacco pouch fungi. A cross section of this fungus will reveal spongy tobacco-like material. Red ones, *Weraroa*, are equally common in beech forest and have a similar inside appearance but I did not find any of these red ones in the Travers Valley.

I only found a *Hygrophorus* specimen in one location. Pure white gills and cap. Between John Tait Hut and Cupola Basin and also near Coldwater

Creek Hut (west side of Lake Rotoiti near Leak Head) grew *Grifola gigantea.* This is the biggest fungus that I have ever found 84 x 50 x 40 cm. This bright apricot-coloured polyporus fungus grew at the base of *Nothofagus menziesii.* It was like a big cabbage and each 'leaf' is a separate fruiting body.

30th March - 3rd April 1990
Todd Valley, Nelson in association with the Nelson branch of the Tree Crops Association field day and my stay on Dick Robert's Tree Crop farm, Todd Valley. In great abundance on dead twigs and branches used for mulching grew the crucible-shaped fungi or bird's nest fungus. *Crucibulum vulgare.* Tiny cups 8x8 mm containing egg-like tissue which produce spores - hence the name bird's nest fungus.

In damper areas I frequently found either *Helvella* or a *Gyromitra* - a contorted, convolute, brown, glutinous, hollow mass on a dirty white stipe 8 - 10 cm tall. The illustration of *Gyromitra* (Moore & Irwin 1978) is very similar to the fungus I found. Both *Helvella* and *Gyromitra* are related to *Morchella* or *Morels,* and are eagerly sought after in Sweden and Finland. To destroy the poison 'gyromitrin', the fungi are given special treatment before being eaten. Being on a tree crop farm my taste buds did not hanker for a nibble of these.

4th April 1990
61 Cleveland Terrace, Nelson. Along the roadside in a bark chip garden was a collection of 30 - 40 white puff balls; all about the size of golf balls and each one was covered with a rash of little pimples and spines. Philippa Horn confirmed the name *Lycoperdon pyriforme.*

10th - 13th May 1990
Fungal Foray, Boyle Lodge, Lewis Pass. Attended by 26 people. On the way to the foray I had a quick browse at Hanmer in the coniferous and deciduous forest opposite Forest Park Headquarters. *Hypholoma fisicularia* was growing on dead wood. These fungi, both cap and gills, are sulphur-yellow with tan or olive green tonings. The caps range in size up to approximately 8 cm. Identified by my companion Anthony Mitchell. The forest was a riot of colour and was most generous in its fungi production. Irrespective of genus, my eye always seemed to be drawn to the dense clusters of *Hypholoma.*

The first day trip was to the beech forest of the Nina Valley at camp. All the fungi seemed beautiful and there was a wide range of colours and shapes. The specimen table was well-filled and the fungus that constantly attracted my attention was *Cortinarius violaceus* collected by Philippa Horn and identified by Marie Taylor. The cap approximately 8 cm across, was convex and margins incurved. Its colour and texture was of the darkest purple-black plus velvet. Gills black, and the stipe was viola blue with dark streaks. It shone in the light and looked rich and unreal.

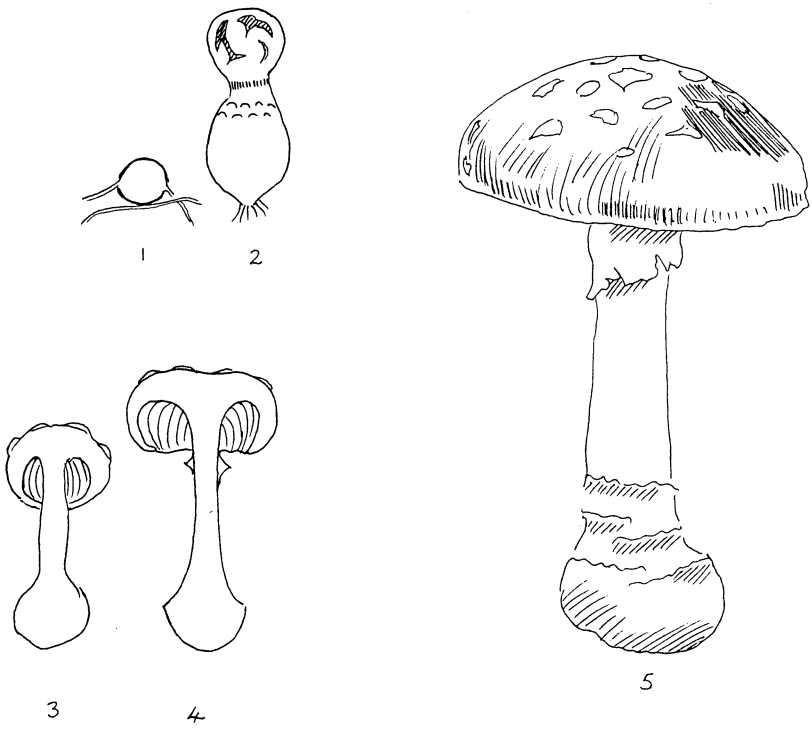
On the second day I set off with three companions, Valma Woods, Peggy Cadenhead and Diana Watson, to explore a little of the St James walkway. In the immediate surroundings of the lodge there is a stand of manuka. A great place in summer for finding orchids and now a great place for finding fungi amongst the manuka. The ground was covered with different mosses and lichens. I caught sight of something green like the thallus of a liverwort - *Marchantia*. I touched it, and gave a squeal of delight. It was an emerald green fungus covered in a transparent jelly substance. *Hygrophorus viridis*. Within a few minutes the four of us had collected mainly *Cortinarius, Mycena, Dermocybe, Icocybe* and *Hygrophorus*. Altogether 40 different species and 40 different colours. Blue, purple and navy blue were the main missing colours, and none of the fungi caps were larger than a 20 cent coin. While exploring the manuka I found a large piece of corrugated perspex which proved ideal for carrying our treasures back to the lodge. After our collection was identified and photographed it was despatched to the fungi herbarium, Auckland.

It was an exciting start to our day and we did eventually get on to the St James walkway. *Gleoporus adustus* was my favourite find here. It was a clump of polyporus bracket-like fungi which was densely imbracted. About 4 cm wide, and its colours were in zones. Smokey grey at the base, black in the middle, topped with an icing-like texture of silver. Another favourite was just before the first swing bridge on the walkway. It was tucked into a bank surrounded by moss. *Dermocybe cardinalis*, sub genus of *Cortinarius*. A cluster of cardinal red caps, each about 5 cm in diameter and glowing in the sunlight.

Although I was the cook at this camp the group had a collecting permit and I did have time to botanise. It was a well worthwhile experience and a complete species list may be obtained from Philippa Horn or Ronald Close both of Lincoln University.

Reference

Moore, L.B. & Irwin, J.B. 1978. *The Oxford Book of New Zealand Plants*. Oxford University Press, Wellington.



1. *Amanita* commences life in the shape of an 'egg' which in fact is a compact mass of mycelium growing in decaying matter.
2. The 'egg' structure enlarges and at this stage a cross-section will show consistent tissue.
3. Growth proceeds rapidly and the separate parts of the fungus can be seen - cap, gills and stipe.
4. The whole structure swells and the enclosing membrane or veil ruptures. Gills become more apparent and the stipe elongates.
5. The white knobs on the cap are the remains of the universal veil. The annulus is the remains of a partial veil which protects the young gills. As the cap and gills expand the partial veil fragments and clings to the upper portion of the stipe. This forms the ring. There is a cup-like structure around the base of the stipe which is the remains of the universal veil called the volva.