

# Fungi of Murphy's Bush

Clive Shirley

I first started visiting Murphy's Bush to photograph its fungi nearly 20 years ago but not until recently having obtained a microscope and develop the skills necessary to look at their microscopic features have I been able to identify many of the fungi found in the reserve.

I soon realised that Murphy's Bush had an unusually large number of waxgill species – these small brightly coloured fungi which were once placed in the Hygrophoraceae family which have recently been moved into the Tricholomataceae. When on a visit to Landcare Research and talking to their mycologists, I happened to mention that I had found at that time 20 different species of waxgills. They were surprised at this sort of diversity in a relatively small reserve was unheard of. I was then asked to take a more scientific approach to my collecting (fortunately I had been).

This started a survey of the fungi that has now continued for 3 years where the number of waxgills species has now climbed to 36 species and 6 that don't appear to be named. Interestingly of the 36 described species 22 of these are on the Fungi Data Deficient list, which is more likely due to the lack of collecting rather than them being rare. I have found and identified 126 fungi species in this reserve, and there are others that I have not been able to identify.

During my visits to the reserve I have made a number of interesting observations. There is very little dead wood, and thus wood decay fungi are not well represented. The few dead trees that fall generally only last a few years. The mycorrhizal fungi are also not well represented with *Russula acrolamellata* being the only one found which is associated with the manuka (*Leptospermum scoparium*). The bulk of the fungi found are saprophytic fungi.

A number of interesting fungi have turned up during my visits. *Bertrandia astatogala* is very common along

or adjacent to the metalled walking tracks (Figure 1). The form of its fruiting body is quite different to the published description, the fruiting body turning black very quickly when damaged or in age. There are two colour variations found – green/yellow as in Figure 2 and red/orange which is not so common.

Another group of fungi well represented in this reserve are members of the family *Entolomataceae*, with 16 species found (Figure 3). Most of these are small brown fungi with angled spores which are very difficult to name, though some are large (*Entoloma haastii*) and/or brightly coloured (*Entoloma chloroxanthum*, *Entoloma sulphureum*), and stand out well against the dark background of leaf litter.

One of the more interesting finds is *Ramaria zippelii* one of only two coral type species found so far in the reserve (Figure 4). *Ramaria zippelii* has a cinnamon brown fruiting body with lovely blue tips to its branches. Strangely it was not found in association with *Leptospermum* as expected but under kahikatea (*Dacrydium dacrydioides*).

Five species of waxgills have been found which appear not to be described, most belonging to the genus *Gliophorus* except for one which is a *Humidicutis* (Figure 5). This *Humidicutis* sp. was found in one of the wetter areas and seems to be restricted to this one location within the reserve. Its striking glutinous yellow and green cap and stipe makes it stand out against the dark background.

Another *Humidicutis* species found is *Hygrocybe lewellinae* (Figure 6) named from Australia where the genus *Humidicutis* is not recognised. Until this turned up in Murphy's Bush it was not known to exist in New Zealand yet this past year it was quite common.

## Acknowledgements

New Zealand Fungal Herbarium (Landcare Research, Auckland) for their list of myxomycetes. I would also like to thank those who have helped with identifications and field collecting, particular Shirley Kerr who help with the *Entoloma's* and *Hygrocybe's* and the mycologists at Landcare Research P. Buchanan and P. Johnston. Thanks also to Birandra Singh of Manukau City Council, Parks Operations Team Leader (East) for permission to collect fungi from the reserve.

## References

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## Fungi Check list

*Agaricus cupreobrunneus*

*Agaricus* sp.

*Agrocybe parasitica*

*Aleurodiscus ochraceoflavus*

*Armillaria limonea*

*Auricularia cornea*

*Bertrandia astatogala*

*Camarophyllus apricosus*

*Camarophyllus griseorufescens*

*Camarophyllus patinicolor*

*Camarophyllus pratensis*

*Campanella tristis*



Figure 1. Walking track through Murphy's Bush



Figure 4. *Ramaria zippelii*



Figure 2. *Bertrandia astatogala*



Figure 5. *Humidicutis* sp.



Figure 3. *Entoloma convexum*



Figure 6. *Hygrocybe lewellinae*

*Calocera cornea*  
*Calvatia cyathiformis*  
*Crucibulum laeve*  
*Clavaria* sp.  
*Clavaria sulcata*  
*Clavaria phoenicea*  
*Clavaria zollingeri*  
*Clavulinopsis spiralis*  
*Clavariadelphus junceus*  
*Crepidotus* sp.  
*Coprinus disseminatus*  
*Coprinus lagopus*  
*Corpinus stercoreus*  
*Campanella tristis*  
*Cyptotrampa asprata*  
*Entoloma aberrans*  
*Entoloma aromaticum*  
*Entoloma chloroxanthum*  
*Entoloma convexum*  
*Entoloma cucurbita*  
*Entoloma decolorans*  
*Entoloma haastii*  
*Entoloma niveum*  
*Entoloma perzonatum*  
*Entoloma peralbidum*  
*Entoloma procerum*  
*Entoloma sulphurum*  
*Entoloma translucidum*  
*Entoloma* sp. (not described)  
*Entoloma* spp. (not identified)  
*Favolaschia calocera*  
*Galerina patagonica*  
*Geastrum saccatum*  
*Geastrum velutinum*  
*Geoglossum fallax*  
*Geoglossum glutinosum*  
*Gliophorus chromolimoneus*  
*Gliophorus luteoglutinosus*  
*Gliophorus lilacinoides*  
*Gliophorus lilacipes*  
*Gliophorus subheteromorphus*  
*Gliophorus sulfureus*

*Gliophorus pallidus*  
*Gliophorus viscaurantiis*  
*Gliophorus* sp1. (Not key out)  
*Gliophorus* sp2. (Not key out)  
*Gliophorus* sp4. (Not key out)  
*Gliophorus* sp5. (Not key out)  
*Gliophorus* sp6. (Not key out)  
*Gliophorus versicolor*  
*Gliophorus viridis*  
*Gymnopilus* sp1.  
*Gymnopilus* sp2.  
*Hygrocybe blanda*  
*Hygrocybe cantharellus*  
*Hygrocybe cavipes*  
*Hygrocybe cerinolutea*  
*Hygrocybe fuscoaurantiaca*  
*Hygrocybe firma*  
*Hygrocybe julietae*  
*Hygrocybe fuliginata*  
*Hygrocybe keithgeorgii*  
*Hygrocybe lewellinae*  
*Hygrocybe cantharellus*  
*Hygrocybe lewellinae*  
*Hygrocybe lilaceolamellata*  
*Hygrocybe procera*  
*Hygrocybe striatolutea*  
*Hypholoma aurantiaca*  
*Hypholoma fasciculare*  
*Hygrophorus involutus*  
*Hygrophorus salmonipes*  
*Hygrophorus* sp.  
*Humidicutis conspicua*  
*Humidicutis luteovirens*  
*Humidicutis pura*  
*Humidicutis* sp. (not described)  
*Isaria sinclairii*  
*Ileodictyon cibarium*  
*Lepiota* sp.  
*Macrolepiota clelandii*  
*Micena* sp.  
*Mycena austrororida*  
*Mycena ura*

*Mycena mamaku*  
*Morganella compactum*  
*Oudemansiella australis*  
*Paurocotylis pila*  
*Plectania campylospora*  
*Pleurotus purpureo-olivace*  
*Pleurotus* sp.  
*Pluteus velutinornatus*  
*Pseudohydnum gelatinosum*  
*Psilocybe subaeruginosa*  
*Podoscypha petalodes*  
*Ramaria gigantea* f. *tenuispora*  
*Ramaria zippelii*  
*Ramariopsis artillarm*  
*Ramariopsis pulchella*  
*Ramariopsis simplex*  
*Rhodocybe piperita*  
*Russula acrolamellata*  
*Scutellinia colensoi*  
*Sphaerostilbella* sp.  
*Stropharia aurantiaca*  
*Stereum fasciatum*  
*Tremellodendropsis tuberosa*  
*Tricholomopsis ornaticeps*  
*Trichoglossum hirsutum*  
*Tympanella galanthina*  
*Weraroa novae-zelandiae*  
*Weraroa erythrocephala*

#### Myxomycetes

*Arcyria denudata*  
*Fuligo septica*  
*Hemitrichia calyculata*  
*Lycogala epidendrum*  
*Physarum album*  
*Physarum compressum*  
*Physarum nutans*  
*Physarum pusillum*  
*Physarum viride*  
*Stemonitis axifera*

## Field Trip: Private Forest, Hatfields Beach (Hinton's Bush). 19/06/04

Maureen Young

On 15 April 1989 ABS visited the large tract of forest to the west of Hatfields Beach (NZMS 260 Sheet R10 Whangaparaoa between GR 605149 and 617144) which was then owned by the Straka family (see ABS Journal Vol 44, No 2, July 1989). Ownership has now passed to Greg Hinton, and Greg kindly gave permission for us to make a return visit on 19 June 2004. The forest consists of a series of kauri-covered ridges separated by gullies of broadleaf vegetation, and is surrounded by regenerating kanuka scrub. It is not fenced, and a flock of goats was seen. The proposed Alpur motorway is to pass over the adjacent Otanerua Stream on a 240 metre long "ecoviaduct"

(NZ Herald 14 July 2004:A2), so it is to be hoped this means that the forest will face minimal destruction.

To approach the bush entails quite a climb. Australian giant sedge (*Carex longibrachiata*) infests the pastures, but luckily does not encroach far into the bush. On the edge grows a large healthy specimen of hybrid pohutukawa/rata, which caused quite a discussion, and later both parents were found, allowing a comparison of leaves. Nearby was a kaikomako (*Pennantia corymbosa*) showing the tangled juvenile form at the base and adult leaves at the top. Several juveniles were found during the day.