



THE QUEENSLAND MYCOLOGIST
Bulletin of
The Queensland Mycological Society Inc.

The Queensland Mycologist is issued quarterly. Members are invited to submit short articles to the editor for publication. The deadline for contributions for the next issue is November 1, 2008.

Please ensure that the Secretary (fungiqld@yahoo.com.au) always has your current email address. The Secretary, Queensland Mycological Society Inc, PO Box 295, Indooroopilly Qld 4068

SOCIETY OBJECTIVES

The objectives of the Queensland Mycological Society are to:

1. Provide a forum and a network for amateur and professional mycologists to share their common interest in macro-fungi;
2. Stimulate and support the study and research of Queensland macro-fungi through the collection, storage, analysis and dissemination of information about fungi through workshops and fungal forays;
3. Promote, at both the state and commonwealth levels, the identification of Queensland's macrofungal biodiversity through documentation and publication of its macro-fungi;
4. Promote an understanding and appreciation of the roles macro-fungal biodiversity plays in the health of Queensland ecosystems; and
5. Promote the conservation of indigenous macro-fungi and their relevant ecosystems.

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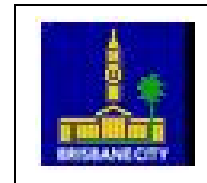
Scientific Editor: Nigel Fechner
 Editor: David Holdom

QMS WEBSITE: www.qms.asn.au

Have you logged onto the QMS website lately? If not then it is time you did!! Many thanks to Andrew Kettle for getting the site up and running. Please provide feedback to the Committee about any ideas you may have for the site.

| OFFICE BEARERS 2008 | | | |
|----------------------------|--------------------------|-------------|--|
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QMS acknowledges and appreciates the sponsorship that has been given to the Society by the Queensland Herbarium, SEQ Catchments and Brisbane City Council.



To assist those not in attendance at meetings, notes on the addresses given are included in issues of the Queensland Mycologist. However, the notes never do justice to the topic as they do not reflect the enthusiasm of the speaker or cover the questions and discussions that were raised on the topic. So remember, where possible it is far better to attend the meetings, get the information first hand and participate in the invaluable information sharing opportunity.

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QMS CALENDAR

Members are reminded that 2008 subscriptions (\$20 pp) are overdue. Payment can be made by cheque mailed to the Treasurer, Queensland Mycological Society Inc., PO Box 295, Indooroopilly Qld 4068 or directly to the Treasurer at the next meeting. A Membership Renewal Form is included on page 16.

Meetings are held in the Bailey Room at the Herbarium, Mt Coot-tha, commencing at 7pm on the second Tuesday of the month, unless otherwise scheduled.

Field Trip: 6 September 2008 - Mt Hobwee, Lamington. Leader Dr Tony Young.

9 September 2008 - June foray report (Patrick Leonard) + QMR (QMS's database) - 'Introduction to new foray data-sheets & guidelines' + Springbrook survey opportunities (Diana Leemon) + Nov 08 meeting celebration planning discussion & supper roster.

Field Trip: 27 September 2008 - Visit to a commercial mushroom farm. Leader Jon Atkinson
Ph 3861 1738.

Field Trip: October 2008 – Cunningham's Gap vicinity. Details not yet available

11 November 2008 - Mushroom farm & Cunningham's Gap foray reports + 'Beatrix Potter, Mycologist' (Rachel Griffiths) + Festive season celebration - Bring a plate to share.

10 February 2009 - Springbrook, Nudgee Waterholes or Mt Glorious foray reports + "Sex and The Fungi" (Andrew Kettle).

14 April 2009 - Foray reports + Members talk TBA.

9 June 2009 - QMS - AGM + Invited speaker.

MEETING SUPPER ROSTER

Two volunteers are required for each meeting – one to bring something savoury and one something sweet.

September 08: Megan Prance (Sweet) & Volunteer needed.

2009 Roster to be decided at Septembers General Meeting.

QMS FIELD TRIP PROGRAMME

September Foray:

27th September 2008

Visit to Mushroom Exchange North Maclean, a.k.a. Queensland Mushrooms led by Jon Atkinson (Phone: 07 38611738, Mobile: 04 01283148

Email: buildingbistro@hotmail.com)

Meeting Place: Queensland Mushrooms, 4700 Mount Lindsay Highway, North Maclean.
Meet 'outside the office' at 9 am.

Leader notes on trip: Focus: Commercial, cultivation and culinary aspects of fungus.

Looking at fungus in a controlled environment offers us a closer look at what is not normally apparent, e.g. growth and fruiting conditions. This visit will obviously also be of interest to members who grow or would like to grow mushrooms, and to mushroom cooking and eating enthusiasts.

Other notes: Queensland Mushrooms, the second largest mushroom producer in Australia, grows 64 tons of mushrooms per week, and also export to Japan.

There is no large scale cultivation of 'exotics' (non-*Agaricus*) in Queensland, and the nearest is probably Dr. Noel Arroll's farm in Bowral NSW (according to his nephew Jay, spawn is available from the laboratory, phone 02 48712879).

This will be a shorter than normal field trip, so we will have time for a further informal foray/lunch/visit, opportunities allowing. For those who want to carry on, we might visit a small scale 'exotic' grower in Brisbane. And if you each bring a mushroom dish to share, we could have a picnic.

Bring: Closed-in shoes.

October Foray

Cunninghams Gap vicinity. Detailed proposal not yet available.

November Foray

Springbrook survey / QMS festive season celebration. To be discussed at QMS September general meeting.

January Foray

Nudgee Waterholes or Mt Glorious. Detailed proposals not yet available.

In addition to notices at general meetings, detail of forthcoming forays will be posted on Mycena (<http://tech.groups.yahoo.com/group/mycena/>) and also emailed to members by the Secretary.

SUMMARY OF QMS MEETINGS

AGM June 10

After the new committee was elected, as detailed elsewhere in this newsletter, Mrs Joan Cribb gave a very interesting and informative talk on the Gasteromycetes. It was well illustrated by photos of a wide range of these fungi from diverse locations throughout Australia.

General Meeting July 8

The meeting was chaired by the new President, Sapphire McMullan-Fisher and focused on a creative discussion by members on the variety of activities QMS conducts as well as our overall purpose.

One of the main outcomes was the change in frequency of General Meetings to every two months and the change in format of General Meetings in order to allow time for more member participation and interaction. There will be a pre-meeting at 6pm to allow photographs and other data from forays to be loaded on to the QMS laptop before the meeting proper. The meeting program will consist of a selection of activities such as talks or mini-talks by either members or guest speakers, foray reports, what's fruiting now, workshops, show & tell, society news and developments.

Forays will continue to be held monthly, whenever possible, and if practicable, be followed by a microscopic identification session.

Committee Meeting July 8

Unfortunately, the initial attempt to gain tax deductible status for any donations or grants had not succeeded because QMS did not have a large enough member base. However, the Treasurer, Rachel Griffiths informed the meeting that she is investigating the option of applying through Landcare Australia who would receive the donations on our behalf and then pass them on to us.

Committee Meeting August 2

The QMS display at the Threatened Species Expo at Griffith University on Sunday 7 September was organized. The focus will be to make people aware of the crucial role fungi play in the environment.

2009 Fungimap Conference V

**Organised in conjunction with:
Sydney Fungal Studies Group, Sydney, NSW
Black Gold Country Cabins, Wallerawang (near Lithgow)
in the Blue Mountains region of NSW.**

Conference V **will run from:**

Thursday 21st May to Tuesday 26th May 2009.

These dates allow members to attend our Fungimap Conference after the meeting held in NZ by the Australasian Mycological Society (Sun 10th to Sat 16th May 2009).

Conference speakers, workshop and foray details will be announced at a later date.

For more information, visit: http://www.rbg.vic.gov.au/fungimap/_welcome/

MEETING PRESENTATION GASTEROMYCETES

Address to QMS AGM 10.6.2008

By Joan Cribb

Hymenomycetes: the spore is carried asymmetrically on its stalk and the spores are exposed and forcibly discharged away from the basidium.

Gasteromycetes: the spore is carried symmetrically and the spores stay until the right “trigger” for their release occurs eg a raindrop.

Originally there were five separate types of Gasteromycetes:

1. Puff balls
2. Stinkhorns
3. Earth balls
4. Bird's nests
5. Subterranean – where the spores remain in the fruiting body which is eaten by rodents or small animals and so the spores are spread.

In 1942 G.H. Cunningham, a prolific writer and a wonderful mycologist, published “Gasteromycetes of Australia and New Zealand”. He worked through all the specimens that were available, the ones he could see at Kew and the ones in some of the Herbaria around Australia. There were not any that he could look at in Queensland, but there were two Queensland specimens in Melbourne, so he did not see a large proportion of the Queensland specimens. He recognised 160 species of Gasteromycetes in Australia. I came along and had this wonderful book as a basis to start with and I found 108 species in Queensland. Of course there are more now as more have been found. As well as finding 160 species Cunningham also listed 700 synonyms which gives you an idea of the terrible lot of name changes for fungi, as anyone who has worked on fungi at all knows.

All the things you normally regard as “puff balls” with the hole (also known as a pore, stoma or ostiole) in the top to release the spores are in the one group – in the early days they were all put in the one genus *Lycoperdon* – there were 25 species then. The latest Fungi of Australia has ten species of *Lycoperdon* and two of them are doubtful, so there are probably about eight species.

[Some photographs of the different Gasteromycetes were then shown highlighting the differences in the species.]

Lycoperdon is a typical puffball, you can see the hole in the top which the spores pass through - if you give it a squeeze you see a puff of spores come out. The spores are very light and carried by any gust of wind. A drop of rainwater hitting the ball, or an animal bumping it will cause the release of a few spores.

Lycoperdon stellatum which has beautiful spines on it - these are referred to as cruciate spines - see the four coming together at the top and they are large. Most have small spines and/or warts.

Lycoperdon perlatum, is found in rain forests; it almost appears to have a stalk - but it is just a sterile base; the ball has big spines and warts – the spines fall off after a while. It grows in debris and soil.

Lycoperdon pyriforme is similar to *L. perlatum* but grows on wood. It is possible that in some books pictures given as *L. pyriforme* are really *L. perlatum*.

Vascellum pratense looks like a *Lycoperdon* and was once in that genus but microscopically it has a different internal structure, with a membrane separating the sterile base from the fertile spore bearing area.

Morganella purpurescens is found on wood in rainforest. It was previously described as a *Lycoperdon* sp. but its microscopic characters are different. It has small spines and is a beautiful grey/blue/purple black colour.

Calvatia lilacina- at maturity the entire peridium flakes away leaving the sterile base. This flaking away of the entire top of the ball is what separates the genus *Calvatia* from the *Lycoperdon* which emits spores via a pore. These can form a fairy ring.

Calvatia gigantea is much larger and can be up to 2.64m in diameter – the largest one was seen in Canada.

Calvatia rugosa the juvenile is pale turning to a bright ochraceous colour as it matures and the skin crumbles.

Arachnion album is very rare and is a puffball that does not puff – it is more fragile than other puffballs. It has a single layer of peridium, which is very easily broken, with a centre like fine sand. It is a fairly inconspicuous grassland species which is white, sometimes slightly yellow, smooth, to maximum of 2cm in diameter. There are a few records of it here in Queensland.

Stalked puffballs

Podaxis pistillaris grows in soil in dry inland country. It is in the family Agaricaceae. It sheds spores out the bottom of the fertile thickened upper section.

Podaxis beringamensis grows on termite mounds. There is no sign that the termites eat these fungi.

Gyrophragmium inquinans found up in Cape York Peninsula (looked like a sagging tree or an afro hair do) and grows in termite mounds.

Phellorinia herculeana from the dry country – described as having a wine glass shape.

Tulostoma australianum has a pore at the top of its ball for spore release. Dry country species.

Battarrea stevenii is a stalked puffball; at maturity the cap falls off its ball to release the spores.

Bird's Nests

Cyathus stercoreus found on cow dung. Quite complex cup with spores in shiny black eggs with a gelatinous thread to the base of the cup which are expelled when hit by a rain drop.

Cyathus novae-zelandiae – has a furrowing around the cup.

Crucibulum laeve has a paler nest and white eggs.

Stinkhorns

Mutinus borneensis which is the about the smallest of the stinkhorns.

Phallus rubicundus – the tip has a wide range of colour variations from pale pink to red stalk with white lace like reticulate markings on the stalk.

Phallus indusiatus which has a yellow cap, is deeply reticulated, stout structure. Net veil is very variable in size.

Phallus multicolor which has a more substantial salmon pink skirt.

Lysurus mokusin has the arms attached at the top. Found in SE Asia and Australia.

Lysurus cruciatus which has short arms on a stout stalk. 72,000,000 spores have been counted in one fly speck!! One unusual specimen shown had the arms separated looking like a jester's hat. This highlights the wide range of variations possible in one species – and helps to explain why some have been given many different names.

Aseroe rubra – very variable.

Colus pusillus – shown a splitting egg and net – splits and expands with considerable force.

An interesting unidentified specimen that looked a little like a thick lacy skull.

Pseudocolus fusiformis – “egg beater fungus” fingers that can occasionally be seen opened up like a star. Very variable.

Earthstars (are in the same order as stinkhorns).

Geastrum triplex common especially in rain forests.

Geastrum pectinatum – as it ages the rays turn back and lift it up from the ground. The ball is on a stalk and has a pointed and furrowed stoma.

Geastrum schweinitzii (previously *G. mirabile*) which is minute, the whole fruiting body would be to 1.5cm across and found in rainforest on wood.

Sphaerobolus stellatus - on horse or cow dung. Used to be in bird's nest group but has now been placed with earth stars. Up to .5cm diameter and is a ball full of spores in a cup consisting of three layers; the inner layer flips out and throws the ball of spores out, up to 4m distance.

Pisolithus arhizus – the “horse dung” fungus – photograph showed in cross section. Probably mycorrhizal.

Scleroderma sp. shaggy and flaky warty yellowish colour; it does not have a pore. Is in the same group as *Pisolithus*. Cross section showed a mass of dark spores. The peridium can split to look a bit like an earthstar without its ball.

Calostoma sp. - pretty mouth – in moss in rain forest and even out on the Moonie Highway. When dug out has a long stalk which is formed by woven strands of fungal material.

Fifth Group

This is the tricky group of mostly subterranean fungi. These are important mycorrhizal species and much work is being done on them and the classification keeps being rearranged. One is being used as a mycorrhizal partner in pine forests, *Rhizopogon rubescens* which is often called a false truffle.

Descomyces albus, is a very common species in both eucalypt and rainforest.

One of this group has latex and is in the Russulaceae family.

AUG 2008 PRESIDENTS REPORT

New Meeting Structure:

For those of you who were not at the July QMS meeting - I'd like to explain the new meeting changes that were agreed upon. These changes are flexible and will be tried until the next AGM. Meetings will now be held approximately every second month which will be September and November 2008 and probably February, April, June 2009. The meeting structure has also been changed so that there is more time for interaction between the membership. We will still try to have a foray every month.

6-6:50 p.m. **Pre-meeting** for foray data and photograph coordination.

This is a meeting for leaders of forays and photographers so that images and data can get matched up and the images which are to be shown at the meeting can be loaded on the laptop before the general meeting.

7-8:30 p.m. **General Meeting** which may include:

- A short committee report
- 'Show and tell' or 'what's fruiting now'. Collections brought in by members with notes for comment and discussion. Could also include members showing some of their own personal fungal projects - scrapbooks, artwork etc.

- Foray reports - Five highlights from each foray. There will probably be two reports per meeting.

- Talk or workshop prepared by a member (~15-30 mins). This is not an 'expert talk' more like a student seminar where you are expected to go away and prepare, then present a seminar on something that interests you. Some suggestions have been Beatrice Potter as a mycologist (Rachel Griffiths), Fungi mating systems (Andrew Kettle), Springbrook survey opportunities (Diana Leemon), Wood decay fungi (Michael Powell).

8:30-8:50 p.m. **Supper**

8:50- 9 p.m. **Room & supper tidy up!**

Please check the website if you want to know when the next QMS event is:

www.qms.asn.au.

QMR – Queensland Mycological Records

To increase the knowledge about the diversity and distributions of local macrofungi a subgroup of QMS members was formed in June to try and create a recording system and data base. By improving the recording sheets and guidelines we hope to improve the quality of the macrofungal observations made by QMS, particularly during forays. Once the database has been created, tested and data read into it we should be able to produce reports and maps based on our records and in the longer term we might be able to see trends and associations of different macrofungi.

The members of this subgroup are Andrew Kettle, Karalyn Herse, Patrick Leonard, Sapphire McMullan-Fisher, Megan Prance, Klaus Querengasser and Kim Quyen. We've coined the abbreviation for the sub-group 'QMR' which stands for Queensland Mycological Records. QMR has so far had two meetings in person and many often technical emails. Creating a database is a huge task if we want to be able to get the

maximum amount of data out of it but I'm confident that with the ingenuity and determination of the members will create an elegant database. If you have any ideas or comments you can contact the QMR members by emailing <records@qms.asn.au>.

'President's rave'

For those of you who don't know much about me – I think of myself as a cryptogamic ecologist with a special interest in the macrofungi. Cryptogams are bryophytes (mosses, liverworts and hornworts), algae, fungi and lichens. These organisms have traditionally been studied by botanists but have lost popularity in modern biological studies. Cryptogams although small and often cryptic have important roles in ecosystem function.

I hope those of you who are interested in local conservation have read the recent **SEQ NRM Plan** (www.seqcatchments.com.au). Sadly like so many 'management' documents this plan focuses on the environment and 'natural resources' mainly 'plants and animals' without recognizing other organisms or their roles in ecosystems. So much so called 'science based' management of our world ignores most organisms, most of the time and rarely considers what needs to be done to achieve conservation outcomes which allow ecosystems to be functional and self sustaining. Anyway I would like to take this opportunity to give a quick summary of the important roles of macrofungi in ecosystems. I hope all QMS members will advocate for conservation of functional ecosystems, highlighting the roles fungi play.

Ecology of macrofungi

Macrofungi are the visible reproductive structures (sporophores) of the vegetative portion of an individual fungus. Although rarely seen, the fungal mycelium makes up the 'body' of the fungus and it is this portion, growing in or on the substrate, that carries out most of the ecological functions. As heterotrophs, fungi have three main nutritional strategies: saprotrophism, parasitism and mutualism. These three strategies also relate to their functional roles in ecosystems (Dix and Webster 1995).

The saprotrophic fungi absorb nutrients from dead organic matter and, along with microbes, play an important part in nutrient cycles, particularly in the decomposition of lignin. Saprotrophic macrofungi include both soil and wood-inhabiting fungi. Several mutualistic relationships exist between plants and fungi, including lichens, endophytes and mycorrhizae. Macrofungi are rarely endophytes or form lichens; however, many form mycorrhizae. There are several types of mycorrhizae, all of which are important for the development, growth and survival of the associated plants (Brundrett 1991; Colpaert and Van Tchelen 1996; van der Heijden and Sanders 2002). The mycorrhizae formed by macrofungi are almost all ectomycorrhizae, where a sheath is formed on the roots of host plants (van der Heijden and Sanders 2002). Mycorrhizae are thought to affect the composition of plant communities (Amaranthus and Perry 1994).

There is an important connection between many Australian plants and mycorrhizal fungi, which is mediated by mycophagous vertebrates, particularly marsupials such as the bandicoots (Peramelidae), potoroos (Potoroidae) and bettongs (Potoroinae) (Claridge 1997; Lamont 1995; Vernes and Haydon 2001). Loss of mycophagous vertebrates from many Australian habitats may have deleterious effects on the long term health on many Australian vegetation types. This loss of vertebrate vectors for dispersing mycorrhizal spores may cause the loss of local genetic diversity amongst mycorrhizal fungi which in turn may reduce the success of symbiotic associations with plants, and hence may reduce the health of the ecosystem.

There is a relatively small number of parasitic macrofungi compared to the large number of parasitic microfungi. These parasitic macrofungi are often associated with trees, and include *Armillaria* and some of the Polypores. Parasites are important in ecosystems because, in the short term, they create gaps in ecosystems and, in the long term, they allow evolutionary development through the reduction of fitness of susceptible hosts. Many of the novel metabolites found in fungi are thought to have evolved as a response to the host during the co-evolution of parasites and their hosts. Another ecological role of the fungi is as a source of food. There are many mycophagous invertebrates (Lawrence and Milner 1996; Moore 1996; Wertheim *et al.* 2000), which often feed on both the fungal mycelia and the sporophores and are not restricted to mycorrhizal fruit-bodies, as mycophagous marsupials tend to be.

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FIELD TRIP REPORT

Report of the June Foray

The June foray was held along the Obi Obi Forest Walk near Montville on the North shore of Lake Baroon. Fourteen QMS members attended and despite concerns earlier in the week about there being few fungi fruiting, forty four different species were seen on the day. The program for the foray was rather different to earlier forays in that the morning was spent collecting and the afternoon was devoted to an identification session using the Society's microscopes and very kindly hosted by Fran Guard.

Of the 44 fungal species seen, 20 were identified to species, a further 22 to genus only and two remained unidentified at generic level. Four species that are in Q-Fungi were readily identified: *Auricularia cornea*, *Cyptotrama aspratium*, *Fomitopsis lilacinogilva* and *Hygrocybe cromolimonea*.

There were two really exciting finds on this foray, the first was *Dermocybe splendida*, a Fungimap target species known colloquially as the Splendid Red Skinhead. It lives up to its name. This is a *Cortinarius* which is distinguished by a relatively large (to 90 mm) deep red brown cap and stipe and vivid paprika-red gills. There was quite a large group of these fungi so it was possible to make a good collection. The flesh is bright red and intensifies when the fungus is dried. The only character which was in doubt was the colour of the basal mycelium which was orange rather than red. There are no records of the fungus occurring in Queensland in Fungimap, nor does the Australian Virtual Herbarium (AVH) show any records, so it looks as if this is a first record for Queensland.

On our return we visited the campsite area near the Lake and there found a very large and tall clump of a polypore, with multiple grey caps, joined to a common base and growing next to a Eucalypt stump. The pores and stipe were both white to cream and the softish flesh had a very pleasant, slightly sweet fungoid smell. The pores are quite small and regular, roundish to polygonal and the spores, when examined, were subglobose and about 5 µm wide. This is almost certainly *Grifola colensoi*, and this too seems to be a new record for Queensland, there are no specimens outside of Victoria according to the AVH, and Ian Hood does not record it in Fungi on Wood in Queensland.

The identification session was an opportunity to practice the preparation of microscope sections and examine spores. One small brown job proved to have angled pink spores and was assigned to the genus *Entoloma*, which we had not been able to do in the field, and another specimen thought to be a *Macrolepiota*, keyed out to *Macrolepiota clelandii* with the aid of microscopic characters. Most of those attending seemed to think this pattern of foray and ID session should be repeated, if suitable venues can be found.

Patrick Leonard.

August 2008

FIND OF THE FIELD TRIP

Dermocybe splendida. Following DNA studies, *Dermocybe* is now regarded as being in *Cortinarius*.



Photo: Sapphire McMullan-Fisher

FUNGUS FEATURE

Panus fasciatus is a Fungimap target species found growing on dead wood- in this case what was probably a Chinese elm log. This photo was taken at the “Caesar’s Place” bushland regeneration site, Queenscrott St Chelmer, in February 2007.



Photo: David Holdom

IDENTIFYING FUNGI FOR BEGINNERS

1. Making spore prints.

When you first start trying to identify macrofungi, one of the first questions you will be faced with is: what colour are the spores? This is probably the most important thing you will need to know about a fungus. The colour of the spores is not always the same as the colour of the gills, although with experience you may be able to make a good guess at spore colour by examining the gills of a mature fruit body. The best way to determine spore colour is to make a spore print.

To make a spore print you will need a fruiting body which is mature and in good condition. Make sure your field collection contains at least two mature fruit bodies. Spore prints should preferably be made as soon as you get home (or to the lab) from a collecting trip.

Take the fruit body and cut off the stem at the apex so that you can lay the cap flat on a surface. Place the cap on a white sheet of paper or light card. It is also a good idea to place a glass slide under the cap. Then place a small ball of wet kitchen paper or tissue near the fungus if it is in a dry room. Place a cover over the fungus to stop draughts; the cover should be large enough to cover the whole fungus and the wet tissue paper. An empty margarine container serves well, but wax paper or a glass bowl will do the job¹.

You should get a usable spore print within an hour, a much better one overnight.

If your spores are on paper you should be able to see the colour easily once the spores are dry. If the spore deposit is thin, you may need to scrape the spores together to make an accurate assessment. If you have your spores on a glass slide, scrape them together and place a cover-slip over the top held down by a strip of invisible tape. Place a label on your slide or paper spore print with the same reference number as your notes. The great advantage of this method is that you can hold the slide over a colour chart and compare directly. It will also give you a supply of mature spores to examine under the microscope to determine size and other features.

If you really only have one good specimen and do not want to cut the stipe off, then you can still make a spore print by placing the specimen upright in a glass. The glass should be tall enough so that the stem does not touch the bottom. Then cut a hole for the stem in your piece of paper and lay it flat on the rim of the glass, put the mushroom stem through the hole, and cover it all with a suitable container to stop air currents. This method also works well by balancing two glass slides on the rim of the glass and balancing the fungus on them.

Once you have your spore print you need to decide which of the five main colour groups it falls in to:

1. White; which includes white, cream, deep cream, and light and dark yellow.
2. Pink; which is really flesh coloured and includes very pale pink to almost salmon coloured.
3. Brown; which includes a variety of yellow browns and browns – clay brown, yellow-brown, cinnamon, earth-brown, rusty brown.

¹ I also find takeaway food containers to be good-especially the deeper ones-DH

4. Purple-brown; which includes chocolate browns.
5. Black; which includes greys and sepia.

Note that there are a few rare mushrooms which have green and blood red spore prints, they do not fit in this classification and have to be learnt.

Spore colour is important because the division of fungi into different genera is based on the colour of the spores. All the major keys to the genera rely on this character. Have a look at Ratkowsky and Gates “ Keys to the Tasmanian Families and Genera of gilled Fungi” to see how spore colour is used to distinguish between major groups.

References:

David Largent, How to Identify Mushrooms to Genus I: Macroscopic Features. Mad River Press, 1986.

David Ratkowsky and Genevieve Gates, Keys to the Tasmanian Families and Genera of gilled Fungi, The Tasmanian Naturalist 124, 2002.

Pat Leonard
August 2008

FUNGAL POSTSCRIPT



Photo: David Holdom

This magnificent *Auricularia*, about 20 cm across, was photographed at “Bushy Park”, a forest reserve near Wanganui, New Zealand in June 2007.

Queensland Mycological Society Inc
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