

# THE QUEENSLAND MYCOLOGIST

## The Bulletin of the Queensland Mycological Society Inc.

Future editions of *The Queensland Mycologist* will be issued quarterly. Members are invited to submit contributions to the Editor. The deadline for scientific contributions for the next issue is 1 August 2006 and for general contributions 15 August 2006.

Please ensure that the Secretary (fungiqlld@yahoo.com.au) always has your current email address. If you are on the mailing list but do not wish to receive future issues, please contact the Secretary to have your details removed from the list.

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### QMS CALENDAR

Monthly meetings are held in the Bailey Room at the Herbarium, Mt Coot-tha, commencing at 7pm and alternate between the second Tuesday and Wednesday.

**Tuesday, 13 June 2006 General Meeting** followed by the guest speaker, **Dr Roger Kitching** of Griffith University. His subject will be the BATH Project, which has a fungi research component that he is establishing at Lamington this year.

**Wednesday, 12 July 2006 General Meeting** followed by Sapphire McMullan-Fisher speaking on "Fungimap Targets In Queensland".

**Tuesday, 8 August 2006 General Meeting**

### FUNGI IN FOCUS

*Podaxis beringamesis* Priest & Michael Lenz

As Dr Tony Young stated at the recent QMS meeting this is a distinctive Queensland fungus that grows on termite mounds.

The fruiting body is an elongated drumstick shape; the colour is at first whitish and the "drumhead" is normally scaly. (The number of brownish scales is very variable: from a few to shaggy.) It emerges as a solitary specimen or in small groups from the top of termite mounds; the outer peridium lifting and shedding to expose a powdery, black spore mass. The stem is cylindrical white to greyish white, very tough, solid, buried at the base in the termite mound; extending into a central woody core through the middle of the peridium. The core persists as a blackened "stick" on the top of the mound when all other parts of the fungus have disintegrated.

Extract from *A Field Guide to Fungi of Australia* by AM Young.

Sightings of this taxon can be reported to Nigel Fechner at nigel.fechner@epa.qld.gov.au

## GENUS *RAMARIA* IN AUSTRALIA

Presented by Nigel Fechner at QMS meeting 10.5.2006

This presentation commenced with an historic overview of researchers who have previously conducted study into *Ramaria*, noting where changes over time had resulted from the successive review of earlier taxonomic studies. This highlighted the fact that it was a very complex taxonomic nightmare that Nigel and Tony are currently attempting to unravel.

The characteristics of *Ramaria* are:

- Coralloid branching.
- The flesh can be brittle, fleshy, fibrous, gelatinous or softly leathery.
- Often staining if bruised – this may be seen as just a water-soaked appearance.
- Grows on humus, soil or rotting wood, mycorrhizal in some cases.
- Spores are pale yellow to ochre brown.
- Spores are ornamented: striate, warty, spiny or smooth (rarely).
- Spores are cyanophilic in cotton blue.

Another technique used in spore taxonomy is SEM (scanning electron microscopy) which gives higher magnifications and resolution compared with light microscopy. The SEM part of the project has yet to be commenced but it will be used to give high definition photographs of the spore surfaces. Despite the high character variability displayed by the various species of *Ramaria*, it is expected that considerable information will be obtained about the precise structures of their ornamentation patterns.

Another feature used in defining this group (and one that is almost unique to species of *Ramaria*) is the presence of ampulliform septa. The function(s) of these swollen septa is/are still uncertain, although they seem to exhibit some characteristics of normal clamp connections. Many Australian species are without clamp connections, although a small number regularly display clamps. Another feature that has been seen is crystalline structures, particularly in rhizomorph hyphae. In some species these are also present on hyphae extending upwards into the stem system. The problem at this stage is, however, that our research shows that the presence of any of these structures is generally not consistent in any given species. Much still requires to be investigated in respect of what these structures represent and why they are there.

Following on from the first recognition of *Clavaria lorithamnus* (later *Ramaria lorithamnus*) as a new species by Berkley in 1873, the first person to apply a new name for an Australian taxon for *Ramaria* in the twentieth century was an American, Curtis Lloyd, who described *Ramaria capitata* (as a *Clavaria*, but alluded to its relationships with Quelet's concept of *Ramaria*). It has capitate, somewhat irregularly lobed tips, which are sometimes viscid; its colour varies from yellow to orange or light brown; and it is often cauliflower like in overall appearance. When the apices are cut through transversely, it can be seen that the top part is consistently composed of a palisade of sterile cells.

John Cleland (1878-1971) published the first major work on Australian fungi entitled *Toadstools & Mushrooms and other Larger Fungi of South Australia*. Parts 1 & 2. He identified 3 species of *Ramaria*, under the genus name *Clavaria*. These were:

*C. australiana* (purplish tips, in soil, possibly eucalypt forest). [*Ramaria australiana*]

*C. ochraceosalmonicolor* [*R. ochraceosalmonicolor*]

*C. sinapicolor* (now transferred to *Ramaria lorithamnus*) is the most common species, is wholly shades of yellow (although the apices may often be lighter or darker depending on variety or weather conditions) and the apices also display dichotomous branching.

Stella Fawcett (1912-1988) worked on *Clavaria* around the same time as Cleland, and did some useful work but unfortunately she was compelled to base at least some of her work on the previously published material by the American mycologist, W.C. Coker (1923). Coker made a number of unfortunate errors in his volume, however this is not a condemnation of his efforts because his book made a very valuable contribution to the studies of coral fungi at a time when the concepts of the various species were even more uncertain than they are now.

Jim (James) Willis (1920-1955) was the first Australian author to transfer *Clavaria* into *Ramaria* on the basis of E.J.H. Corner's Monograph of *Clavaria* and Allied Genera (1950).

*Ramaria* in Australian literature (rightly or wrongly) were assigned to 3 or 4 sub genera – these being *Echinoramaria*, *Laeticolora*, *Lentoramaria* and *Ramaria* - many combine *Laeticolora* and *Ramaria*.

So far, in the current study, Dr Tony Young and Nigel Fechner have verified 7 Australian taxa, these are:

*R. anziana* R.H.Petersen.

*R. australiana* (Cleland) R.H.Petersen.

*R. capitata* (Lloyd) Corner

*R. botrytoides* (Peck) Corner – which often exhibits a candelabra shaped form – the juvenile is a very intense pink/magenta colour, particularly in the apices, and usually bears some aborted branches near the base of the stipe.

*R. fennica* (P.Karst) Ricken *var. fumigata* (Peck) Schild which is found in eucalypt woodland.

*R. lorithamnus* (Berk.) R.H.Petersen. A very common species. Occurs in a wide range of vegetation communities.

*R. gracilis* (Pers.:Fr.) Quel. which forms dense mats of rhizomorphs in leaf litter in either *Pinus* or broadleaf forests..

How many *Ramaria* are yet to be described? We believe there are at least 10 new species but possibly as many as 30. (This was then demonstrated with a number of slides of different species that are being documented).

There are approximately 500 – 1000 herbarium collections to study

In the study of genus *Ramaria* it is intended to:

Publish keys;

Write up full descriptions;

Complete an electronic key (using Lucid);

Undertake SEM studies;

Undertake molecular studies.

Collectors are always required. (The *Ramaria* collecting forms are available online at [http://sites.ourbrisbane.com/cubberla-witton/fungi/coral\\_fungi](http://sites.ourbrisbane.com/cubberla-witton/fungi/coral_fungi)).

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## INCORPORATION

The documentation seeking incorporation was submitted and incorporation was granted on 14 May 2006. The QMS Committee, and in particular Karalyn Herse, are to be congratulated and thanked for the time and effort that has been necessary to get QMS established.

## MEMBERSHIP

All membership fees are now due. If you are not yet a financial member of QMS, please complete the Membership Application Form on the last page of this journal and return the form with your payment to QMS.

## 2006 OFFICE BEARERS:

President	Nigel Fechner	Ph 3896 9316	<a href="mailto:nigel.fechner@epa.qld.gov.au">nigel.fechner@epa.qld.gov.au</a>
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Committee	Jutta Godwin	Ph 3378 1929	<a href="mailto:jrgo@bigpond.net.au">jrgo@bigpond.net.au</a>

## THE BASIC FUNGI FOR BEGINNERS WORKSHOP

The considerable effort that went into preparation of the workshop was appreciated by all participants so congratulations and a big thank you to:

- Sapphire McMullan–Fisher, who spoke on the topics of “Fungi in the Environment”, “Overview of Major Macrofungus Groups”, “Parts of Agarics”, “Fungimap and Fungi Conservation”; and at the conclusion took everyone a few metres beyond the car park to view a field of *Cyathus* (Bird’s nest).
- Nigel Fechner who spoke on “Getting Names to Fungi”.
- Ray Baxter who convened the Workshop and demonstrated some “Tools of the Trade”.
- Rachel Griffiths and her THECA team, who organized the audio-visual equipment, provided the venue and the morning tea.



L to R Susan Waite, Karalyn Herse and John Wrench working with keys. Photo by Rachel Griffiths.

Twenty-five persons attended the workshop. The 19 workshop evaluations received were all very positive with 17 reporting the workshop met their expectations 100%. These evaluations will be very useful in planning future activities for QMS members. Thank you to everyone who took the time to complete and return the evaluations.

It is hoped to include summaries of the Workshop presentations in future issues of The Queensland Mycologist.

### SUGGESTED REFERENCES THE BASIC COURSE were:

- A. M. Young 2005 *A Field Guide to the Fungi of Australia*. UNSW Press, Sydney.  
 Bruce Fuhrer 2005 *A Field Guide to Australian Fungi*. Bloomings Books, Melbourne.  
 Pat & Ed Grey 2005 *Fungi Down Under: the Fungimap Guide to Australian Fungi*. Fungimap, South Yarra.  
 Ian McCann 2003 *Australian Fungi Illustrated*. Macdown Productions, Vermont.

### SUMMARY OF QMS MEETING 10 May 2006

Issues discussed at the meeting were:

The circulation of a poster inviting members to assist in a Truffle survey project.

The costs involved in running workshops. QMS has to rely on the three Queensland Mycologists to conduct the quality educational programmes required, which places a considerable workload on them, just how much time they can commit to QMS on a voluntary basis was discussed. If funding for workshops cannot be obtained through grant applications, then workshops will need to be run on a cost recovery basis. This may mean that a full day workshop would cost \$50 to \$60 for members, with non members paying a minimum of \$20 more than members. The committee will monitor the costs involved.

Copies of *Fungi Down Under* were available for members to purchase. In future, *A Field Guide to the Fungi of Australia* by AM Young and K Smith may also be available. It is hoped to sell books at a discount to members, but still make a small profit to go towards purchase or equipment, field guides and subsidising workshops (for example).

Tony Young has been in contact with Tom May to discuss the possibility of increasing the number of Fungimap species to include common Queensland species.

Nigel Fechner advised that Queensland has been approached to host the 2007 Fungimap conference. Discussion covered the following points:

- The number of participants is generally capped at about 100 – 120;
- Possible locations are being considered, in particular Lamington NP as there are conference facilities at Binna Burra and, if the drought ever breaks, potentially some fungi as well;
- Tony Young advised that he is on the Board of Directors for Binna Burra and did not wish to influence the decision making process;
- Nigel Fechner noted that he had proposed Lamington/Binna Burra as a possible location for the conference independent of Tony's affiliations;
- Nigel Fechner is currently liaising with Fungimap representatives in Victoria to finalise details and the level of involvement required from the Qld Herbarium and QMS;
- It was decided that Nigel Fechner and Sapphire McMullan-Fisher would liaise with Fungimap until dates are firmed up and a Conference Committee is established.

## FUNGIMAP

Fungimap is an Australia wide scheme to map the distribution of 100 species of Australian mushrooms, toadstools and other fungi using the information sent in by a network of volunteer recorders across Australia. The 100 species are referred to as the "target" species. <http://fungimap.rbg.vic.gov.au/fsp/fsp.html>

Anyone can become a Fungimap recorder. Reports of sightings, supplying specific data, are sent to Fungimap and then collated to develop a database of the "target" species' distribution across Australia. Fungimap is administered from Melbourne, and is supported by the Victorian Field Naturalists and the Royal Botanic Gardens. The topic for the QMS 12 July meeting is "Fungimap Target Species In Queensland" by Sapphire McMullan-Fisher.

Information on Fungimap is available on the net at <http://fungimap.rbg.vic.gov.au> or via email to [fungimap@rbg.vic.gov.au](mailto:fungimap@rbg.vic.gov.au).

Fungimap recorders, who are Queensland residents, can assist anyone interested in becoming a Fungimap recorder. Sapphire McMullan-Fisher (Palmwoods) [sapphire@flyangler.com.au](mailto:sapphire@flyangler.com.au); Susan Waite (Bundaberg) [swaite3@bigpond.com](mailto:swaite3@bigpond.com) Ph 4152 9381; and Ray and Noreen Baxter (Brisbane) [rbaxn@acr.net.au](mailto:rbaxn@acr.net.au) Ph 3202 5008 are all Fungimappers who would be happy to provide more details.

### Macrofungi Kits

At the last meeting, Vivienne Nash, who works as a volunteer with the Queensland Museum Loans spoke about a fungi project in which she is involved:

Queensland Museum Loans is planning a project to develop macrofungi kits for use in schools and community groups. If you are interested or know of anyone else who could assist, particularly in making models and/or illustrations of fungi, please contact Vivien Nash (Queensland Mycological Society Inc. member) ([vivien.nash@bigpond.com](mailto:vivien.nash@bigpond.com)) or Chris Purdie, Manager, Queensland Museum Loans ([Loans@qm.qld.gov.au](mailto:Loans@qm.qld.gov.au)).

## MEMBERS SKILLS AUDIT

Members are reminded that if you have not yet returned your completed skills audit form (which appeared in the first issue of *The Queensland Mycologist*) it would be appreciated if you would do so as soon as possible. The information obtained from the audit will assist the Committee to develop QMS activities that are consistent with your interests and meet your expectations.

# QUEENSLAND MYCOLOGICAL SOCIETY INC

## Membership Application Form

Surname\* : ..... First Name\* : .....

Address\* : .....

.....

Phone No\* : ..... Mobile No\* : .....

Email Address (if any) : .....

**I would like to become a member of the Queensland Mycological Society Inc**

Date\* : .....

Signature\* : .....

\*Required information

**Individual: \$20 per annum**

**Please note:** Membership fees will be due on the 1<sup>st</sup> of January of each year  
Members joining after the 1<sup>st</sup> of October will pay a single membership valid for the current and following year (eg. join 1<sup>st</sup> November 2006, membership current until 31<sup>st</sup> December 2007)

**Payment Details: Cheque / Money Order Attached (please circle one\*)**

**Applications may be submitted in person at the next QMS general meeting**  
phone the Secretary (Karalyn) on 0419 716 851 for details

**OR**

**Please mail applications to:** The Secretary  
Queensland Mycological Society Inc  
PO Box 2304  
Keperra Qld 4054