**Australasian Mycological Society**

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**Australasian Mycological Newsletter**

**Editorial Panel**

J.A. Simpson  
C.A. Grgurinovic

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DISTRIBUTION OF CRYPTOCoccus neoformans VAR. GATTII AMONG THE SPECIES OF Eucalyptus

David Ellis & Tania Pfeiffer
Mycology Unit, Women's and Children's Hospital, Adelaide, Australia.

The distribution of cryptococcosis due to Cryptococcus neoformans var. gattii is geographically restricted, non-immunocompromised hosts are usually affected, large mass lesions in lung and/or brain (cryptococcomas) are characteristic and morbidity from neurological disease is high (Mitchell et al. 1995). Human disease is endemic in Australia (18 life threatening cases reported in 1995), Papua New Guinea, parts of Africa, India, South-East Asia, Mexico, Brazil, Paraguay and southern California (Ellis & Pfeiffer 1990; Kwon-Chung & Bennett 1984).

Environmental isolations, initially from the Barossa Valley in South Australia, have established that C. neoformans var. gattii has a specific ecological association with Eucalyptus camaldulensis Dehn. (river red gum) and Eucalyptus tereticornis J.E. Smith (forest red gum) (Ellis & Pfeiffer 1990; Pfeiffer & Ellis 1992). Evidence for an epidemiological association between this cryptococcal habitat and human infection is circumstantial. There is correlation between the global distribution of human infection with C. neoformans var. gattii and the two species of eucalypts, and environmental searches conducted in Australia and elsewhere have so far failed to identify any other natural source. In Australia, E. camaldulensis is widespread, principally west of the Great Dividing Range, with endemic foci occurring around Darwin, Alice Springs, and rural areas of South Australia, New South Wales, Victoria, Queensland and Western Australia. Eucalyptus tereticornis shows a more restricted distribution occurring along the eastern coastal seaboard of Australia, extending to Papua New Guinea. It does not occur naturally in South Australia where our initial environmental sampling was performed. Eucalyptus tereticornis is easily confused with E. camaldulensis as they are morphologically similar, both belonging to the red gum group (Eucalyptus ser. Exsertae Blakely). These two eucalyptus have been exported extensively from Australia to other regions; especially California, Mexico, Brazil, parts of Africa and South-East Asia (Ellis & Pfeiffer 1990) from where C. neoformans var. gattii infections have been reported (Kwon-Chung & Bennett 1984). Environmental isolates of the fungus have also been recovered from E. camaldulensis trees growing at a site near Fort Point, San Francisco, California and from Eucalyptus species growing in the car parks of the San Diego Zoo (Pfeiffer & Ellis 1992). To date, all C. neoformans var. gattii environmental isolates from eucalyptus have been serotype B. Cryptococcus neoformans var. gattii serotype C has not yet been isolated from the environment.

Analysis of Australian isolates of clinical and eucalypt origin by random amplification of polymorphic DNA (RAPD) has revealed that all eucalypt isolates (n = 45) and 92 per cent of clinical isolates (n = 48), exhibit a single major RAPD profile, designated VG1 (Sorrell & Chen et al. 1996). This genetic concordance between the majority of clinical and environmental isolates in Australia is consistent with the hypothesis that human disease is acquired from exposure to host eucalyptus. Fingerprints of clinical isolates were independent of underlying host disease or body site of infection and profiles of all isolates were stable over time. Analysis by PCR-fingerprinting confirmed the RAPD results (Sorrell & Chen et al. 1996). However, a second RAPD profile (VGII) was found to be associated with human and animal infections in the southwest of Western Australia, where the two known host eucalypts do not occur naturally (Sorrell et al. 1996). This finding together with other reports of human and animal infection occurring in areas where neither E. camaldulensis or E. tereticornis are found raises the possibility of additional natural hosts for C. neoformans var. gattii (Sorrell & Chen et al. 1996; Sorrell & Brownlee et al. 1996). Accordingly, we have recently investigated eucalypt trees growing near Bunbury and Nannup in the southwestern corner of Western Australia and isolated C. neoformans var. gattii from woody debris from both Eucalyptus rudis Endl. and Eucalyptus gomphocephala DC.

Eucalyptus rudis (flooded gum) was deliberately targeted because it is a member of the red gum group with a very similar habitat to E. camaldulensis and it was endemic to the region under investigation. There are no records to indicate that E. rudis has been exported in any quantity to other countries. Eucalyptus gomphocephala (tuart) is a species, with no known close relatives, restricted to the subcoastal plains around Perth. This species has been extensively exported to California, Chile and the Mediterranean region especially Morocco, Cyprus, Algeria, Libya, Tunisia, Italy, Spain, Portugal, Greece, Malta and Israel. Eucalyptus gomphocephala was planted outside Australia for its quality hard wood which has tested to be stronger and tougher than oak, and earlier it was in great demand for shipbuilding and underwater uses. However, preliminary RAPD analysis of the C. neoformans var. gattii isolates recovered from these two eucalypt demonstrate the common eucalypt VG1 profile and not the expected VGII profile as seen in some clinical isolates from this area. The only environmental isolates so far recovered with a VGII profile are from plant debris collected from along the fence-line of a paddock containing sheep infected with the
same biotype in southwestern Western Australia (Sorrell & Brownlee et al. 1996) and from debris collected from a possible hybrid of *E. camaldulensis* growing in California, USA (Sorrell & Chen et al. 1996). Further investigation of the range of ecological niches of *C. neoformans* var. *gattii* is warranted and we are now examining other closely related species and/or subspecies of eucalypts as natural reservoirs for the fungus. In addition, molecular characterisation of environmental and relevant clinical isolates has proved to be a valuable epidemiological tool, enabling the identification of subpopulations of *C. neoformans* var. *gattii* that may lead to the discovery of alternative host plants.

The following notes are provided to assist investigators wishing to isolate and identify *C. neoformans* var. *gattii* from host *Eucalyptus* or other trees. By far the best material to collect is decaying woody debris found accumulated around the base of suspect trees. Woody material from any small hollows, representing a sheltered habitat, should be especially sought after and sampled. Wood has previously been reported as a natural habitat for *C. neoformans* (Swinne et al. 1991) and our own data, from extensive collections, indicates that decaying eucalypt wood may be the principal source of *C. neoformans* var. *gattii* in nature. Wood debris from eucalypts contains very high concentrations of lignin and polyphenols which suggests that the well documented phenol oxidase activity of *C. neoformans* may be an adaptation to its natural habitat.

Identification of the trees is also important; so far positive samples have only been collected from *Eucalyptus camaldulensis*, *E. tereticornis*, *E. rudis* and *E. gomphocephala*, but other members of the red gum group (*Eucalyptus* ser. *Excelsae*) or hybrids may be involved. The identification of eucalypts growing outside Australia is also difficult and will likely require expert botanical knowledge. It should also be noted that the presence of *C. neoformans* var. *gattii* may be seasonal and that not all trees will be positive. Extensive sampling over a period of time is likely to be required.

When collecting specimens use small sealable plastic bags and collect a good size sample (at least a large hand full), label and return to the laboratory for processing. Specimens should be processed promptly, but if this is not possible store them in a cool environment away from direct sunlight. It should also be noted that delayed processing of damp or moist samples may lead to increased contamination.

For specimens consisting mostly of soil, take a small ‘teaspoon’ sized sample from the bulk collection and add 20 ml sterile distilled water and shake thoroughly. For specimens consisting mostly of leaf or woody material add 20–50 ml sterile distilled water to the sample and shake thoroughly. Larger pieces of wood may have to be picked out and processed individually. Allow washings to stand for 5–10 minutes and then plate out by streaking 0.5–1.0 ml aliquots onto bird seed agar (use smaller aliquots if contamination is a problem). Incubate plates at 26°C.

In our experience the best primary isolation medium to use is Staib’s recipe for bird seed agar. Many different formulations for bird seed agar or other selective agars for the isolation of *Cryptococcus neoformans* have been published, but they are not as good as that documented by Staib (1987).

The initial or early recognition of colonies of *C. neoformans* growing on the bird seed agar is a technique which requires considerable experience and expertise. Plates must be examined daily and maintained for seven days. Look for small brown pigmented ‘pin head’ colonies. These usually appear after 2–3 days of incubation and are mucoid in appearance. Isolates of *C. neoformans* var. *gattii* are generally more mucoid than those of *C. neoformans* var. *neoformans*. Holding the primary isolation plates up to direct sunlight may also help to see the small brown colonies of *C. neoformans*. However, we must stress again that careful examination of the plates is required, colonies of *C. neoformans* are easily missed, especially if there are many other contaminant fungi growing on the plate.

Suspect colonies should be picked off and subcultured by streaking for purity on to bird seed agar. It is essential that all isolates are fully identified by using one of the recognised yeast identification schemes utilising sugar assimilation tests (e.g. reliable commercially available yeast identification kits are the API 20C, ID 32C, Uni-Yeast-Tek, MicroScan or Vitek systems).

Some contaminant fungi on initial appearance may look suspiciously like *C. neoformans*, however, once streaked for purity they show hyphal development and are clearly moulds. In addition, other yeasts are often isolated from
eucalypt material, especially strains of *Cryptococcus laurentii* which may also show a brown colour effect on bird seed agar and turn CGB media blue.

Variatel differentiation should be done using CGB agar (Kwon-Chung *et al.* 1982). This simple biotype test is based on the ability of *C. neoformans* var. *gattii* isolates to grow in the presence of L-canavanine and to assimilate glycine as a sole carbon source. *Cryptococcus neoformans* var. *gattii* isolates usually turn CGB agar blue within 3–5 days, however, some strains may take as long as 10–14 days.

**Key features for the identification of Cryptococcus neoformans**

Microscopic morphology, physiological and biochemical tests, pigmentation on bird seed agar and reaction on Canavanine-glycine-bromthymol blue agar.

On Sabouraud’s dextrose agar colonies are cream colored, smooth, mucoid and yeast-like, consisting of globose to ovoid budding yeast-like cells or blastoconidia, 3.0–7.0 × 3.3–7.9 μm. India ink preparations show the presence of distinct, wide gelatinous capsules surrounding the yeast cells.

**Physiological Tests:**

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germ tube test</td>
<td>Negative</td>
</tr>
<tr>
<td>Hydrolysis of urea</td>
<td>Positive</td>
</tr>
<tr>
<td>Growth on cycloheximide agar</td>
<td>Negative</td>
</tr>
<tr>
<td>Growth at 37°C</td>
<td>Positive (w)</td>
</tr>
</tbody>
</table>

**Assimilation Tests:**

<table>
<thead>
<tr>
<th>Carbon Source</th>
<th>Assimilation</th>
<th>Potassium nitrate</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glucose</td>
<td>+</td>
<td>-</td>
<td>Ribitol v</td>
</tr>
<tr>
<td>Galactose</td>
<td>+</td>
<td>+(w)</td>
<td>L-Sorbose v</td>
</tr>
<tr>
<td>Maltose</td>
<td>+</td>
<td>+(w)</td>
<td>D-Ribose +</td>
</tr>
<tr>
<td>Sucrose</td>
<td>+</td>
<td>-</td>
<td>Galactitol +</td>
</tr>
<tr>
<td>Trehalose</td>
<td>+</td>
<td>+(w)</td>
<td>D-Mannitol +</td>
</tr>
<tr>
<td>D-Xylose</td>
<td>+</td>
<td>-</td>
<td>D-Glucitol +</td>
</tr>
<tr>
<td>Soluble Starch</td>
<td>v</td>
<td>L-Rhamnose +</td>
<td>Salicin v</td>
</tr>
<tr>
<td>Melezitose</td>
<td>+</td>
<td>D-Arabinose +</td>
<td>Citric acid v</td>
</tr>
<tr>
<td>Glycerol</td>
<td>v</td>
<td>L-Arabinose +(D)</td>
<td>DL-Lactic acid v</td>
</tr>
<tr>
<td>Succinic acid</td>
<td>v</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

+ Positive, - Negative, v Variable, w Weak, D Delayed.

**Bird Seed Agar for the selective isolation of Cryptococcus neoformans** (Staib 1987)

*Guizotia abyssinica* (niger seed) 50 g
Glucose 1 g
KH₂PO₄ (potassium dihydrogen orthophosphate) 1 g
Creatinine 1 g
Bacto-agar (Difco) 15 g
Distilled water 1000 ml

**Additives:** to each 500 ml bottle.
Penicillin G (20 units/ml) 0.5 ml
Gentamicin (40 mg/ml) 0.5 ml

1. Grind seeds of *Guizotia abyssinica* as finely as possible with an electric mixer and add to 1000 ml distilled water in a stainless steel jug.
2. Boil for 30 minutes, pass through filter paper and adjust volume to 1000 ml.
3. Add remaining ingredients except Bacto-Agar to filtrate and dissolve. *If required:* Cool to room temperature and pH to 5.5. Dispense into 500 ml bottles.
4. Add 7.5 g Bacto-agar to each 500 ml reagent bottle.
5. Autoclave at 110°C for 20 minutes.
6. Cool to 48°C and add 0.5 ml Penicillin G and 0.5 ml Gentamicin to each 500 ml of Bird Seed Agar.
7. Mix gently and pour into 90 mm plastic petri dishes.
CGB (L-Canavanine, glycine, bromthymol blue) agar for the differentiation of Cryptococcus neoformans var. neoformans and Cryptococcus neoformans var. gattii (Kwong-Chung et al. 1982).

**Solution A**

<table>
<thead>
<tr>
<th>Component</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycine</td>
<td>10 g</td>
</tr>
<tr>
<td>KH₂PO₄</td>
<td>1 g</td>
</tr>
<tr>
<td>MGSO₄</td>
<td>1 g</td>
</tr>
<tr>
<td>Thiamine HCl</td>
<td>1 mg</td>
</tr>
<tr>
<td>L-canavanine sulphate</td>
<td>30 mg</td>
</tr>
<tr>
<td>Distilled water</td>
<td>100 ml</td>
</tr>
</tbody>
</table>

1. Dissolve ingredients in small beaker and adjust pH to 5.6.
2. Filter sterilise solution using 0.22 µm filter.
3. Store in refrigerator.

**Solution B (Aqueous Bromthymol Blue)**

<table>
<thead>
<tr>
<th>Component</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bromthymol blue</td>
<td>0.4 g</td>
</tr>
<tr>
<td>0.01N NaOH</td>
<td>64 ml</td>
</tr>
<tr>
<td>Distilled water</td>
<td>36 ml</td>
</tr>
</tbody>
</table>

1. Dissolve the Bromthymol Blue in the NaOH.
2. Add the water to this.

**To prepare medium (1L for plates)**

<table>
<thead>
<tr>
<th>Component</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distilled water</td>
<td>880 ml</td>
</tr>
<tr>
<td>Solution B</td>
<td>20 ml</td>
</tr>
<tr>
<td>Bacto agar</td>
<td>20 g</td>
</tr>
</tbody>
</table>

1. Autoclave to 121°C for 15 minutes, cool to 48°C.
2. For plates add 100 ml of the filtered solution A and mix.
3. Dispense in plates.

**References:**


Wednesday, 3rd October
8.00–8.50 Registration / Set up posters

Session 1 (Chairperson: Jack Simpson, President, Australasian Mycological Society)
8.50 Welcome
9.00 Ethel Irene McLennan, an Australian mycological pioneer—Sophie Ducker
9.30 Mycological studies on small Victorian fungi by Harry Swart and Gordon Beaton—Gretna Weste
9.50 Mushroom poisonings in Australia—F. Mary Cole
10.10 Observations on morphology and the response of hyphae to temperature by Australian and French isolates of Lepista—Karen Stott, Andrew Broderick & N.G. Nair

10.30 Morning Tea

Session 2 (Chairperson: Cheryl Grgurinovic)
10.50 Coprophilous fungi in New Zealand with special emphasis on the genus Podospora (Lasiosphaeriaceae)—Ann Bell & Daniel Mahoney
11.10 The species of Elsinoë on Myrtaceae in Australia—Jack Simpson
11.30 Lactarius (Russulaceae) in Tasmania: with special reference to L. subdulcis—Naiyana Thongjeim & Alan Mills
11.50 A study of the genus Amanita (Agaricales)—Alec Wood
12.10 Preliminary observations on the systematics of the Australian Hygrophoraceae Lotsy (Fungi, Agaricales)—Anthony Young

12.30 Launch of Fungi of Australia (Senator Hill)
12.50 Lunch

1.30 Poster Session
Session 3 (Chairperson: Tom May)
2.20 Preliminary characterisation of New Zealand Ganoderma species by morphology, mating reaction and rDNA sequences—Peter Buchanan & J. Paula Wilkie
2.40 Implications of phylogenetic studies for conservation of genetic diversity in shiitake mushrooms—David Hibbett & Michael Donoghue
3.00 Microfungi of north Queensland wet tropics—Kevin Hyde, Jane Fröhlich & J. Taylor
3.20 Afternoon Tea

Session 4 (Chairperson: Ian Pascoe)
3.40 Survival of arbuscular mycorrhizal fungi in soil—Peter McGee & Greg Pattinson
4.00 The phenology of macrofungi in relation to autumn rainfall in the Adelaide Hills—Adrienne Burns & John Conran
4.20 Understanding the distribution of a soil microfungus: Fusarium nygamai—David Backhouse, Lester Burgess & Brett Summerell
4.40 Does Acmena smithii (Myrtaceae) have both endo and ectomycorrhizas?—Candida Briggs, D. Messiqua & A.E. Ashford

5.30 Australasian Mycological Society, Annual General Meeting

7.00/7.30 Dinner: Private Dining Room, Melbourne University Student Union.

POSTERS
Mycena in Australia—Cheryl Grgurinovic
A systematic study of *Collybia* (Fr.) Staude (Agaricales: Tricholomataceae)—Gavin Smith
The genus *Phaeocollybia* (Cortinariaceae) in south-east Australia—Bettye Rees & Alec Wood
Ordinal placement of the genus *Densospora*: Glomales or Endogonales?—Murray Henwood & Peter McGee
Towards a monograph of the Australian Phyllachoraceae (Ascomycetes)—Ceridwen Pearce & Kevin Hyde
Variability in *Fusarium compactum* from Australian soils—Jelena Levic, David Backhouse, Lester Burgess & Brett Summerell

*Phomopsis viticola* pathogenicity, sexual reproduction and genetic variation—Reiny Scheper, Eileen Scott & Dara Whisson

Genetic variation among isolates of *Uncinula necator*, the grapevine powdery mildew fungus—Belinda Stummer, Kathy Evans, Eileen Scott & Dara Whisson

*Alternaria*, a common fungus that causes asthma—Peter McGee

A review of the psychoactive fungi found in Australia and New Zealand—Michael Bock

The psychoactive ergot alkaloids and their occurrence in the microfungi—Michael Bock & Doug Parbery

Temperature and moisture effects on competitive colonization of roots by *Fusarium* species—H. Saremi, David Backhouse & Lester Burgess

*Phytophthora cinnamomi*: structure, life cycle and biology—David Cahill, Adrienne Hardham & Gretna Weste

Use of a vital stain to detect viable infective units of arbuscular mycorrhizal fungi in a cultivated soil—Greg Pattinson & Peter McGee

Repeated sampling for macrofungi in eucalypt forest in south-eastern Australia—Sapphire McMullan & Tom May

Surveys for macrofungi at Wattle Park, an urban bushland—Noel Schleiger & John Julian

The macrofungal community of wet forests in Tasmania—Tom May & Jill Packham

Use of small mammals to determine the presence of sporocarpic Zygomycetous fungi in native vegetation—Peter McGee, Greg Pattinson & E. Sutherland

Identification of fungal spores in the diet of Australian mammals—Michael Tory & Tom May

Australian ectomycorrhizal fungi: biodiversity, biogeography and conservation—Neale Bougher, I. Tommerup, N. Malajczuk, T. Grove & K. Old

Conservation status of macrofungi in Victoria—John Avram & Tom May

FUNGIMAP: the Australian Fungi Mapping Scheme—John Julian & Tom May

BEYOND THE FLORAS

This conference runs from 4–6 October. Among various sessions the following is of particular relevance to mycologists.

**Thursday, 4th October**

*Orphan groups (fungi) (Chair: Peter Buchanan)*

1.50 Orphans in ‘botanical’ diversity—David Hawksworth

2.30 Who will look after the orphans?—Kevin Hyde

2.50 Waiting for the mycofloras: making the most of existing information on fungal taxonomy—Tom May

3.10 Doing the Fungi: how to write a ‘Flora’ treatment for the *Fungi of Australia*—Ian Pascoe

FURTHER INFORMATION

The Mycology conference is being held as part of the 1996 Commemorative Conference, which marks the 100th anniversary of the death of Baron Ferdinand von Mueller, and the 150th anniversary of the founding of the Royal Botanic Gardens, Melbourne. Other conferences include The Scientific Savant, Proteaceae and Beyond the Floras.

A full program is available at http://www.science.unimelb.edu.au/botany/www.confand/conference.html. Please direct any enquiries to Dr Tom May, National Herbarium of Victoria, Birdwood Ave., South Yarra, Victoria 3141. PH: (03) 9252-2319, FAX (03) 9252-2350, email: may@popa.melbpc.org.au.

MYCOLOGY POST-CONFERENCE FORAY, 5–8 OCTOBER 1996

The post-conference foray will be based at Marysville, close to Melbourne and to a variety of habitats—including cool temperate rainforest, tall wet sclerophyll forest, dry sclerophyll forest, subalpine communities and pine plantations. Ferdinand von Mueller described the Mountain Ash as a ‘gigant’ among trees, and we will see some impressive specimens in the tall trees reserve at Cambarville. Other sites to be visited include Lady Talbot Drive, The Beeches Reserve, Lake Mountain, and the Acheron Way.
October is not always the best time of year for macrofungi, but this winter has been reasonably wet, and there should still be some macrofungi present, especially in the wetter mountain gullies. Cool temperate rainforest occurs in scattered pockets in Victoria, and is a mycological paradise in season. The drier eucalypt forest may not yield many macrofungi during our visit, but an interesting array of leaf-inhabiting and other microfungi can be found.

Arrangements are informal, and participants may join in the foray for all or part of the time. Details of the sites visited may be altered according to weather and where the fungi are, but we can arrange meeting spots if people wish to catch up with the foray for a day.

Accommodation has been booked in self-contained twin-share cabins in Marysville, about an hour and a half drive from the centre of Melbourne. The exact cost depends on numbers, but will be between $35 and $50 per person per night for accommodation and self-cater breakfast and lunch (make own arrangements for evening meals). Some people have already arranged transport, and it is likely that a few places will be available for those without cars (donation of $30 towards costs).

If you would like to attend the foray and have not already received a booking form, please contact Tom May immediately at the Royal Botanic Gardens, Melbourne, Birdwood Ave, South Yarra, Vic. 3141. Ph.: 03 9252 2319. Fax: 03 9252 2350. Email: may@popa.melbpc.org.au

NEW SOUTH WALES BIODIVERSITY STRATEGY

The Threatened Species Conservation Act 1995, which came into effect on 1 January 1996, requires the Director General of the New South Wales National Parks and Wildlife Service to prepare a New South Wales Biodiversity Strategy and to establish a Biological Diversity Advisory Council (BDAC) comprising representatives of science, industry, conservation, Aboriginal Land Councils and local government. A draft version of the Strategy is to be released later this year. The NSW National Parks and Wildlife Service and the BDAC would welcome submissions from the Australasian Mycological Society on the draft NSW Biodiversity Strategy. The address is NSW National Parks and Wildlife Service, P.O. Box 1967, Hurstville 2220. Our Society has requested a copy of the draft Strategy.

J.A. Simpson

NEW BOOKS

Fungi of Australia, Volume 1A. 1996. (Will be available at the CSIRO Publications display and sales stand at the Conference in Melbourne. See the enclosed flier for further information about this and other volumes in this series.)


The Atlas contains 720 pages. It gives descriptions of 135 pathogenic and 190 opportunistic fungi, most of these being common environmental fungi. This book contains some excellent keys. Cost: Hfl. 130 (excl. postage and handling).

The book is available from:
Centraalbureau voor Schimmelcultures
PO Box 273, 3740 AG Baarn
The Netherlands

DA Information Services
648 Whitehorse Road
Mitcham, Vic. 3132
Email: service@dadirect.com.au

SECOND BLACKLEG (LEPTOSPHAERIA MACULANS) WORKSHOP
NEW MEMBERS

Full members:
Ms Fiona Benyon, Institute of Respiratory Medicine, Sydney, NSW
Dr Louise Cole, UNSW, Sydney, NSW
Ms Wendy Hull, New England Pathology, Tamworth, NSW

CONFERENCES AND WORKSHOPS

30 September–1 October 1996
Dr T.J. Entwisle
1996 Commemorative Conference Committee
Royal Botanic Gardens
Birdwood Avenue
South Yarra, Vic. 3141 Australia

2 October 1996
(See notice below)
Melbourne, Vic. Mycology before the Floras & 1st Australasian Mycological Conference
Dr T.J. Entwisle
1996 Commemorative Conference Committee
Royal Botanic Gardens
Birdwood Avenue
South Yarra, Vic. 3141 Australia

3–5 October 1996
(session on orphan groups (fungi) is on 3 October)
Royal Botanic Gardens, Melbourne, Vic. The 1996 Commemorative Conference, Beyond the Floras
Dr T.J. Entwisle
1996 Commemorative Conference Committee
Royal Botanic Gardens
Birdwood Avenue
South Yarra, Vic. 3141 Australia

11–13 October 1996
University of Arizona, USA The Phylogeny of Life and the Accomplishments of Phylogenetic Biology
Marty Wojciechowski or Anne Gerber, Department of Ecology and Evolutionary Biology, University of Arizona, Tucson, Arizona, USA 85721
Email: <rtg@ccit.arizona.edu>
Updates posted to RTG web site:
<http://biodiv.arizona.edu/rtg.html>
<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Event Description</th>
<th>Organizer</th>
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</thead>
<tbody>
<tr>
<td>21–25 October 1996</td>
<td>IMI, Egham, UK</td>
<td>Mycotoxins—occurrence, significance and analysis</td>
<td>Stephanie Groundwater, International Mycological Institute, Bakeham Lane, Egham, Surrey, TW20 9TY, UK</td>
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<tr>
<td></td>
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<td>Ph.: 01784 470111, Fax: 01784 470909, Email: <a href="mailto:s.groundwater@cabi.org">s.groundwater@cabi.org</a></td>
</tr>
<tr>
<td>29–31 October 1996</td>
<td>Beltsville, MD, USA</td>
<td>The first International Fusarium Biocontrol Workshop</td>
<td>Robert D. Lumsden, Research Leader, Biocontrol of Plant Diseases Laboratory, Plant Sciences Institute, Bldg 011A, Room 275, BARC-West, 10300 Baltimore Avenue, Beltsville, MD 20705, USA</td>
</tr>
<tr>
<td>18–22 November 1996</td>
<td>IMI, Egham, UK</td>
<td>Isolation and Identification of Fungi from Natural Habitats</td>
<td>Stephanie Groundwater, International Mycological Institute, Bakeham Lane, Egham, Surrey, TW20 9TY, UK</td>
</tr>
<tr>
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<td>Ph.: 01784 470111, Fax: 01784 470909, Email: <a href="mailto:s.groundwater@cabi.org">s.groundwater@cabi.org</a></td>
</tr>
<tr>
<td>18–23 March 1997</td>
<td>Asilomar, CA, USA</td>
<td>The 18th Fungal Genetics Meeting</td>
<td>Dr N. Louise Glass, Biotechnology Laboratory, University of British Columbia, Vancouver, BC V6T 1W5, Canada</td>
</tr>
<tr>
<td></td>
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<td>Fax: 604 822 6097, Email: <a href="mailto:glass@unixg.ubc.ca">glass@unixg.ubc.ca</a></td>
</tr>
<tr>
<td>1998</td>
<td>IMI, Egham, UK</td>
<td>Fusarium workshop</td>
<td>Kathy Gott, Department of Crop Sciences, University of Sydney, NSW 2006 Australia</td>
</tr>
<tr>
<td>9–16 August 1998</td>
<td>Edinburgh, Scotland</td>
<td>7th International Congress of Plant Pathology</td>
<td>ICPP98 Congress Secretariat, c/o Meeting Makers 50 George Street, Glasgow G1 1QE, Scotland, UK</td>
</tr>
<tr>
<td>23–28 August 1998</td>
<td>Jerusalem, Israel</td>
<td>6th International Mycological Congress</td>
<td>Secretariat, 6th International Mycological Congress, PO Box 50006, Tel Aviv 61500, Israel</td>
</tr>
<tr>
<td>1–7 August 1999</td>
<td>St Louis, MO, USA</td>
<td>International Botanical Congress</td>
<td>Contact Don Pfister or Meredith Blackwell with any ideas of topics that will be of interest to the botanical community as a whole, as well as to mycology. Although the meeting is not until 1999, we must offer suggestions now if they are to be considered.</td>
</tr>
</tbody>
</table>

If you know of any other conferences, symposia, workshops, etc. that may be of interest to members, please send us the details so the information can be included in the next Newsletter.
MYCOSURFING ON THE WORLD WIDE WEB

The British Society for Plant Pathology has an electronic journal Molecular Plant Pathology On-Line. For additional information see <http://www.bspp.org.uk/mppol>

The first issue of the Rhizoctonia Newsletter was published in June. If you wish to receive subsequent issues of this Newsletter send your email address to: <mkulik@asrr.arsusda.gov> (Martin Kulik, editor Rhizoctonia Newsletter.)


The U.S. National Fungus Collection has completed the computerisation of its Ascomycete specimen data (154 000 specimens). In addition to this group, computerised data is available for the following groups of fungi: Uredinales (168 000), Ustilaginales (30 000), Polypores (104 000), Deuteromycetes (114 000) and the C.G. Lloyd Herbarium (54 000). This information is available at <http://nt.ars-grin.gov>

Zoosporic Fungi on Line is available at <http://zoosporic-fungi.dmc.maine.edu>

Index Nominum Genericorum is available at <http://www.nmnh.si.edu/ing/>

The Internet Guide to Myxomycetes is available at <http://www.wvonline.com/myxo>

There is a new entry in Tree of Life at <http://phylogeny.arizona.edu/tree/eukaryotes/fungi/fungi.html>

CORTBASE: A nomenclatural database of corticioid fungi. Version 1. Erast Parmasto, Institute of Zoology and Botany, 181 Riia St., EE 2400 Tartu, Estonia. Email: erast@park.tartu.ee. 4 page user guide, 3 1/2 or 5 1/4 inch HD disc, ISBN 9985-9081-0-4, freeware (exc. for postage and handling). Requirements: DOS systems, 520K RAM, 6.3 MB hard disc space. The program is easy to use. Options are: check a name; data on a species; list of all species in a genus; species accepted in a genus; quit. Output can be saved to a file for editing or printed direct. There is information for 7350 species names, including 3905 basionyms, 1740 accepted species, 1285 facultative synonyms, and 880 names of uncertain application.

CUMULATIVE INDEX FOR VOLUMES 1–14

J.A. Simpson

Between 1990 and 1995 the Australian Mycological Newsletter was edited by Ian Parbery (volume 1), John Walker (2–8) and Jack Simpson & Cheryl Grgurinovic (9–14). Volumes 1–13 were each a single issue whereas volume 14 comprised four issues. With volume 14 (3) the title of the Newsletter became the Australasian Mycological Newsletter. Technical material published in Newsletters 1–14(3) inclusive was confidential and could not be used for any purpose without the consent of the contributing author and the editor. Many issues of substance were addressed in the Newsletter and we think it is important to have an index to the articles published in the first 14 volumes.

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EXECUTIVE POSITIONS

Nominations for the following positions have been received. You will note that there is only one nomination per position and thus, according to the rules of the Society, the persons nominated are taken as being elected.

President Jack Simpson
Vice-President Cheryl Grgurinovic
Secretary Tom May
Treasurer Heino Lepp
Councillor David Ellis
Councillor Peter Buchanan

Tom May
AUSTRALASIAN MYCOLOGICAL SOCIETY INCORPORATED

Incorporated in the Australian Capital Territory

Balance sheet at 30 June 1996

MEMBERS FUNDS
Surplus for the year $2,842

REPRESENTED BY:
CURRENT ASSETS
Cash at bank $2,822
Subscription on hand $20
TOTAL ASSETS $2,842

INCOME AND EXPENDITURE ACCOUNT
for the period 4 October 1995 to 30 June 1996

INCOME
Funds from Former Society $2,065
Subscriptions $1,310
Interest Received $43
$3,418

EXPENDITURE
Stationary $103
Newsletters $437
Logo $35
Bank Fees $1
$576

SURPLUS $2,842

Notes to and forming part of the accounts for the year ended 30 June 1996.
1. Summary of Accounting Policies

The significant accounting policies which have been adopted in the preparation of the financial statements are:
a) Accrual accounting has been applied and the accounts have been prepared on the basis of historical costs and do not take into account changing money values nor, except where stated, current valuations of non-current assets.
CALL FOR CONTRIBUTIONS TO THE NEWSLETTER

The editors would like to thank all those who contributed to this issue of the Newsletter. We would greatly appreciate continued support and would particularly like to receive contributions from members who have not previously written articles for the Newsletter. We would appreciate it if authors would adhere to the Newsletter’s style, especially with regard to references where we would like the journal and book titles in full.

C. Grgurinovic & J. Simpson

DEADLINE FOR NEXT ISSUE

Articles for the next Newsletter are due by Friday 6 December 1996. If articles are more than half a page long, the editors would appreciate a copy on disc. The disc will be returned after publication of the Newsletter.
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