



AUSTRALIA'S FUNGI MAPPING SCHEME

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News from the Fungimap Coordinator

The Fungi Season is nearly here and I've been delighted at some early sightings of Fungi in the Royal Botanic Gardens after several weeks of cool weather and rain – yes it has been a charming Melbourne summer! This unusual weather has provided me with my first opportunity to foray since becoming the new Fungimap Coordinator and I hope it's just a taste of the fungi season ahead.

The last four months have been a fascinating learning curve for me and I am grateful for the support of several people who helped ease me into the job. In particular, the guidance of Tom May and the great work of Fungimap volunteers Pat Grey, Geoff Lay and Graham Patterson have made a tremendous difference. I've also enjoyed opportunities to meet many Fungimappers (often via phone or email) and look forward to getting to know many more of you.

While taking over the Coordinator's baton from Gudrun Evans I almost daily appreciate the energy and skills that Gudrun invested in Fungimap. She deserves much praise for establishing a very strong foundation from which Fungimap can grow and flourish into the future and I hope to continue and build on her good work.

Perhaps the most exciting challenge facing Fungimap over the next year will be its move towards incorporation. You can look forward to updates and opportunities for your input in coming Newsletters.

Community interest in Fungi is growing in Australia with the emergence of two new Fungi groups. Exciting news just out from WA is that funding has been confirmed for the *Perth Urban Fungi Project*. The project starts this month and looks set to dramatically enhance our knowledge of fungi in the south west of WA. The Central Coast Fungi Group also got under-way late last year and they have a number of forays planned for the coming fungi season. Congratulations to both groups! (See page 9 for further details).

The summer season has been an eventful time for Fungimap, even though the period is quiet for fungi records. Fungimap received a grant from the Australian Heritage Commission (AHC) to supply records of 200 Fungi that are not on the list of Fungimap Targets. With the help of Fungimap members, we have compiled several thousand records of these species, which the AHC will use to identify biodiversity hot-spots and to determine the status of rare-or-threatened species. This list of 200 species may also provide the basis for expanding the list of Fungimap Target species at some future date.

Production of the Fungimap book has also been keeping busy. Pat and Ed Grey together with Leon Costermans have done wonderful work compiling text, collecting and scanning photos and laying out pages, and Michael McBain has created distribution maps of all target species for publication. The book is due for publication later this year

In this issue, Tom May reactivates his Spore Print column, as a venue for interesting observations and for your questions about fungi. Separate articles on all things fungal are also very welcome for the *Fungimap Newsletter* and can be sent to the Editor.

Finally, we have a very full calendar of fungi activities this year, so check pages 10 & 11 to help plan your Fungi season.

Cassia Read
Fungimap Coordinator



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INTERESTING GROUPS

Adelaide Fungal Studies Group

Monthly meetings and forays during the fungi season.

- ◆ **Meetings:** Usually second Tuesday of the month at the Staff Room of the Plant Biodiversity Centre, off Hackney Road, 7.30pm. During the fungal season, collections made during the previous weekend's foray will be examined, described and identifications will be made.
- ◆ **Excursions:** Day excursions are normally on the Saturday before the meeting. Please bring notebook, pencil, hand lens (if possible), brush and methylated spirits to disinfect boots and car wheels.

Check with Pam before excursions, as variations will be made to take advantage of fungal fruiting times and good fungal sites (NB there are no meetings from November-February or excursions from October-March, inclusive).

Convenor: Pam Catcheside

Ph: (08) 8222 9379 (w)

E-mail: Catcheside.Pam@saugov.sa.gov.au

Sydney Fungal Studies Group

Fungi forays, talks and workshops in the Sydney area.

Secretary: Donald Gover

5 Dawes Street

Little Bay NSW 2036

Ph: (02) 9661 4898

E-mail: djgover@bigpond.com

Central Coast Fungi Group, NSW

Fungi forays in the Central Coast region of NSW.

Contact: Pam O'Sullivan Ph: (02) 4362 1543, or
Nikki Bennetts Ph: (02) 4392 1782

WA Fungal Studies Groups

The two groups in WA, in different geographical locations, organise events both separately and together.

- ◆ A group within the WA Naturalists' Club organises fungal forays, workshops, identification evenings and talks, based in Perth.
WA Naturalists' Club, PO Box 8257
Perth Business Centre WA 6849
E-mail: wanats@inet.net.au
Website: <http://www.wanats.inet.net.au/>
- ◆ The William Bay National Parks Association Fungi Studies Group is based around Denmark, WA.
Contact is Katrina Syme.
E-mail: syme@westnet.com.au

Fungi Lovers Adventure Group (FLAG), Tas

Fungi activities in northern Tasmania.

Contact: Sarah Lloyd

Ph: (03) 6396 1380

Email: sarahlloyd@iprimus.com.au

INTERESTING WEBSITES

- ◆ Friends of the Potoroo*: <http://home.vicnet.net.au/~potoroo>
- ◆ Australian National Botanic Gardens fungi web site: <http://www.anbg.gov.au/fungi/>
- ◆ FungiBank: <http://www.fungibank.csiro.au/>
- ◆ Natural Selection: <http://nature.ac.uk/>
- ◆ Royal Botanic Gardens Melbourne fungi pages: <http://www.rbm.vic.gov.au/biodiversity/fungi/>
- ◆ Taylor Lockwood: <http://www.fungiphoto.com/>
- ◆ The Hidden Forest: <http://www.hiddenforest.co.nz/>
- ◆ MykoWeb: <http://www.mykoweb.com/>
- ◆ Fungi Images on the Net: <http://www.in2.dk/fungi/>

*Potoroos eat lots of fungi

VOLUNTEER OPPORTUNITIES FOR FUNGI ENTHUSIASTS

Fungi survey on Tetepare Island

Tetepare Island is one of the Solomon Islands and is the largest uninhabited island in the south pacific. It is 130 km² and 95% of the island is pristine lowland rainforest. The island is unique in that it is the only large island in the Western Province of the Solomon Islands which has not been cleared by Asian logging companies for rainforest timber. It supports many rare and endangered species such as leatherback turtles, dugong etc.

The indigenous owners of the island have expressed interest in conservation. The island's original inhabitants were head hunters who fled the island over 150 years ago during a "big sickness". Their descendants now live on surrounding islands and have formed the Tetepare Descendants Association (TDA). TDA has built a research station on the island with the view to hosting ecotourists and researchers who can come and study and enjoy the pristine rainforest and reefs of Tetepare. TDA is trying to survey the resources of the island in order to formulate a conservation management plan. We are interested in hearing from anyone who would be willing to visit the island and conduct a survey of the fungi (or other taxa) and also try and determine the impact of the feral pigs that live on the island. Unfortunately, funding is limited and visitors need to be self-funded.

Anyone interested in visiting or assisting with a survey can contact Katherine Moseby on (08) 8671 1250 or katherine.moseby@wmc.com

Queensland Museum

A volunteer is required to assist with collecting and identifying fungus species at the Queensland Museum Loans section.

If you are interested, please contact the Manager, Queensland Museum Loans Section. Ph: (07) 3406 8344.

Royal Botanic Gardens, Melbourne

Children's Garden Volunteers

Volunteers will be required to help out in The Ian Potter Foundation Children's Garden (opening October 2004), as well as new volunteers to take the popular regular guided walks of the Royal Botanic Gardens.

The Gardens is looking for people of all ages who have an interest in gardening, who are open to learning and like meeting people. In The Ian Potter Foundation Children's Garden we are particularly interested in people who have experience working with children to play a major role in facilitating child centred discovery learning in the garden. Fungi will be included in the programs offered, so we hope to find interested volunteers to assist with this.

All new volunteers will have to attend training sessions between May and September, where they will learn from Royal Botanic Gardens Melbourne horticulturists, experienced guides and other staff. Those working with children will also be required to agree to a criminal record check. Volunteers have to be available for one shift, about four hours, on a weekly or fortnightly basis.

Information sessions will take place on: Wednesday 31st March at 5.30pm, Thursday 1st April at 11am and Friday 2nd April at 2pm. **Public inquiries only:** To book a place on one of the Information Sessions call the Royal Botanic Gardens on 9252 2429.

Fungimap Volunteer

There is an exciting opportunity for a Volunteer to develop the purchase and sale of fungi-related books on behalf of Fungimap. Tasks would involve sourcing interesting books and recent publications, collating and perhaps writing reviews for publication in the Fungimap Newsletter, and assisting with sales. Job sharing of this position is an option. The sale and distribution of books on fungi is an important component of Fungimap activities as many fungi books are difficult to find in Australia. Volunteer support with this would make a valuable contribution to the Fungimap project.

For more information, please contact Cassia Read.
Ph: (03) 9252 2374. Email: cassia.read@rbg.vic.gov.au

SURVEYS FOR MACROFUNGI: PLOTS AND TRANSECTS

Richard Robinson (Department of Conservation and Land Management, WA)

INTRODUCTION

For most of us, counting and identifying fruit bodies (mushrooms, corals, brackets, puffballs etc) is the only practical method of recording fungal species. But because of the periodic and unreliable fruiting behaviour of most macrofungi and the ephemeral nature of many fruit bodies, it is almost impossible to count all the species of fungi in a particular habitat. But with appropriate survey methods employing regular monitoring periods and uniform techniques it is possible to build up a comprehensive fungal diary of an area. If surveys are undertaken correctly and carefully, data collected by interested nature groups (including Fungimappers) can yield useful information on the diversity, richness and abundance of fungi that can be used to help make decisions concerning conservation and management of our native fungi.

There are a number of traditional methods used for surveys. The sampling unit may be composed of plots, transects, plots along stratified transects, searching for a pre-determined time within (large) plots, walking bush tracks and paths, systematic wandering or combinations of several of these methods. Ideally the sampling unit chosen should be stable, or if not the changes should be easily and continuously measured. In order to make valid comparisons, the sampling unit must lend itself to conversion into units and should be of such a size that it provides a reasonable balance between resources (time, personnel and costs) and variation. It should be easily delineated in the field and must be large enough or placed at an appropriate point to decrease edge effects.

Plots and transects are the most convenient methods for fungi surveys. Transects are in effect linear plots, but they have the advantage of giving a continuous coverage across an area. Plots give a fragmented coverage but can be distributed over a wide area to compensate for this. Both will yield reliable data from your survey. The area that your transects or plots cover will depend on the time and resources available and the size of the area you wish to survey. At a single site, aim for the area covered by your plots or transects to cover at least 100 m². This can be done with a single transect 100 m long and 1 m wide or a single large plot. However, it is difficult to monitor large plots efficiently and they may be affected by trampling. It may be better to install a number of smaller sub-plots (say 5 plots each 10 x 2 m) distributed evenly within your monitoring site. Note that several transects or plots at one site do not replicate your survey, they are considered to be sub-plots. To replicate your survey, the plot or transect set-up will need to be duplicated at another location with identical site characteristics and history.

GETTING STARTED

First, decide on the **OBJECTIVE** of your survey. Common objectives are to:

- compile species lists
- determine distributions for 'target' or selected species of fungi (eg. Fungimap)
- compare different habitats
- compare treatments within a single habitat (eg. fire, logging, cattle grazing etc. – NB you will need a control or reference site for comparison).

Next, decide on the **LEVEL** at which you want to survey. It may be at:

- a single habitat or location
- a variety of habitats over a wide area, and it may include:
 - all species on the site(s)
 - a selection of 'target' fungi
 - a group or guild of fungi (eg. a taxonomic group such as boletes, or an ecological guild such as wood inhabiting fungi).

Once the object of the survey is decided, the method of recording each species and how often you intend to monitor your plots or transects needs to be decided. The most common and convenient methods of recording species are:

- presence or absence
- counts of fruit bodies produced by each species
- recording the frequency of occurrence of each species

The greater the monitoring frequency the more accurate the data you collect will be. You need to weigh time and resources to decide on the frequency. Low monitoring frequency can be alleviated, to some extent, by monitoring for a number of years on several dates at various times in the fruiting season. Monitoring can also be maximised by following the local weather pattern and using it to your advantage. The vast majority of fungi fruit in the wetter late autumn-early winter period.

INSTALLING YOUR PLOTS OR TRANSECTS

When your location is selected, it is time to install your plots or transects. The equipment needed includes a compass, a measuring tape (100 m), a GPS (optional) or a map of your location (to obtain grid references), and a post to mark each plot or transect. Select the starting point of your transect or the centre point of your plot. Remember to be far enough away from roads or 'unnatural' clearings to avoid edge effects. A general rule of thumb is to allow a distance of at least one tree height, or 20 m – whichever is greatest. Permanently mark your transect origin or one corner of your plot with a durable wooden or metal post and label it with an inscribed metal tag (plastic cattle tags written on with the correct marking pen are also acceptable). Record all site and transect or plot information listed on the attached Site Description Form. For your transect, decide on a compass bearing and head off from the origin for your desired distance. For plots, decide on the plot orientation and permanently mark a

nominated corner (say the SW corner for a N-S orientated plot) and survey the four boundaries of the plot from this post. When installing several plots on a single site, keep the plot orientation and plot dimensions the same. When monitoring, try to avoid walking directly on your transect line or in your plot. Always survey your transect from the same side of the line, and keep the survey width at 1 m.

PROTOCOLS INVOLVED WHEN ENTERING AND CONDUCTING SURVEYS IN STATE FORESTS AND LANDS

In all States and Territories in Australia, native fungi are protected under the same laws that protect native flora and fauna. Always apply for a PERMIT TO COLLECT if you intend to collect fungi for vouchers or for identification purposes. Always lodge voucher collections at the relevant State Herbarium, accompanied with adequate collection details (which includes as a minimum: the date, the location, a vegetation description and the name of the

collector). Also try to include a basic description including size, colour, shape and any distinct odour.

When entering State Forest for survey purposes it is always courteous to notify the relevant Conservation or Forestry Office of your activities. For safety reasons, this is especially important if there are logging or other management activities in the area. Always check the disease status of the location at which you wish to survey. A location with *Phytophthora* infestation may require an entry permit and entry may be restricted at certain times (usually following rain events). Check with your local Department of Conservation or Forestry Office for details of disease regulations.

A fungi survey "Site description form" and a "Transect data form" have been included in this issue of Fungimap.

Good luck. If you have any questions relating to setting up your survey, Richard can be contacted on (08) 9771 7997 or by email: richardr@calm.wa.gov.au

Hooray!

The Cryptogamic Extravaganza II

will be held from May 28th to 31st, 2004
in the spectacular Grampians, Victoria.

So if you love the idea of spending a weekend away with like-minded naturalists and experts in the fields of macrofungi, microfungi, mosses, liverworts, lichens and freshwater algae; with activities such as bushwalking, peering down microscopes, browsing natural history books, listening to talks, and chatting and exchanging knowledge – all concerning the fascinating and tiny world of cryptogams – then THIS is the trip for you!

We will be staying at Norval Lodge in Halls Gap, which has bunk style accommodation with en-suites to each room of 6 people, a large dining room, with meals provided, and an activities room. We will have guided walks and afternoon activities led by one or two of the following experts who are supporting this trip: Tom May, Teresa Lebel, Ian Pascoe, Pina Milne, David Meagher, Bruce Fuhrer, Sharon Morley and others.

So if you'd like to be a part of the *Cryptogamic Extravaganza II*, simply fill in the registration form in this issue of the Fungimap Newsletter and send it with your deposit, to:

Cryptogamic Extravaganza
c/o The Field Naturalists Club of Victoria
Locked Bag 3 PO
Blackburn, 3130

FUNGI OF THE SOUTH COAST REGION, WESTERN AUSTRALIA

Katrina Syme

Towards the end of last year I began compiling data from various sources for a report on fungi of the South Coast Region. Information on the region's biodiversity is being sought by the South Coast Region Initiative Planning Team (SCRIPT) for a Natural Resources Management Strategy, and as far as I know this is the only region in Western Australia for which a report on fungi has been commissioned.

The South Coast region is divided into six catchment based sub-regions. Two of these – Albany Hinterland and Kent Frankland - include the wet sclerophyll Karri and Tingle forests which have been the main target of mycological interest from as early as 1881 by Thomas Muir and 1867 by Ferdinand von Mueller, during his visit to Albany and the Stirling Range. Despite this, only 373 named species have been recorded from the Albany district (which includes the Denmark Shire, where I live). Lists provided by the Western Australian Herbarium included myxomycetes and microfungi – the latter mainly pathogens of agricultural crops, and I was asked to include these records, although the focus of the report is the macrofungi. The third largest number of fungi, recorded in the Esperance Sandplain subregion reflects the interest in fungi of long-term resident Thelma Daniell, who lodged specimens at the Botany Department, UWA, during Roger Hilton's tenure as Senior Lecturer in Mycology. Botanist James Willis also collected fungi in the islands of the Recherche Archipelago whilst on an Australian Geographical Society expedition in November 1950, many of which were the first records for the state.

The three remaining sub-regions had few fungi listed – the Fitzgerald Biosphere Reserve (encompassing the famously biodiverse Fitzgerald River National Park, with around 1,900 known plant species) has only 31 named species of fungi recorded (primarily from lists made during a Fungimap weekend workshop I held in 2000); the subregion adjoining it to the north had 14 named fungi and the Esperance mallee subregion only 13.

The original lists from which these figures were extracted were from 4.5 to 10 times greater, in the subregions that attracted the most mycological interest. For example, in the Albany Hinterland subregion, 147 genera and 2,091 species were listed as unknown.

All of these figures demonstrate (as Tom May once told me) that whatever we do in our enthusiasm for fungi will make a difference to general understanding of these fascinating organisms. There is still so much more work to be done!

NEW & INTERESTING PUBLICATIONS ON AUSTRALASIAN FUNGI

New Zealand Journal of Botany Volume 41 (part 3), September 2003

This is a special issue which includes five papers presented in a symposium on Southern Hemisphere fungi at the International Mycological Congress held in Oslo (August 2002), with a preface by Peter Buchanan, who organised the symposium. Papers include a review of the conservation of New Zealand and Australian Fungi (Peter Buchanan & Tom May) [includes colour illustrations of rare Fungimap target species *Claustula fischeri*, *Hypocreopsis* sp. 'Nyora', *Morchella esculenta* and *Nyctalis mirabilis*], and other papers on names of macrofungi (Tom May), ammonia fungi from the Southern Hemisphere (Akira Suzuki and co-authors) [such as Fungimap target *Hebeloma aminophilum*, the Ghoul Fungus], cocoa pathogens (Gareth Griffiths and co-authors), and Diversity of Patagonian Corticiaceae (Alina Greslebin & Mario Rajchenberg).

Copies available for NZ/US\$50 from sales@rsnz.org. Individual papers can be viewed for NZ/US\$20 each online through the journal's webpage <http://www.rsnz.org/publish/nzjb/>. Or contact RSNZ Publishing, PO Box 598, Wellington, New Zealand.

Ecos April-June 2000: 18-21. (2000). Fungal awakenings, by Wendy Pyper. This article describes research by CSIRO scientists Victoria Gordon and Paul Reddell on spore dormancy in some mycorrhizal truffles, which was broken by removing surface ornamentation with an enzyme. This finding has implications for rehabilitation, where use of spores as inoculation for mycorrhizal plants on a large scale had previously been unsuccessful. 'Darwin' the truffle-hound is also featured.

Treasures from the Kingdom of Fungi by Taylor Lockwood



"An absolutely sumptuous book of stunning fungal photographs, the culmination of fifteen years travel by the author. 274 incredible images of all types of fungi are presented, some of which are absolutely breathtaking, the rest simply superb."

(Jonathan Rivet, Field Mycology).

This book is available through Fungimap at the **Sale Price** of \$49.95 (GST inclusive) plus \$10.00 postage.

SPORE PRINT

Spore Print is a column for your interesting snippets of information about fungi, especially if you would like some feedback on your observations or have specific questions. Please contact me at the address below and I will endeavour to answer your queries and provide some context for your observations.

Native Bread up a tree?

From East Gippsland in Victoria **Kevin Thiele** reports on a very unusual occurrence of the Native Bread, *Polyporus mylittae* (now included in the genus *Laccocephalum*). This fungus produces an underground storage organ - the sclerotium, ranging from cricket- to soccer-ball size. Sclerotia often occur well buried below the soil surface, and can be found when formerly treed land is ploughed. Sclerotia appear to be long-lived, and are stimulated to produce a fruit body after fire.

The sclerotium has a characteristic marbled appearance in cross section. This pattern is also present in some truffles, but these produce spores, whereas the sclerotium is a mass of very densely packed hyphae (fungal threads). Other species of *Laccocephalum* either produce small sclerotia (as in the Marble Maker *L. sclerotinum*) or false sclerotia, which are masses of fungal hyphae binding soil particles (as in the Stonemaker *L. basilapiloides* and *L. tumulosum*).

Kevin observed a fresh Native Bread sclerotium lying on the ground in a forest gully, with no obvious signs of soil disturbance nearby. The outer surface of the sclerotium was quite clean, with a small patch of leafy liverwort growing on one side. Not far away, overhead, a branch had broken off from a large living *Eucalyptus*. Where the branch had broken away from the trunk, it was obvious that the heart wood of the tree was rotten. *Polyporus mylittae* is known to produce a brown rot (one reason why the species has been transferred to the genus *Laccocephalum*, in contrast to the white rot of *Polyporus*). Perhaps the sclerotium had formed in the rotten wood (partially exposed, hence the liverwort), and been dislodged when the branch fell.

Kevin enquired around, and one of his neighbours reported felling a tree (rotten inside) that smashed as it fell. Among the debris was a Native Bread sclerotium (it was not clear how high the sclerotium had been in the trunk).

Sclerotia of Native Bread have not previously been reported from within standing trees. In a very interesting (and well illustrated) study of post-fire fungi, Richard Robinson (*Landscape* 16: 48-53, 2001) has observed that Stonemaker initially grows as mycelium (the vegetative phase of the fungus), causing rot in large fallen jarrah logs. The mycelium then grows into the underlying soil, where the large pseudosclerotia are formed. After fire, fruit bodies appear above ground from pseudosclerotia, where the log has burned away. E.J.H. Corner (*Beih. Nova Hedwigia* 69) describes sclerotia of *Pleurotus tuber-*

regium forming in fallen trunks, and dropping to the ground when the wood had rotted away.

More observations are needed on the life cycle of Native Bread. In making these, it will be worth looking up as well as down.

Death Caps come early this Autumn

The highly toxic Death Cap (*Amanita phalloides*) is an unwelcome sight in Royal Botanic Gardens Melbourne in early autumn, usually appearing in March or April, with sightings as late as July.

Teresa Lebel from RBG Melbourne has observed a very early occurrence of Death Cap. Large crops appeared in the first week of February 2004. Summer 2003/4 in Victoria has had the usual mixed weather that is so characteristic of the Australian climate, with a hotter than usual December, followed by a cool January, with many mild days. Rain has been fairly average, but there was a very heavy downpour on 30 January (with more than 50 mm falling at the Botanic Gardens in 24 hours). There were some very hot days (around 40°C) in the second week of February, although contrary to most summers, these hot days came one at a time, and more than one very hot day in a row has been a rarity this summer. The Death Caps continued to produce fruit bodies after the first very hot day, but were looking a little the worse for wear after the second.

Along with the Death Cap, I have seen a number of other exotic mycorrhizal fungi fruiting unusually early in February of this year, such as *Laccaria laccata* (the real thing, under Oak), *Russula sororia* (also under Oak), and under Pine *R. integra* and *Suillus granulatus*. At the end of the season, mycorrhizal fungi which form partnerships with deciduous trees seem to cease fruiting once the leaves fall (see Last *et al.*, 1979, *Nature* 280: 168-169). At the start of the season, this year has shown that with sufficient rain, and some cool spells (which may be important in keeping the ground from drying out) fungi can fruit much earlier than normal.

The interplay of temperature and rainfall in determining the appearance of fleshy fungi can only be understood by making regular observations of the presence of fruit bodies (even of one or two species) in the same location from one week to the next over many years. Perhaps you could consider incorporating such a study into any regular walk through bushland or parkland, such as with the dog, or for the paper.

Tom May

Royal Botanic Gardens Melbourne, Private Bag 2000
South Yarra, Victoria 3141
Email: tom.may@rbg.vic.gov.au

FUNGIMAP SPECIES IN FLINDERS CHASE NATIONAL PARK

Pam Catcheside (State Herbarium of South Australia)

Flinders Chase National Park is a wonderful place for fungi and, after only two surveys, in August 2002 and June 2003, David and I have recorded over 170 species, a large number for arid South Australia and a number surpassed only by one site. (This site is a small patch of remnant *Eucalyptus obliqua* woodland in Deep Creek Conservation Park which we have been surveying since 1997 [approximately 200 fungal species found in Deep Creek CP, 172 in FCNP].)

Last year I was accompanied on surveys by staff at Flinders Chase NP, notably Ranger Dale Smithyman and Information Officers Rosie Collins and Ann Warner. They were a great help as they knew the wetter spots and differing habitats where we were likely to find more and diverse fungi. Having more collectors is always a boon – the more eyes, the more fungi – and they were great company. They took me to a site a couple of kilometres from the Visitor Centre near Rocky River. We were not long out of the cars when Dale returned bearing a twig of *Melaleuca gibbosa* with small hooded orange-grey caps along its length: *Anthracoxyllum archeri*, Orange Fan Caps. It is almost certainly the first record for South Australia – there are no collections of it in the State Herbarium of S.A. Needless to say, we were all thrilled and Dale was triumphant. Rosie found the next Fungimap species: Purple Turnover, *Leucopaxillus lilacinus*, fruiting abundantly in rich soil in eucalypt woodland. This was another exciting find: it had been discovered at Kuitpo Forest on the joint foray of the Fungimap Coordinators and Adelaide Fungal Studies Group in June 2002. Previously, it had only been collected at Denmark W.A. and Kermadec, Tasmania.



Hebeloma aminophilum. Photo: David Catcheside

In the same area but on another occasion, Ann pointed out a steely dark blue capped mushroom with a long slender stipe – a blue *Oudemansiella (Xerula) radicata*, Rooting Shank. This does have a variable cap colour ranging from cream to olive brown through to grey-black – but blue! And at another site near the entrance to Flinders Chase Visitor Centre bones of a kangaroo were intermingled with

fruit bodies of the fawn-brown, sticky-capped Ghoul Fungus, *Hebeloma aminophilum*.

Rosemary took me to Gosselands, another part of the Park, which had been swept by a very hot fire in November 2002. An interesting suite of fungi was fruiting in June 2003, including magnificent glutinous red-brown brackets of *Fistulina hepatica*, Beefsteak Fungus, projecting from the blackened trunk of a mallee eucalypt. We also found little Dung Buttons, *Poronia erici*, on kangaroo dung.



Macrotyphula juncea. Photo: David Catcheside

The Ravine de Casoars, so named because Baudin misidentified the now extinct dwarf emus as cassowaries, has a very rich fungal flora. I hadn't expected to find Fairy Hair, *Macrotyphula juncea*, but its cream, slender, upright clubs gleamed from a hollowed bank, shaded by a fallen eucalypt. Blue Pixies' Parasols, *Mycena interrupta*, trooped along moist logs, large semicircular, whitish brackets of *Piptoporus australiensis*, Curry Punk, jutted from fallen trunks and were easily identified by their smell and their orange pores, tubes and corky interior. Other wood inhabitants were more Orange Fan Caps, *Anthracoxyllum archeri*, grey-pink frilled caps of Split Gill, *Schizophyllum commune*, orange patches of the toothed Golden Spine Splash, *Mycoacia subceracea*, overlapping tiers of the leathery Hairy Parchment, *Stereum hirsutum* and the Jellies, *Tremella mesenterica/aurantia* (Golden Jelly) and *T. fuciformis* (White Jelly).

Scattered throughout the park we found patches of tiny funnels of Yellow Belly Buttons, *Omphalina chromacea*, on bare ground, also the pretty Vermilion Amanita, *Amanita xanthocephala*, with its orange-fringed basal sac and ringless white to pale yellow stipe. There were huge thick fans of white Ghost Fungus, *Omphalotus nidiformis*, which glowed eerily from the bases of eucalypts as I drove 'home' at the end of a day's collecting.

Our week in Flinders Chase National Park was a wonderful experience – one which I thoroughly recommend to all Fungimappers – especially in the fungal season.

I am very grateful for the assistance and hospitality that I had from all the staff at FCNP and to the Wildlife

NEWS FROM NSW

Bettye Rees, NSW Regional Coordinator

Despite high heat and humidity for several weeks, Sydney Fungiphiles were beginning to wonder if they were in for another dry year! Several small fruitings have appeared in response to light rain, but with solid rain falling here tonight (Feb 24th), hopes are raised for the start of a good season ahead. The Sydney Fungal Studies Group Inc. who report all target species to Fungimap (thanks to the good work of Frank Taeker and Joan and Roy Freere), have settled on dates for forays in the forthcoming season (see pages 10-11 for details). All forays this year will be held on Saturdays and new participants will be most welcome.

A new recorder from New South Wales, Kirsti Musicka from Balickera north of Newcastle, has organised a successful fungal photographic display which has now moved to a new location at Shortland Wetland Centre.

In addition, a new fungal group has formed at Ourimbah under the auspices of the Central Coast Community Network (CCCN). This group is lucky enough to be instructed by Pam O'Sullivan who has been a member of the SFSG Inc for many years and whose enthusiasm for fungi is contagious.

Pam O'Sullivan, Central Coast Fungi Group

The Central Coast Fungi Group had its first small outing on the 1st of November last year to Katandra Reserve in Gosford Local Government area. The initial concept was to introduce people to the sorts of areas fungi might be found when the season commenced and, if we were lucky, find a couple we could look at and talk about.

Amazingly, for the time of the year and the prevailing weather conditions we found quite an array of different types of fungi. These included species such as *Dictyopanus pusillus*, *Polyporus arcularius*, *Pycnoporus coccineus*, *Schizophyllum commune*, *Trametes versicolor*, *Calocera* sp. which was rehydrated in situ with some water, (an interesting exercise for many of the newcomers). We also saw *Ganoderma applanatum*, a *Phellinus* sp. growing on a very large Turpentine tree (*Syncarpia glomulifera*) some slime moulds, numerous other brackets and paint fungi as expected, and a range of small fungi. For an orientation type day it was an exciting and interesting outing.

We have had a very dry start to the year up here, so will start by becoming familiar with just a small number of different fungi. Our first foray of the year will be on the coast in Wyrabalong National Park. The plant communities here have evolved on old sand dunes, so it will be interesting to see what types of fungi we can find.

Conservation Fund (Department for Environment and Heritage) for a travel grant to conduct the survey.

We welcome anyone who can reach us, north, south or west and will be interested to hear about their areas and maybe go and visit them.

NEWS FROM TASMANIA

Sapphire McMullan-Fisher, TAS Regional Coordinator

Summer has been a strange one down here in the south; no rain in November, December was the usual mixed bag; downpours and floods for February, followed by cool but windy days and who know what March may bring? With weather like that the fungi don't seem to know what to make of it either. I've found very few fungi during my summer walks, although I did see puffballs the week after the floods on the East coast. Plus my neighbours, in the Margate hills had massive *Gymnopilus pampeanus* in their garden. The caps were up to 1 metre in diameter, which is the biggest I've seen to date! I hope everyone has a fantastic fungi autumn, perhaps I'll see you out there.

Sarah Lloyd, Fungi Lovers Adventure Group, FLAG

FLAG has a few fungi events organised for northern Tasmania this season, including a weekend of fungi related activities at Skemps Field Study Centre (see pages 10-11 for details). The centre is surrounded by some great fungi habitats within easy walking distance and is also within driving range of Mt Arthur and Mt Barrow, if we need to go further afield for specimens. Sapphire McMullan-Fisher, Genevieve Gates and David Ratkowsky will be sharing their knowledge and expertise so it should be a fascinating weekend for fungi lovers.

NEWS FROM WA

There has been some very exciting news from WA recently, with funding made available for a project on *Perth Urban Bushland Fungi* (PUBF). The primary aims of the project are to: work with interested community groups to collect data on fungi, coordinate the collection and identification of fungi in urban bushland, teach community group members to identify fungi and conduct fungi surveys and to develop a fungi website. The project is set to start in early March with the employment of a Mycologist, a Community Education Officer and a Project Coordinator. You can learn about fungi of Perth's urban bushlands and how you can become involved in the *Perth Urban Bushland Fungi Project* with Neale Bougher, Friday 7th May (see pages 10-11 for details).

FORTHCOMING EVENTS

Please note that these activities are not organised by Fungimap

Event	Date	Place	State	Contact
Weekly Forays at the Royal Botanic Gardens, Melbourne. Leader: Teresa Lebel Call to confirm foray times & location as there may be some changes.	Every Thursday during Fungi season, starting March 25th 2004, 1-3pm	RBG Melbourne. Meet at the East door of the National Herbarium	VIC	Cassia Read Ph: (03) 9252 2374
Planning meeting for Fungi survey of the William Bay National Park.	March 2004- date to be finalised	William Bay National Park, Denmark	WA	Katrina Syme Email: syme@westnet.com.au
Sydney Fungal Studies Group Inc. Foray	Saturday 20 th March 2004	Boronia Park	NSW	Elma & Ray Kearney Ph: (02) 9428 5336
Central Coast Fungi Group Foray	Saturday 27 th March 2004, 10am-3pm	Girrakool, Brisbane Water National Park	NSW	Pam O'Sullivan Ph: (02) 4362 1543
Sydney Fungal Studies Group Inc. Foray	Saturday 3 rd April 2004	Mt Wilson	NSW	Alec Wood Ph: (02) 9570 1133
Fungi Frolic - Discover fascinating fungi on the slopes of Mt Wellington, with fungi experts from the University of Tasmania. Grade: Easy. Bring: Very warm clothes. Cost: Free but bookings required.	Sunday 4 th April 2004, 10am-12 noon	Fern Glade Track, Mt Wellington	Tas	HCC, Bushland Reserves Unit Ph: (02) 6238 2886
Adelaide Fungal Studies Group meeting. Finalisation of program & Ascomycete workshop. Leader: Pam Catcheside	13 th APRIL 2004, 7:30pm	Plant Biodiversity Centre, Adelaide	SA	Pam Catcheside Ph: (08) 8222 9379
Sydney Fungal Studies Group Inc. Foray	Saturday 17 th April 2004	Coachwood Glen	NSW	Bettye Rees Ph: (02) 9817 5978
Adelaide Fungal Studies Group Excursion. Leader: Pam Catcheside	Saturday 24 ^h APRIL 2004, 10am-	Mount Lofty Botanic Garden. Meet MLBG, upper car park	SA	Pam Catcheside Ph: (08) 8222 9379
Central Coast Fungi Group Foray	Saturday 24 th April 2004, 10am-3pm	near Lake Macquarie (exact location to be confirmed)	NSW	Pam O'Sullivan Ph: (02) 4362 1543
Adelaide Fungal Studies Group meeting. Specimens: identification/discussion	Tuesday 27 th APRIL 2004, 7:30pm	Plant Biodiversity Centre, Adelaide	SA	Pam Catcheside Ph: (08) 8222 9379
Sydney Fungal Studies Group Inc. Foray	Saturday 1 st May 2004	Robertson	NSW	Joan & Roy Freere Ph: (02) 4885 1766
NE Field Naturalists & Central North Field Naturalist Excursion	Saturday 1 st May 2004, 10am	East Coast. Meet Pancake Parlour, Elephants Pass.	TAS	Sarah Lloyd Ph: (03) 6396 1380
Adult Education: Environmental Studies - Fungal Walk & identification workshop. Cost: \$93 Tutor: Sapphire McMullan-Fisher.	Sunday, 2 nd May 2004, 10am - 4pm	Mt Wellington & the University of Tasmania	TAS	Adult Education. Customer Service Centre Ph: 6233 7237 Fax 6234 8196
WA Naturalists' Club Meeting. "Fungi in Perth's Urban Bushlands." Speaker: Dr Neale Bougher. Come and learn about fungi in our bushland and how you can become involved in the Perth Urban Bushland Fungi Project. Visitors welcome	Friday 7 th May 2004, 7:30-10pm.	University of WA - Ross lecture theatre, Physics building at the Nedlands campus	WA	For more information call the WA Naturalists' Club Office Ph: (03) 9228 2495 or go to www.wanats.iinet.net.au
Fungi Lovers Adventure Group Foray	Thursday 13 th May 2004, 9am	Narawntapu NP	TAS	Sarah Lloyd Ph: (03) 6396 1380
Fungi Lovers Adventure Group - A weekend of fungi related activities. Cost: to be finalised (should be <\$100 weekend & approx. \$20 for 1 day)	14 th - 16 th May 2004	Skemps Field Study Centre, Nunamara	TAS	Sarah Lloyd Ph: (03) 6396 1380
Sydney Fungal Studies Group Inc. Foray	Saturday 15 th May 2004	Palm Grove	NSW	Elma & Ray Kearney Ph: (02) 9428 5336

Event	Date	Place	State	Contact
Adelaide Fungal Studies Group Excursion. Leader: Pam Catcheside	Saturday 22 nd MAY 2004, 10:30am-	Stringybark Walking Trail, Deep Creek CP. Meet Delamere store.	SA	Pam Catcheside Ph: (08) 8222 9379
Central Coast Fungi Group Foray	Sunday 23 rd MAY 2004, 10am-3pm	Ourimbah Campus of Newcastle University, Ourimbah	NSW	Pam O'Sullivan Ph: (02) 4362 1543
Cryptogamic Extravaganza II	28 th -31 st MAY 2004	Grampians	VIC	Sharon Morley Ph: (03) 9210 9211 (bh)
Adelaide Fungal Studies Group meeting. Specimens: identification/discussion	Tuesday 25 th MAY 2004, 7:30pm	Plant Biodiversity Centre, Adelaide	SA	Pam Catcheside Ph: (08) 8222 9379
Sydney Fungal Studies Group Inc. Foray	Saturday 29 th May	Bola Creek	NSW	Judith & Don Gover Ph: (02) 9661 4898
Fungi Study Group (WA Naturalists Club) Foray	Long weekend, 5 th - 7 th June 2004.	Location to be advised	WA	WA Naturalists' Club Email: wanats@iinet.net.au
Fungi Lovers Adventure Group - bird walk and fungi foray.	Thursday 10 th JUNE 2004, 10am	Holwell Gorge. Meet at Nth carpark (Beaconsfield end)	TAS	Sarah Lloyd Ph: (03) 6396 1380
Adelaide Fungal Studies Group Excursion. Leader: Pam Catcheside	Saturday 12 ^h JUNE 2004,	Location to be decided	SA	Pam Catcheside Ph: (08) 8222 9379
Adelaide Fungal Studies Group meeting. Specimens: identification/discussion	Tuesday 15 th JUNE 2004, 7:30pm	Plant Biodiversity Centre, Adelaide	SA	Pam Catcheside Ph: (08) 8222 9379
Sydney Fungal Studies Group Inc. Foray	Saturday 19 th JUNE, 2004	Mill Creek	NSW	Elma & Ray Kearney Ph: (02) 9428 5336
Adelaide Fungal Studies Group Excursion with FNSSA. Leader: Pam Catcheside	Saturday 3 rd JULY 2004, 10am-	Kuito upper car park. Meet Rangers HQ, corner of Brookman & Harvey Roads	SA	Pam Catcheside Ph: (08) 8222 9379
Hamilton FNC meeting Speaker: Teresa Lebel on Truffles	Friday 18 th JUNE 2004, 8pm	Hamilton Institute of Rural Learning, Hamilton	VIC	Dave Munro Ph: (03) 5577 2268
Hamilton FNC Truffling Foray Leader: Teresa Lebel	Saturday 19 th JUNE 2004, 8pm	Location to be decided	VIC	Dave Munro Ph: (03) 5577 2268
Adelaide Fungal Studies Group meeting. Specimens: identification/discussion	6 th JULY 2004, 7:30pm	Plant Biodiversity Centre, Adelaide	SA	Pam Catcheside Ph: (08) 8222 9379
Friends of the Grampians/Gariwerd Annual Fungi Foray Leader: Dave Munro	Saturday 10 th July 2004, 10am	Jimmy's Creek Camp Ground	VIC	Dave Munro Ph: (03) 5577 2268
Fungi Lovers Adventure Group bird walk and fungi foray	Thursday 15 th JULY 2004, 10am	Notley Fern Gorge. Meet at the carpark	TAS	Sarah Lloyd Ph: (03) 6396 1380
Fungi Lovers Adventure Group bird walk and fungi foray	Thursday 12 th AUGUST 2004, 10am	Liffey Falls. Meet at the upper carpark	TAS	Sarah Lloyd Ph: (03) 6396 1380
Adelaide Fungal Studies Group Excursion. Leader: Pam Catcheside	Saturday 14 th AUGUST 2004	Venue to be decided	SA	Pam Catcheside Ph: (08) 8 222 9379
Adelaide Fungal Studies Group meeting. Specimens: identification/discussion	17 th AUGUST 2004, 7:30pm	Plant Biodiversity Centre, Adelaide	SA	Pam Catcheside Ph: (08) 8222 9379
Adelaide Fungal Studies Group Excursion. Leader: Pam Catcheside	Saturday 11 th SEPTEMBER 2004,	Venue to be decided	SA	Pam Catcheside Ph: (08) 8222 9379
Adelaide Fungal Studies Group meeting. Specimens: identification/discussion	14 th SEPTEMBER 2004, 7:30pm	Plant Biodiversity Centre, Adelaide	SA	Pam Catcheside Ph: (08) 8222 9379
Adelaide Fungal Studies Group meeting. Speaker: to be announced	12 th OCTOBER 2004, 7:30pm	Plant Biodiversity Centre, Adelaide	SA	Pam Catcheside Ph: (08) 8222 9379

ACKNOWLEDGMENTS: FUNGIMAP RECORDERS

Ian Bride	1	WA	Geoff Lay	79*
TAS		Roz Hart	Mandy Lay	1
Genevieve Gates & David Ratkowsky	2504*	Katrina Syme	Simon & Emma Lewis	23
Sarah Lloyd	149*	SA	David Lockwood	2
Bill Taylor	1	Pam & David Catcheside	Ivan Margitta	18
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Jel & Ted Brown	5	Paul George	Lois Pricor	1
Russell Elliott	1	Pat & Ed Grey	FNCV	1
Paul Jones	5	Les Hanrahan	Nigel Sinnott	25
Patricia Jordan	103	Anne & Phil Hargreaves	Glen Thomas	1
Barry Kemp	7	Sheila Houghton	Neville Walsh	2
Rowan Peck	1	Virgil Hubregtse	Elaine & Peter Davison	130
Margery Smith	8	Dave King	Daphne Edinger	7
		Valerie LaMay		1

DONATIONS

Fungimap does not have any source of on-going funding, and relies entirely on grants and donations, so we are very grateful for contributions in the last 6 months of 2003 from the following individuals and organisations:

- ◆ Royal Botanic Gardens, Melbourne
- ◆ Friends of the Royal Botanic Gardens, Melbourne Inc.
- ◆ Plant Craft Cottage Group Inc.
- ◆ Sheila Houghton
- ◆ Eileen Collins
- ◆ Friends of the Grange
- ◆ Dorothy Perret

We were also very fortunate to receive a donation of \$500 from The Royal Society of Victoria towards publication of the Fungimap book and an indication of financial support for the Book has also come from the Royal Botanic Gardens Melbourne.

*Includes records of the 200 non-target species for the Australian Heritage Commission

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Fungimap Newsletters are available in colour on-line at our website:

<http://www.rbg.vic.gov.au/fungimap/>

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Fungimap is a joint project of the Field Naturalists Club of Victoria and the Royal Botanic Gardens Melbourne.

The Fungimap Newsletter is edited by Cassia Read.

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