Perth
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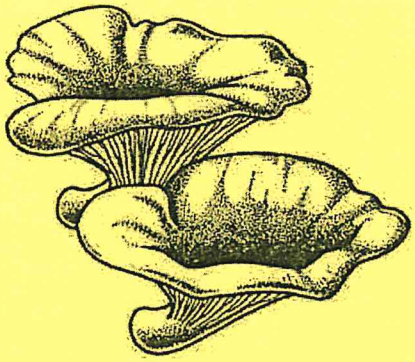
Fungi



www.fungiperth.org.au

PUBF Fungi Kit

For
Fungi Workshop
North Lake Bushland July 3rd 2005

Urban Bushland Council WA Inc

Government of Western Australia
Department of Conservation and Land Management
Conserving the nature of WA

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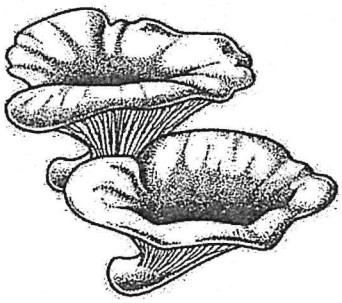

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PUBF Fungi Kit

Booklet written and produced by Neale L. Bougher

Photos by Neale L. Bougher

Practical sessions demonstrated by

Neale Bougher, Roz Hart, John Weaver & Group Leaders

of the Perth Urban Bushland Fungi Project

PUBF Website at **www.fungiperth.org.au**

Disclaimer

Information about fungi and their edibility and/or poisonous nature is provided only as a guide. The producers of this booklet and demonstrators of the associated practical sessions accept no responsibility for any consequences of people either correctly or wrongly identifying fungi or experiencing ill effects from using or eating fungi.

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TIPS ABOUT IDENTIFYING AUSTRALIAN FUNGI

- **Colour and size of fungi vary** according to environmental conditions and are not *always* reliable characters for determining differences between species.

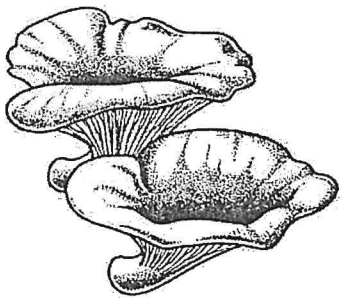
- **Shapes and forms of fungi vary** and may not always fall into discrete categories and may sometimes overlap the defined boundaries of genera and species.

- **Many Australian fungi are unique.** Only some Australian fungi are the same as those in overseas countries. Even fungi that closely resemble European or North American fungi are often different species.

- **Do not expect to be able to key out and/or put a name on every fungus.** Comprehensive, accurate descriptions are not available for most Australian fungi. Keys are not available for most groups. Also, many Australian fungi are yet to be discovered and named, and so there are no published data about those.

- **Field guides:** There are not many field guides about Australian fungi, and these all deal with only a small representation of our fungi. Field guides about overseas fungi are only of limited use because many Australian fungi are unique.

A list of some useful books, CD's and web sites is provided at the end of this booklet.



See the new
PUBF Field Book
at
www.fungiperth.org.au

The difference between Ascomycetes and Basidiomycetes

The broadest category in determining the identity of the larger fungi is to decide whether a specimen is an Ascomycete or a Basidiomycete. Sexual reproduction in the Ascomycetes is by microscopic sacks or tubes called asci producing ascospores, and in Basidiomycetes it is by microscopic structures called basidia producing basidiospores. Each Ascomycete fruit body may have thousands of asci, e.g. lining the concave surface of a cup-shaped fruit body or coating the surface of a tongue-shaped fruit body. Each Basidiomycete fruit body may have thousands of basidia, e.g. lining the surface of the gills of a mushroom or occupying the inside of a puffball.

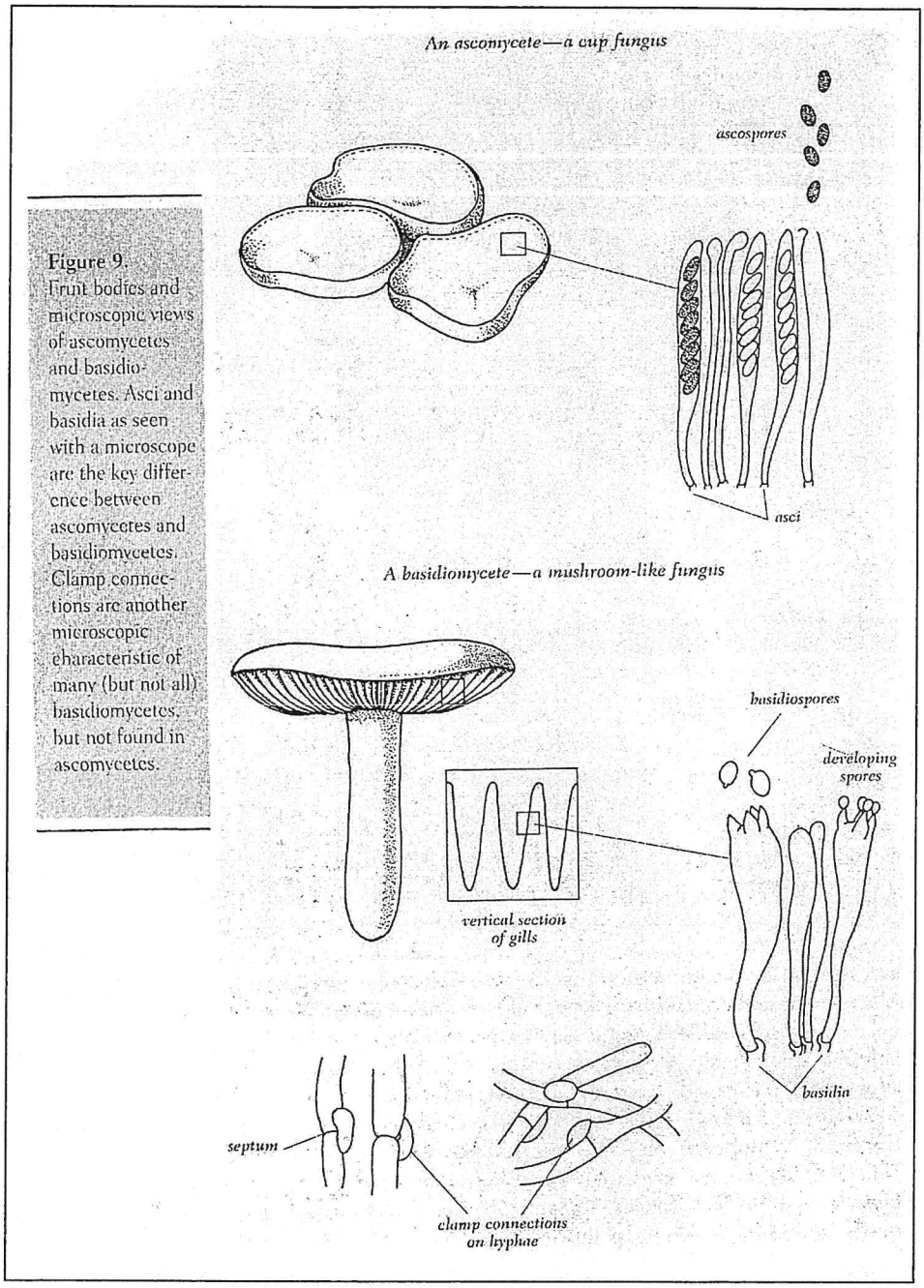


Figure 9. Fruit bodies and microscopic views of ascomycetes and basidiomycetes. Asci and basidia as seen with a microscope are the key difference between ascomycetes and basidiomycetes. Clamp connections are another microscopic characteristic of many (but not all) basidiomycetes, but not found in ascomycetes.

Extracted from the book Fungi of Southern Australia (Bougher and Syme 1998)

Some distinctive main types of fungi

Ascomycetes

Cup fungi

Morels

Earth Tongues

Truffles
(Ascomycetes)

Basidiomycetes

Jelly Fungi

Birds Nest Fungi

Earth Balls

Puffballs

Stinkhorns

Earth Stars

Gilled Mushrooms

Mushrooms with Pores
(Boletes)

Truffles
(Basidiomycetes)

Bracket Fungi
(Polypores)

Coral Fungi

Teeth Fungi

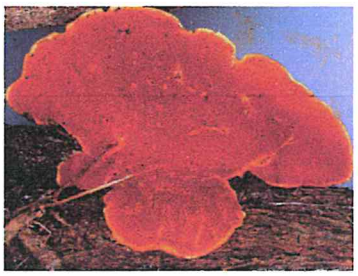
Skin Fungi
(Resupinate Fungi)

Some distinctive species of fungi to learn

Another way to learn about fungi is to simply focus on recognising a few distinctive species.

Ghost Fungus
Omphalotus nidiformis

Scarlet Bracket Fungus
Pycnoporus coccineus



Golden Wood Fungus
Gymnopilus allantopus (*austrosapineus*)

Pink-spored Volvaria
Volvariella speciosa

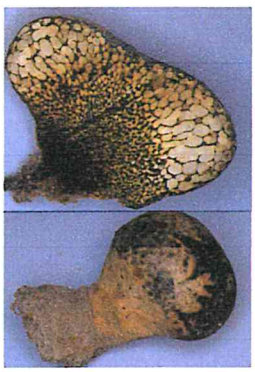
Curry Punk Fungus
Piptoporus australiensis

Punk Fungus
Laetiporus portentosus

Magpie Fungus
Coprinus aff. picaceus

Dog Poo Fungus

Pisolithus species



5 common Genera of gilled mushrooms

In learning how to identify fungi it is useful to at least recognise some of the more frequently encountered genera of fungi.

Amanita

- On ground
- Veil patches on cap and/ or ring on stem.
- Cup (volva) often at base of stem
- **Spore print** white to cream
- Gills usually free
- Spores smooth, sometimes blue in Melzers reagent (iodine)

Coprinus (Ink Caps)

- On ground, dung, wood or litter
- Mushrooms auto-digest, become inky
- **Spore print** black
- Gills usually attached
- Spores usually smooth, with a germ pore

Cortinarius

- On ground
- Cobweb-like veil on upper stem when young
- **Spore print** rusty or ochre brown
- Gills attached
- Spores ornamented

Mycena

- On ground or wood or litter
- No veil patches on cap or ring on stem.
- **Spore print** white to cream
- Gills attached
- Typically small and slender
- Caps often conical or bell-shaped
- Spores smooth

Russula

- On ground
- No veil patches on cap or ring on stem.
- **Spore print** white to cream
- Gills attached
- Texture chalky, snaps
- Spores ornamented and blue in Melzers reagent (iodine)
- Closest relative = *Lactarius* which exudes latex when cut.

Photographing fungi

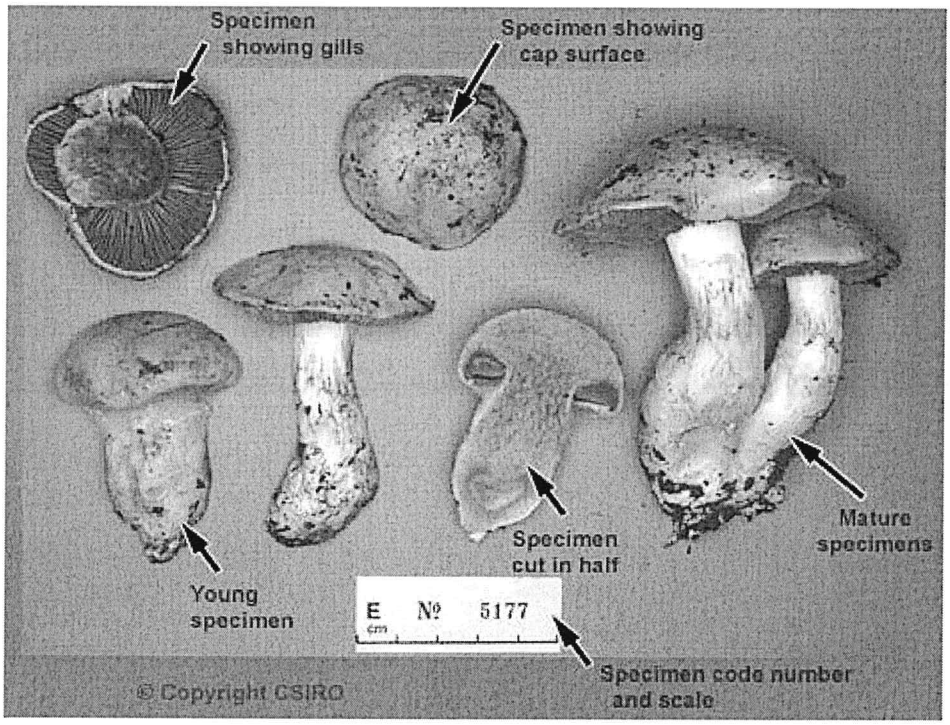
The best photos for scientific record are colour photographs showing young, mature, and old specimens, with a scale. It is also a good idea to include a unique collection reference number for the specimen in the photograph.

Photographs can also be taken in the field to show the habitat, and such photographs are also scientifically valuable.

In order to provide a clear visual record of the main features of fungi, a photographic system which enables good lighting and close-up focus is strongly recommended. A single lens reflex camera for either 35 mm film or digital media is recommended. The camera should have a close-up or macro lens, e.g. 50 mm macro lens capable of focusing on an area as small as about 70 x 50 mm, i.e. 1x or 0.5x magnification at the closest focus.

A lens aperture, preferably f16 or f22 or more, should be used to ensure an acceptable depth of focus. No filter should be used on the lens, as natural colours are desirable.

Slide film is recommended over print film, as the colour saturation and resolution is often better. Digital imaging is fast taking over as the preferred method due to relatively low cost, improved resolution, speed, and compatibility with computers.



A *Cortinarius* species photographed in a manner to keep as a quality image record for permanent reference.

Image extracted from FungiBank at www.FungiBank.csiro.au

Guide for collecting, examining and preserving fungi

The following outline is a guide to collecting fungi in a well planned and ordered fashion so as to achieve a high standard of information. For example, data about fungi and their environment, particularly associated plants and soil, needs to be recorded at the time of collection as it is often impossible to retrieve such data at a later date. Morphological characteristics such as shapes, textures and colours are required for identifying fungi and these need to be recorded with fungi in their fresh condition . The value of the information may be greatly enhanced by preservation of fungal fruit bodies in a herbarium.

Main steps for collecting and initial processing of fungi

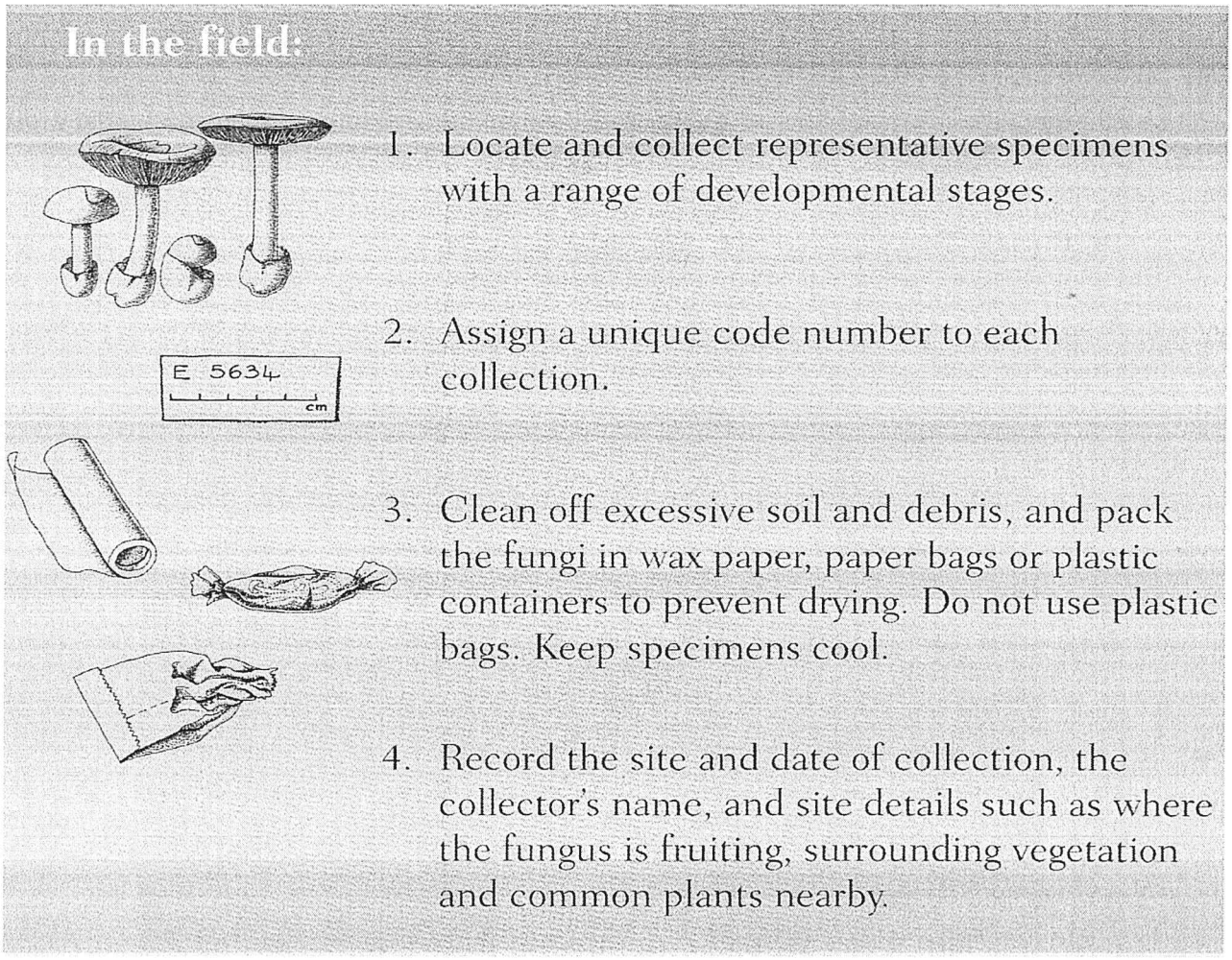


Image extracted from the book Fungi of Southern Australia (Bougher & Syme 1998).

Collecting a fungus

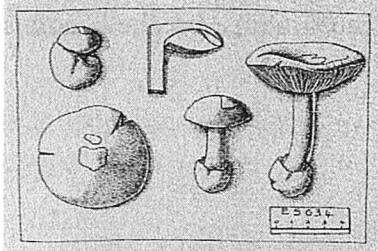
Extract the whole fruit body including the base of the stalk by using a small knife or other instrument to dig well under and into the soil and immediately place in a bag to prevent desiccation. A 'good collection' of a fungus consists of at least several fruit bodies of the same species, preferably young and mature specimens at different stages of development, collected at the same place and at the same time. Rotting or maggot-infested specimens should be discarded.

What to do with fungi you collect

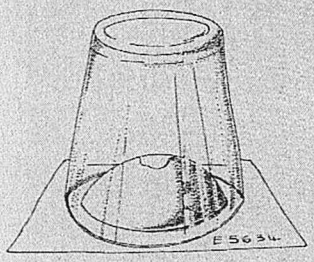
(Aside from eating them – not recommended unless you are certain of what you are doing)

In the laboratory:

5. Examine, draw, and record characteristics of the fungi such as shapes, textures and colours, giving particular attention to variations with age.

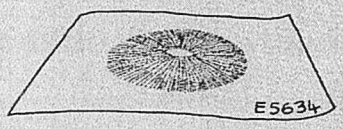


6. Take colour photographs showing young, mature, and old specimens, some in longitudinal section, on a standard background with a scale.



7. Set up a spore print on white paper (may need to do this first, e.g. if small specimens).

8. Before air-drying the specimens: cut one or two fruit bodies of mushroom-like fungi longitudinally; cut all truffle-like fungi in half.



9. After thorough drying is completed, package the specimens and spore prints in a labelled paper bag, envelope, or plastic zip-lock bag. Store them in a dry environment.

Image extracted from the book Fungi of Southern Australia (Bougher & Syme 1998).

Recording shapes, sizes, and colours

Morphological features such as shapes, textures and colours are useful for identifying fungi and these need to be recorded with fungi in their fresh condition.

Some of the main features are:
Cap and stem: size, shape, colour, surface texture and moisture.
Gills: size, shape, colour, how attached to the stem.
Partial veil: (ring or covering over gills): presence or absence, form.
Universal veil: (patches on cap or cup at base of stem): presence or absence, form.
Flesh: colour, texture, bruising.
Odour and taste:
Spore print colour:

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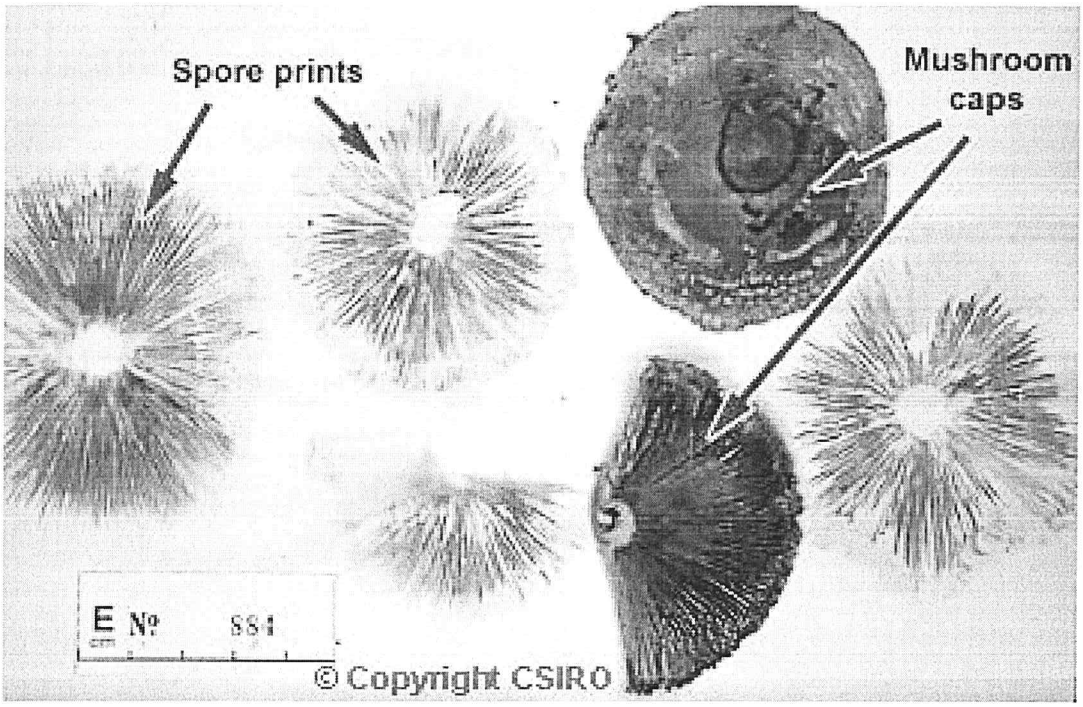
Making spore prints

A spore print can be made by placing a mushroom cap which is mature but not too old, with the stem removed and the spore-bearing gills facing down, onto white paper. It can be covered with paper or glass for protection against air movements and desiccation. A drop of water placed near the fungus may help to prevent drying out. After a period of one hour to overnight (depending on the size and condition of the specimen), the spores should have been deposited on the paper. They adhere to the paper by static electricity but can be easily brushed off and therefore require some protection. The colour of the deposit itself is useful for broad identification purposes, and the spores can be used later for microscopic examination. Spore print colour should be noted as soon as possible as they may change colour on drying, and may change further after lengthy periods of storage. Label the spore print paper with the name and/or code number of the fungal collection, allow the paper to dry out, then fold it in half with the spore deposit facing inwards. Store spore prints with the corresponding fruit bodies.

Spore prints can be made from many types of fungi such as mushrooms, brackets, corals and clubs. Truffle-like fungi generally do not produce spore prints.



Green spore prints of the fungus *Chlorophyllum molybdites*
(Image extracted from FungiBank at www.FungiBank.csiro.au)

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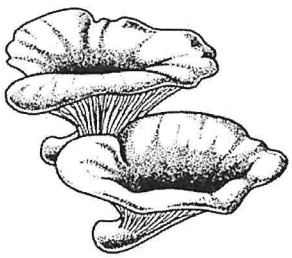

EXAMPLE OF A COMPLETED DATA SHEET

FUNGI DATA **RECORDED BY:** Neale Bougher ..... **DATE:** 10 June 1994 .....

COLLECTION No. NLB 331/94 ..... **FUNGUS NAME** Delicate Descolea .....

Genus . .Descolea..... **species** . .phlebophora.....

Collector . . N. Bougher, R. Vilgalys, S. Bolsenbroek, & M. Brundrett.....

Site . . Maits Rest rainforest walk, Otway Nat. Park, Victoria .....

Lat. 45° 38' 21" S . . **Long.** 143° 33' 15" E .

Plant association and habit: . . Scattered singly in litter of rainforest. Under *Nothofagus cunninghamii*, *Eucalyptus regnans*, & other associated plants.....

Main distinctive features: (*do this last*)

1. . dirty-coloured, narrow stem with a conspicuous white or cream membranous ring.....
.....

2. . dark brown, campanulate cap which becomes paler when older or as drying out.....
.....

3. . cap becomes wrinkled when older or as drying out.....
.....

4.....

Cap: size, shape, colour, surface texture and moisture.

15-45 mm diam., bluntly conic or campanulate (often with an umbo), flattening with age. Dark brown (near Methuen 7F8) when young then paler from margin inwards (near 6D8). Surface greasy with a translucent-striate margin when wet, smooth but becoming coarsely, radially wrinkled in older specimens.

Gills: colour, attachment, spacing, lamellules.

Tan (6C6) at first then maturing to darker brown (6D8). Adnexed, crowded then closely spaced, up to 4 mm deep. Edge smooth & entire, lamellules abundant (1,2, or 3 between each pair of gills)

Stem: size, shape, colour, surface texture and moisture.

30-50 x 2-4 mm, narrow-cylindrical, white above ring, dirty brown below ring. Covered with cream-coloured, appressed, silky, longitudinally arranged fibrils which are easily rubbed off or bruising dull dark brown (near 7F7). Sometimes some white scales near base of the stem. Surface dry. Interior solid at first then hollow.

Partial veil: (ring or covering over gills): presence or absence, form.

A superior or centrally placed white or cream-coloured (near 4A2) membranous ring clasping the stem and with a flaring free margin. Striations present on some of the ring in some.

Further notes and diagrams **Collection No.** . .NLB 331/94. . . . .

Universal veil: presence or absence, form.
Most specimens without any evidence of veil remnants on the cap. However white fibrillose scales were seen on the cap of one very young specimen.

Flesh: colour, texture, bruising.
Variable from cream to dark brown, watery in the stem of older specimens. Not bruising.

Chemical reactions: 15% KOH or Ammonia, $FeSO_4$, Melzers.
KOH slowly darkens the cap surface, but not elsewhere. No other chemical tests done.

Odour and taste:
Odour slightly farinaceous. Taste mild.

Spore print colour:
Bright brown (near 6D8 to 6E8)

Notes and diagrams
The ring is often discoloured brown by the deposit of spores.
The ring may have partially or completely disappeared off old specimens.

Two photos taken in the field - film no. 7/94 frames 24, 25.

We have a number of previous collections of D. phlebophora from Nothofagus forests in various parts of Victoria and Tasmania (refer to database for details).

Identification/ relationships notes

..Descolea maculata & D. recedens differ from D. phlebophora by having yellowish-orange colours (e.g. stem, ring & veil remnants on cap). D. phlebophora is more delicate in stature, e.g. comparatively narrow spindly stem, and is apparently always associated with Nothofagus whereas the other two fungi are mainly found with eucalypts. D. phlebophora also occurs in New Zealand (need to confirm by checking E. Horak's 1971 paper on Descolea).

- This form was produced by Neale Bougher and distributed for use at urban bushland events 2005 -

FUNGI DATA RECORDED BY: ..... DATE: .....

COLLECTION No. ..... FUNGUS NAME .....

Genus ..... **species** .....

Common Name .....

Collector .....

Site .....

Lat. ..... **Long.** .....

Plant association and habit: .....

.....

.....

Main distinctive features: (*do this last*)

1 .....

2 .....

3 .....

4 .....

Cap: size, shape, colour, surface texture and moisture.

Gills: colour, attachment, spacing, lamellules.

Stem: size, shape, colour, surface texture and moisture.

Partial veil: (ring or covering over gills): presence or absence, form.

PTO
Continued over page

Further notes and diagrams

Collection No...... Page 2

Universal veil: presence or absence, form.

Flesh: colour, texture, bruising.

Chemical reactions: 15% KOH or Ammonia, $FeSO_4$, Melzers.

Odour and taste:

Spore print colour:

Notes and diagrams

Identification/ relationships and notes

.....

.....

.....

.....

.....

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This form was produced by Neale Bougher and distributed for use at urban bushland events 2005

Data sheet for recording microscopic features of fungi

MICROSCOPIC DATA **RECORDED BY:** ..... **DATE:** .....

COLLECTION No. ..... **FUNGUS NAME** .....

SPORES

shape - face view:

shape - side view: symmetrical ☐ asymmetrical ☐

size - length: ☐ to ☐ µm

size - breadth: ☐ to ☐ µm

colour in KOH:

colour in Melzer's: amyloid (blue) ☐ dextrinoid (brown) ☐

hilar appendix:

apex:

wall ornamentation and thickness:

perisporium: present ☐ absent ☐

other notes:

BASIDIA

shape: sterigma number ☐

clamp connection at base? Yes ☐ No ☐ Not sure ☐

other notes (size, colour in KOH, in Melzers):

CYSTIDIA

present ☐ absent ☐ shape size ☐ X ☐ to ☐ X ☐ µm

colour in KOH colour in Melzer's (amyloid/dextrinoid)

PELLIS/PERIDIUM

structure

CLAMP CONNECTIONS

presence/absence, abundance and location

DIAGRAMS AND OTHER NOTES

This form was produced by Neale L. Bougher and distributed for use at urban bushland forays in Perth2004

Scale: _____ µm

Preserving fungi for permanent herbarium specimens

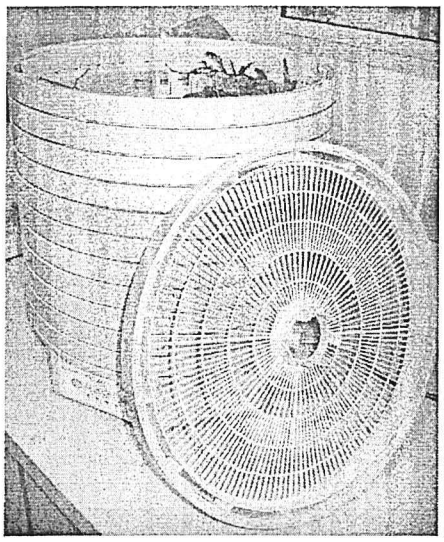
Air drying is the best method of preserving fungi. Air drying can best be achieved with commercially available electrical units designed for drying fruit or herbs. These have a heating element and blow warm air through a series of wire or plastic grid trays.

Tips about drying fungi specimens

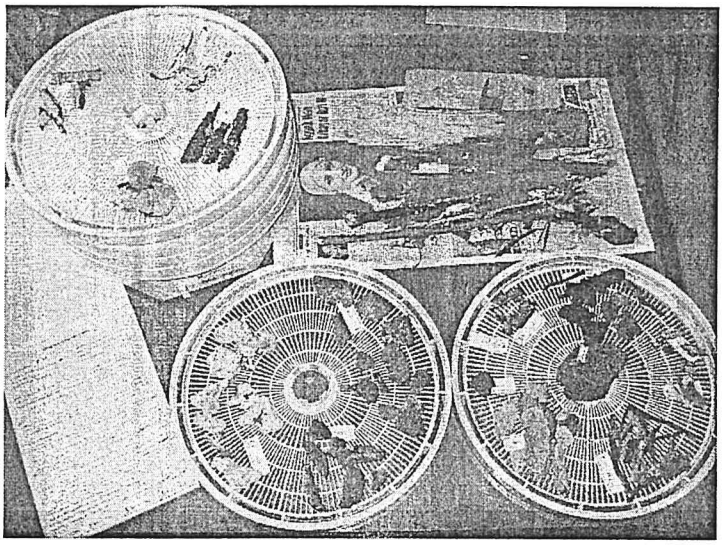
- It is important **not to cook specimens** by overheating them as this may destroy structures needed later for identification. 40 – 50°C is adequate.
- **Heating overnight is sufficient** for drying most fungi.
- Large and woody specimens **take longer**.
- It is best to **slice all specimens**, particularly large specimens to encourage thorough drying.

If a drier is not available it may be possible to air-dry small to medium sized fungi by:

- placing specimens on a wire mesh over an electric, gas or oil lamp
- placing specimens on a wire mesh over a radiator or a fan heater
- application of silica desiccating gel
- exposure to the sun (only in warm, low humidity weather).



Air-drier suitable for drying fungi.



Fungi specimens ready for drying.

Air-dried fruit bodies often have little resemblance to the fresh fruit bodies. However, microscopic characters of the fungi that are useful for identification are preserved in the samples. Fruit bodies of air-dried fungi can be stored permanently for future reference. If at any time fungi are found to have rehydrated, the specimens can be removed from their packet and put on an air drier for an hour or until dry once again.

Books and other useful References

Some books and CD's about Australian fungi

Aberdeen, JEC. (1979). **Introduction to the Mushrooms, Toadstools and Larger Fungi of Queensland.** Queensland Naturalists Club, Brisbane.

Bougher, N.L., (2005). **Perth Urban Bushland Fungi Field Book.** PUBF, Perth. (A self-managed format, on-line at www.fungiperth.org.au).

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Cole, M, Fuhrer, B & Holland, A. (1984). **A Field Guide to the Common Genera of Gilled Fungi of Australia** (rev. ed.). Inkata Press, Melbourne & Sydney,

Fuhrer, B. A (2005). **A Field Guide to Australian Fungi.** Bloomings Books, Melbourne.

Fuhrer, B.A. and Robinson, R. (1992). **Rainforest fungi of Tasmania and south-east Australia.** (CSIRO, Melbourne.)

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Grey, P. & Grey, E. (2005). **Fungi Down Under.** Fungimap, Melbourne.

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Grgurinovic, C.A. (2003). **The genus Mycena in south-eastern Australia.** Fungal Diversity Res. Ser. 9. Fungal Diversity Press.

Griffiths, K. (1985). **A Field Guide to the Larger Fungi of the Darling Scarp & South West of Western Australia.** (Griffiths, Perth.)

Hood, I. (2003). **An Introduction to Fungi on Wood in Queensland.** (University of New England)

Macdonald, R. and Westerman, J. (1979). **A Field Guide to Fungi of South-eastern Australia.** (Thomas Nelson, Melbourne.)

McCann, I.R. (2003). **Australian fungi illustrated.** Macdown Productions, Vermont.

Robinson, R. (2003). **Fungi of south west forests.** Department of Conservation and Land Management, Kensington.

Shepherd, C.J. and Totterdell, C.J. (1988). **Mushrooms and Toadstools of Australia.** (Inkata Press, Melbourne.)

Willis, JH. (1963). **Victorian Toadstools and Mushrooms** (3rd. ed.). Field Naturalists Club of Victoria, Melbourne.

Wood, A. (1990). **Australian Mushrooms and Toadstools: How to identify them** (rev. ed.). New South Wales University Press, Sydney.

Young AM. (2005). **A Field Guide to the Fungi of Australia.** New South Wales Univ. Press, Sydney.

A helpful book series on how to identify and work with larger fungi

Largent, D.L. (1977a). **How to Identify Mushrooms to Genus I: Macroscopic features.** (Mad River Press Inc., Eureka.)
Largent D.L. (1977b). **How to Identify Mushrooms to Genus III: Microscopic Features.** (MRP Inc., Eureka.)
Largent D.L. and Baroni, T.J. (1988). **How to Identify Mushrooms to Genus VI: Modern Genera.** (MRP Inc., Eureka.)
Largent D.L. and Thiers, H.D. (1977). **How to Identify Mushrooms to Genus II: Field ID of Genera.** (MRP Inc., Eureka.)
Stuntz, D.E., (1977). **How to Identify Mushrooms to Genus IV: Keys to Families and Genera.** (MRP Inc., Eureka.)

A couple of easy-to-read books about fungi

Arora, D. (1986). **Mushrooms Demystified.** (Ten Speed Press: Berkeley.)

Kendrick, B. (1992). **The Fifth Kingdom.** (Focus Information Group Inc., Newburyport).

Growing edible fungi

Stamets, P. (1993). **Growing Gourmet and Medicinal Mushrooms.** (Ten Speed Press, Berkeley.)

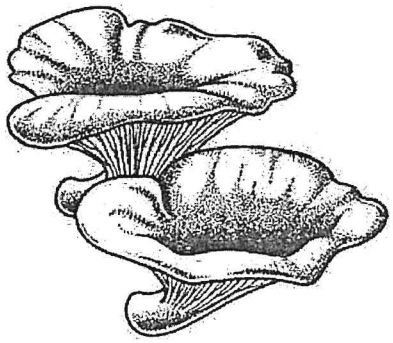
Some of the many useful websites about fungi

Perth Urban Bushland Fungi – Including Fungi Field Book for Perth Region http://fungiperth.org.au

Fungimap – A project to map the locations of Australian fungi http://fungimap.rbg.vic.gov.au/

FungiBank – online resource of information about Australia's rich resource bank of native fungi for revegetation http://www.fungibank.csiro.au

Notes



See the PUBF Website & new PUBF Field Book

at

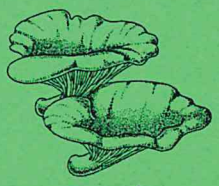
www.fungiperth.org.au

Urban Bushland Council WA Inc

Government of Western Australia — Department of Conservation and Land Management — Conserving the nature of WA

Western Australian Naturalists Club

lotterywest supported



Perth Urban Bushland Fungi

Perth Urban Bushland Fungi (PUBF) is a collaborative project begun in 2004 between the Urban Bushland Council and the WA Naturalists' Club in conjunction with the WA Herbarium, with financial support from Lotterywest. Over the past 10 years, many well attended fungi forays and workshops have been held in urban bushlands of Perth. These events have highlighted growing requests by community and professional land managers to address the generally low level of awareness and knowledge about fungi and their general exclusion from bushland management. PUBF addresses this gap and aims to improve awareness and knowledge so that fungi become an integral part of long-term urban bushland management.

Activities of the PUBF project include:

- Working with community groups to collect data on fungi and build inventories of fungi for Perth bushlands, in many cases for the first time.
- Increasing community skills and knowledge of fungi in bushland via PUBF fungi kits and posters, forays, biological surveys, workshops, university extension courses, feedback packages and presentations to bush care groups.
- Teaching community group members to identify fungi and conduct fungi surveys.
- Building an accurately identified reference collection of fungi at the WA Herbarium accompanied by high quality data.
- Fostering a volunteer and salaried fungi workforce in the field, laboratory and herbarium.
- Encouraging Federal, State, and Local Governments to integrate fungi into natural resource management strategies for the Perth Region.

Perth's urban bushlands lie within one of the world's 34 terrestrial biodiversity hotspots for conservation priority. Our region is the only hotspot in Australia. The bushlands are an important natural refuge for many fungi. The fungi underpin the long-term health and resilience of the bushlands. Knowledge of the fungi and other organisms that help keep the region's plants healthy is essential for effective conservation management of this hotspot region.

Development of an on-line fungi information base for the Perth region and continued community participation and education are major priorities for upcoming phases of PUBF.

Want to participate?

Contact Roz, the Community Education Officer, on 9334 0500 or by email at rozh@calm.wa.gov.au or Jac, the Project Support Officer, on 9420 7207 or by email at fungi@iinet.net.au. Visit our website at www.fungiperth.org.au.

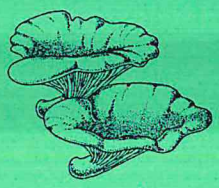
Urban Bushland Council WA Inc

Government of Western Australia — Department of Conservation and Land Management — Conserving the nature of WA

Western Australian Naturalists Club

Perth Urban Bushland Fungi – a collaborative project between the Urban Bushland Council and the WA Naturalists' Club in conjunction with the CALM WA Herbarium, is.....

lotterywest supported



Perth Urban Bushland Fungi

This year, 2005 the PUBF team will continue to organise Fungi events to satisfy the various needs of community groups and the requirements of the project. Hot off the press is the news that we now have our own, very exciting and innovative **Perth Urban Bushland Fungi Project website** at www.fungiperth.org.au. There is a PUBF field book for you to download and create individually as fits your requirements, information about this year's events, last year's events, news items, information about learning about fungi, Fungus of the Month and lots more After the current phase of funding, which runs until August, we hope to continue the project and build upon the findings.

PUBF requires your assistance to survey and collect fungi from a wide range of vegetation and soil types. We are running four whole day teaching workshops in June and July for interested people to learn how to go about gathering useful fungi information. Come to a workshop to learn how to spot fungi in the field, how to go about identifying fungi and important details to be aware of when taking photos for identification. We are building inventories of fungi for Perth bushlands, in many cases for the first time. Each **workshop** will cater for a maximum of 40 people at no charge and so it is *essential that you book* if you wish to take part. We are also conducting **fungi walks** which will take the form of a 2 hour stroll in an urban bushland to point out the existence of a diverse range of fungi and how to find them, as well as raise awareness about the importance of fungi to the environment. These events will cater for everyone from beginners to enthusiasts. A report with a list of fungi recorded and collected in each bushland and a dossier of fungi photos will be produced as a permanent record of our visit. Fungi specimens will be lodged for permanent curation at the WA Herbarium as a basis for key scientific studies from these events.

To participate please refer to the attached list of events and determine which one you would like to take part in. Then contact Roz Hart, the PUBF Community Education Officer on 9334 0500 weekdays or by email at rozh@calm.wa.gov.au.

Events : Workshops:

1	Sunday, 19 June	Mindarie Bushland
2	Sunday 3 July	North Lake Bush
3	Sunday, 10 July	Hartfield Pk Bushland, Forrestfield
4	Sunday, 24 July	Warwick Open Space Bushland

Walks

1	Saturday, 11 June	Allen Pk, Swanbourne, Royal Society of WA walk
2	Sunday 12 June	Paganoni Bushland, Karnup
3	Saturday, 25 June	Sir Frederick Samson Pk, Fremantle
4	Sunday 26 June	Darling Range Br. Wildflower Society fungi walk
5	Saturday, 9 July	Periwinkle Bushland, Mullaloo
6	Sunday, 17 July	Kensington Bushland

Fungi Feedback Packages for those groups who had a PUBF event in their bush in 2004 will be provided to the groups involved. Copies will be placed in the WA Naturalists' Club, Urban Bushland Council and WA Herbarium libraries.

Please visit our **website** at www.fungiperth.org.au for further information.

The Perth Urban Bushland Fungi (PUBF) Project Team

Welcome to the PUBF Website

Understanding and protecting our fabulous fungi!

Raising awareness and improving knowledge of fungi for bushland management in the Perth Region, south-west Australia.

The Project

Perth Urban Bushland Fungi (PUBF) is a collaborative project between the Urban Bushland Council and the WA Naturalists' Club in conjunction with the Department of Conservation and Land Management, Western Australian Herbarium. The project began in 2004 and is supported by Lotterywest.

The Fungi

Find all you need to know about fungi in the Perth Region - What to look for and how to find fungi. Why understanding and recognising fungi is important to protecting our remaining bushland. Why fungi can make a difference to the health of the bush and what you can do to make a difference!

Urban Bushland Council WA Inc | Conservation | lotterywest supported

Stop Press: With one of the best fungi seasons for some years now with us, a number of interesting fungi are emerging in all manner of places. **The bright red toadstool - *Stropharia aurantiaca*** is currently fruiting profusely in woodchip beds throughout the campus at University of WA in Nedlands. It is also fruiting in woodchips elsewhere throughout the Perth region. Information about this fungus, and larger photos, soon will be featured in the next addition to the PUBF Field Book, in the meantime learn about this interesting fungus at the Fungus of the Month page for July.

Stop Press: The **Minister for the Environment, Dr Judy Edwards**, will launch the Perth Urban Bushland Fungi Website at our workshop on the 3rd July, 2005 at 2pm. The workshop is being held at the Cockburn Wetlands Education Centre and is conducted in conjuction with the "Skills for Nature Conservation Program".

Stop Press: The **2005 West Australian Fungi Photographic Competition and Exhibition** will be held the Henderson Environmental Centre, Groat Street, North Beach (Star Swamp Nature Reserve) over the weekend 27th and 28th August, 2005. The Exhibition is from 10am to 5pm on the 27th and 28th and the Photographic Competition will be held at 4.30pm on the 28th.

All Welcome!

Visit the News Item and obtain your registration and entry form.

For more information about these organizations, please Click on any of these icons for a link to the respective website homepage.

Contact: Webmaster | Project Officer | Top of Page