

Perth Urban Bushland Fungi

Canning River Regional Park Fungi Report 2007

Written and produced by Neale L. Bougher, Roz Hart, Sarah de Bueger & Brett Glossop



Blue survey team



Green group along the riverbank



Orange group amongst the Zamia Palms



Red group in the Melaleuca Swamp

PUBF Website : www.fungiperth.org.au







<u>Canning River Regional Park</u> <u>Fungi Report 2007</u>

Written and produced by Neale L. Bougher, Roz Hart, Sarah de Bueger & Brett Glossop

Department of Environment and Conservation – Perth Urban Bushland Fungi Project

Advice about the identity of the fungi was provided by Dr Neale Bougher, Mycologist. Organisational and technical support was provided by officers on the PUBF project -Roz Hart, Sarah de Bueger, and Brett Glossop.

Photos and field assistance by PUBF participants

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Perth Urban Bushland Fungi Project Mycologist Neale Bougher and Community Education Officer Roz Hart conducted a biological survey for fungi in Canning River Regional Park on 24 June 2007. Fungi Leaders and volunteers from the Perth Urban Bushland Fungi (PUBF) Project, the Western Australian Naturalists' Club and members of the public assisted with the fungi survey.

This fungi survey was conducted as part of a **Department of Environment and Conservation (DEC) Regional Parks Community Grant** awarded to the Perth Urban Bushland Fungi Project to survey three sites in nominated DEC Regional Parks. The survey party divided into four groups, with two starting from the same point at the Kent St Weir and the other two groups starting out from sites on Fern St on the northern side of the park.

Canning River Regional Park Fungi: 24 June 2007

The survey at Canning River was preceded by below average rainfall. The soil, woody material and plants were drier than would be expected by late June at the park. Nevertheless 63 records, including 34 different fungi were recorded, and 26 specimens were vouchered into the WA Herbarium. These include genera of decomposer fungi such as *Mycena*, *Pholiota* and *Pycnoporus*, and beneficial mycorrhizal fungi belonging to genera such as *Amanita*, *Scleroderma and Laccaria*. Many of the more conspicuous forms of fungi such as mushroom or toadstool types were scarce on the day of the survey. Participants in the survey were alerted to some of the less conspicuous forms of fungi, such as resupinate (skin or crust) fungi that usually occur on dead wood. The most striking example of the fungi recorded in this survey remain unidentified, pending further collections or more detailed comparative analyses. Many of the fungi could only be identified to genus level. This is because detailed taxonomic examinations are yet to be completed, or perhaps some of the specimens are undescribed species.

Far more fungi are likely to occur in Canning River Regional Park than those recorded in this inaugural survey. Because of the unpredictable nature of fungi fruiting, surveys need to be conducted over many years in order to capture the biodiversity of fungi present in any given area. Such inventory data can be used as a baseline to monitor changes in biodiversity at the park, such as any trend towards reduction in the diversity of significant ecological groups of fungi such as mycorrhizal species, and the effects of major disturbances such as fire or disease incursions.

<u>Management recommendations for understanding and conserving Fungi</u> <u>Biodiversity at Canning River Regional Park</u>

The objectives of the Canning River Regional Park Management Plan 1997-2007 under part C concerning Conservation include: "to protect, conserve, rehabilitate and regenerate the indigenous vegetation in the Park". Objectives for fauna are similar, i.e. "maintain viable populations of all indigenous fauna in the Park". Fungi are not considered in the current Management Plan, but to help achieve management objectives relating to flora and fauna conservation at the park, the Flora, Fauna and Fungi may need to considered together. The Fungi have crucial ecological roles for maintaining bushland health, including linkages between the 3 F's. An increased level of knowledge about the fungi at Canning River Regional Park is required as a basis for documenting and understanding the fungi, and in turn for helping to manage the Park's Flora and Fauna.

Management recommendations involving fungi include:

- 1. Undertake biological surveys to build up an inventory of fungi: Far more fungi are likely to occur in Canning River Regional Park than those recorded in the inaugural survey. Because of the unpredictable nature of fungi fruiting, surveys need to be conducted over many years in order to capture the biodiversity of fungi present in any given area. Such inventory data can be used as a baseline for monitoring changes in biodiversity at Canning River Regional Park, such as any trend towards reduction in the diversity of significant ecological groups of fungi such as mycorrhizal species, and the effects of major disturbances such as fire or disease incursions.
- 2. **Record comprehensive data on surveys:** (i) the identity of the fungi (ii) the main features of the fungi (including close-up photographs), (iii) habitat (in litter, on dead wood etc...), (iv) plant species associated with each of the fungi. Standard recording sheets for fungi biodiversity surveys are available on request from PUBF.

- 3. **Georeference the surveys:** It would be desirable to georeference the surveys at Canning River Regional Park to build up a spatial map of distribution of individual fungi species. Such data can be overlain onto vegetation, soil and fire-age maps so as to potentially recognize associations between particular fungi and plants or vegetation and landscape types. A georeferencing survey kit developed by John Weaver for PUBF is available on loan from the WA Herbarium.
- 4. **Involve community:** It is recommended that further fungi surveys involving members of the local community be undertaken at Canning River Regional Park. The involvement of community members can facilitate a greater sampling effort, a general increase in awareness of fungi and their roles and linkages in bushlands, and a greater appreciation of the need to preserve bushland. Fungi surveys are well suited to annual involvement of Friends Groups and volunteers from the local community.
- 5. Determine the mycorrhizal plant partners of fungi. To understand the mycorrhizal relationships between fungi and plants at Canning River Regional Park, the list of known plants at Canning River should be annotated with the likely mycorrhizal status of each plant, e.g. categories such as ectomycorrhizal, arbuscular, epacrid, orchid, not mycorrhizal. This will help understand how the pattern of occurrence of various species of fungi relates to the distribution of vegetation types at Canning River Regional Park.
- 6. **Determine animal interactions with fungi:** Determine what truffle fungi are present at Canning River Regional Park, and if they and other fungi are being used as a food resource by local native mammals, such as the local populations of the Short nosed Bandicoot (*Isoodon obesulus*). Such information has significant application if mammals are being encouraged or relocated into the area, or to help understand why there may have been declines in mammal populations at Canning River Regional Park.
- 7. **Include Flora, Fauna and Fungi in signage and interpretative material at the Park:** To promote public awareness and appreciation of the conspicuous and less conspicuous biodiversity at Canning Regional Park and the linkages between the 3F's that influence the long-term health of the Park. Visitors to the Park are most likely to see a variety of large fungi in the Fringing Forest vegetation communities and those areas would be the most appropriate target area for such signage.
- 8. **Support a strategy for preserving representative landscapes:** Support a management plan that aims to preserve a variety of natural vegetation types and the diversity of plant species within the type groups. Also preserve a diversity of fire ages, including at least some long-unburnt patches if possible. This strategy will help retain a variety of microhabitats for fungi e.g. specific components of wood (logs, cones, twigs etc...), litter, moss beds, and specific mycorrhizal partner plants. In turn, this strategy may foster fungi and other biodiversity at Canning River Regional Park.

References:

Bougher, N.L (2007 updated 3rd edition). Perth Urban Bushland Fungi Field Book. Perth Urban Bushland Fungi, Perth, Western Australia (self managed format linked to www.fungiperth.org.au).

Department of Conservation and Land Management, City of Canning, and National Parks and Nature Conservation Authority (2007) Canning River Regional Park Management Plan 1997-2007. Management Plan No 36, Perth, Western Australia.

Canning River Regional Park Fungi List, 24 June 2007

<u>Life Mode Key</u>: M = Mycorrhizal, S = Saprotrophic (Decomposer), S/P = Saprotrophic and Parasitic. Life Mode allocation is based on probability only, as many fungi have not been tested.

Field Book Page #: refers to the Perth Urban Bushland Fungi Field Book which is available for downloading from the project website at www.fungiperth.org.au

Fungimap Target: refers to species that have been selected by the Australia-wide mapping project, Fungimap, for collecting detailed records to be compiled into distribution maps. See Fungimap on-line at <u>www.rbg.vic.gov.au/fungimap</u> and the book *Fungi Down Under* by Grey, P. and Grey, E (2005).

Scientific Name	Common Name	Form	Habitat	Life Mode	Fungimap Target	Field Book Page #	Specimen ID
Amanita sp.		mushroom	litter/ ground	М			2915
Byssomerulius corium	Bysso Skin Fungus	resupinate/ shelf	dead wood	S		O-3	2933
Crepidotus eucalyptorum	Eucalypt Crepidotus	shell	dead wood	S		J-13	2917, 2937, 2940, 2941
<i>Exidia</i> sp.		jelly fungus	dead wood	S			2897, 2934, 2950, 2951
Gymnopilus allantopus	Golden Wood Fungus	mushroom	dead wood	S		J-15	2947
Gymnopilus cf. purpuratus		mushroom	dead wood	S			2903
Gymnopilus purpuratus		mushroom	dead wood	S			2898, 2912
Hexagonia vesparia	Wasp Nest Polypore	bracket	dead wood	S		N-3	2935
Hohenbuehelia sp.		shell	dead wood	S			2902
Hjorstamia crassa		resupinate	dead wood	S			2895, 2920, 2936, 2953
Laccaria lateritia	Brick Red Laccaria	mushroom	litter/ ground	М		J-17	2892
Leucoagaricus sp.		mushroom	litter/ ground	S			2916
Mycena clarkeana	Clarke's Pixie Cap	mushroom	bark, tree	S		J-38	2944
<i>Mycena</i> sp.		mushroom	litter/ ground	S			2907, 2928, 2932, 2938, 2948
Phaeotrametes decipiens	Lavender-pored Bracket Fungus	bracket	dead wood	S		N-5	2911
Phellinus sp.		bracket	dead wood	S			2893, 2922,2945
Pholiota communis	Common Pholiota	mushroom	litter/ ground	S		J-26	2923
Phylloporus sp.		mushroom	litter/ ground	М			2925

				I ifo	Funcimon	Field Book	
Scientific Name	Common Name	Form	Habitat	Mode	Target	Page #	Specimen ID
Pisolithus sp.	Dog Poo Fungus	puffball	litter/ ground	М		L-3	2913, 2926,2929
Pleurotellus sp.		shell	dead wood	S			2918
Poria s.l.		resupinate	dead wood	S			2900, 2924
Poria sp.		resupinate	dead wood	S			2921
Pycnoporus coccineus	Scarlet Bracket Fungus	bracket	dead wood	S		N-8	2894, 2939, 2946
Resupinatus cinerascens		shell	dead wood	S			2952, 2896
Scleroderma cepa		puffball	litter/ ground	М			2908, 2942
Sphaerobolus stellatus	Cannonball Fungus	birds nest	dead wood	S		L-5	2927
<i>Tephrocybe</i> sp.		mushroom	litter/ ground	S			2905
Tremella mesenterica group	Yellow Brain Fungus	jelly fungus	dead wood	S	Yes	Q-2	2919, 2931
<i>Tubaria</i> sp.		mushroom	litter/ ground	S			2904
Undetermined Agaric		mushroom	litter/ ground	?			2906
Undetermined Bracket Fungus		bracket	dead wood	S			2910
Undetermined Resupinate		resupinate	dead wood	М			2899, 2909, 2930, 2943, 2949
Undetermined Xylariaceae		resupinate	dead wood	S			2901
Volvariella speciosa	Common Rosegill	mushroom	litter/ ground	S	Yes	J-30	2891

<u>Permanent Vouchered Specimens</u>

Twenty six of the fungi collected during this event were deposited into the WA Herbarium fungi collection with the following details:

Amanita sp.	Voucher ID:	E8421	Specimen ID:	2915
Byssomerulius corium	Voucher ID:	E8465	Specimen ID:	2933
Crepidotus eucalyptorum	Voucher ID:	E8419	Specimen ID:	2941
Gymnopilus allantopus	Voucher ID:	E8456	Specimen ID:	2947
Gymnopilus purpuratus	Voucher ID:	E8454	Specimen ID:	2912
Hexagonia vesparia	Voucher ID:	E8420	Specimen ID:	2935
Hjorstamia crassa	Voucher ID:	E8459	Specimen ID:	2920
Hjorstamia crassa	Voucher ID:	E8464	Specimen ID:	2936
Hjorstamia crassa	Voucher ID:	E8457	Specimen ID:	2953
Laccaria lateritia	Voucher ID:	E8460	Specimen ID:	2892
Leucoagaricus sp.	Voucher ID:	E8451	Specimen ID:	2916
Mycena clarkeana	Voucher ID:	E8455	Specimen ID:	2944
Mycena sp.	Voucher ID:	E8425	Specimen ID:	2932
Phaeotrametes decipiens	Voucher ID:	E8470	Specimen ID:	2911
Phylloporus sp.	Voucher ID:	E8461	Specimen ID:	2925
Pisolithus sp.	Voucher ID:	E8467	Specimen ID:	2926
Poria s.l.	Voucher ID:	E8463	Specimen ID:	2900
Poria s.l.	Voucher ID:	E8423	Specimen ID:	2924
Pycnoporus coccineus	Voucher ID:	E8422	Specimen ID:	2946
Resupinatus cinerascens	Voucher ID:	E8453	Specimen ID:	2952
Scleroderma cepa	Voucher ID:	E8452	Specimen ID:	2942
Tephrocybe sp.	Voucher ID:	E8466	Specimen ID:	2905
Undetermined Agaric	Voucher ID:	E8458	Specimen ID:	2906
Undetermined Bracket Fungus	Voucher ID:	E8468	Specimen ID:	2910
Undetermined Resupinate	Voucher ID:	E8462	Specimen ID:	2899
Undetermined Resupinate	Voucher ID:	E8424	Specimen ID:	2949



StreetExpress Map showing the location of Canning River Regional Park, Bush Forever Site 224.



Aerial photo showing the colour coded tracks taken by the four groups, 24 June 2007.

Georeferenced Track and Photos

Date : 24 June 2006

Group: Perth Urban Bushland Fungi Project Leaders Neil Goldsborough and Phylis Robertson led the group of volunteers from the WA Naturalists' Club and members of the public.



The numbers on the coloured dots in the fungi photos correspond to the collecting number and usually **do not** match the photo number. It is the **photo number** preceding the fungus name which correlates with the site on the map above.

Event: Canning River Regiona Group Number: 199 Photograp	al Park Survey Date: 24/06/2007 bher: Neil Goldsborough	
	02 Volvariella speciosa Growing amongst litter on the edge of boggy Latitude: 32° 1' 26.1"South Longitude: 115° 24/06/2007 Fungimap Target	Common Rosegill Specimen ID: 2891 grassland/wetland. '55' 15.5"East Image: CR69_199NG02
	05 Laccaria lateritia	Brick Red Laccaria Specimen ID: 2892
	Growing amongst litter under <i>Eucalyptus rud</i> Latitude: 32° 1' 27.1"South Longitude: 115° 24/06/2007 Vouchered WA Herbarium: E8460	is. 55' 14.7"East Image: CR69_199NG05

 09 <i>Phellinus</i> sp. Growing on live tree trunk in woodland. Latitude: 32° 1' 26.9"South Longitude: 115° 24/06/2007 12 <i>Pycnoporus coccineus</i> Growing on dead, small <i>Eucalyptus rudis</i> log E Latitude: 32° 1' 27"South Longitude: 115° 5: 24/06/2007 	Specimen ID: 2893 55' 15"East Image: CR69_199NG09 Scarlet Bracket Fungus Specimen ID: 2894 in woodland. 5' 13.7"East Image: CR69_199NG12
14 <i>Hjorstamia crassa</i> Growing on dead wood of small <i>Eucalyptus ri</i> Latitude: 32° 1' 27"South Longitude: 115° 55 24/06/2007	Specimen ID: 2895 <i>idis</i> log, in woodland. 5' 13.7"East Image: CR69_199NG14
15 <i>Resupinatus cinerascens</i> Growing on bark of small, dead <i>Eucalyptus ru</i> Latitude: 32° 1' 27"South Longitude: 115° 55 24/06/2007	Specimen ID: 2896 <i>dis</i> log in woodland. 5' 13.7"East Image: CR69_199NG15
20 <i>Exidia</i> sp. Growing on dead bark and wood of small <i>Euc</i> Latitude: 32° 1' 27"South Longitude: 115° 55 24/06/2007	Specimen ID: 2897 <i>alyptus rudis</i> log. 5' 13.7"East Image: CR69_199NG20
21 <i>Gymnopilus purpuratus</i> Growing on dead banksia log in woodland. Latitude: 32° 1' 27"South Longitude: 115° 5: 24/06/2007	Specimen ID: 2898 5' 13.7"East Image: CR69_199NG21





	57 Phaeotrametes decipiens	Lavender-pored Bracket Fungus
	Growing on dead <i>Casuarina obesa</i> log on the on dead, upright sheoak in woodland.	ground. Also growing
	Latitude: 32° 1′ 25.3″South Longitude: 115°	55' 10.7"East
States and the second	24/06/2007	mage: CR69 199NG57
	Vouchered WA Herbarium: E8470	CR0/_1////05/
	58 Gymnopilus purpuratus	
		Specimen ID: 2912
	Growing at the base of dead, upright Casuarin	na obesa log in
	woodland.	
	Latitude: 32° 1' 25.3"South Longitude: 115°	55' 10.7"East
	24/06/2007	Image:
	Vouchered WA Herbarium: E8454	CR09_1991\038
	62 Pisolithus sp.	Dog Poo Fungus
All The The The	_	Specimen ID: 2913
	Growing in sand.	
	Latitude: 32° 1′ 26.5″South Longitude: 115°	55' 10.2"East
	24/06/2007	Image:
		CK09_1991\002
	66 Amanita sp	
	oo Amanaa sp.	Specimen ID: 2915
	Growing in sand in woodland.	
	Latitude: 32° 1' 27.7"South Longitude: 115°	55' 11.5"East
	24/06/2007	Image:
		CR69_199NG66
	Vouchered WA Herbarium: E8421	

Georeferenced Track and Photos

Date : 24 June 2006

Group: Perth Urban Bushland Fungi Project Leaders Kevn Griffiths and Elaine Davison led the group of volunteers from the WA Naturalists' Club and members of the public.



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Event: Canning River Regional Park Survey Date: 24/06/2007 Group Number: 200 Photographer: Laurton McGurk



06 Leucoagaricus sp.

Growing in organic soil in grassland. Latitude: 32° 1' 15.5"South Longitude: 115° 55' 16.1"East 24/06/2007 Image: CR69_200LMG06 Vouchered WA Herbarium: **E8451**

20	09 <i>Crepidotus eucalyptorum</i> Growing on the bark of living <i>Eucalyptus rudu</i> Latitude: 32° 10' 15.5"South Longitude: 115 24/06/2007	Eucalypt Crepidotus Specimen ID: 2917 is. ° 55' 16.1"East Image: CR69_200LMG09
	11 <i>Pleurotellus</i> sp. Growing on the bark of living <i>Eucalyptus rudu</i> Latitude: 32° 1' 15.5"South Longitude: 115° 24/06/2007	Specimen ID: 2918 s. 55' 16.1"East Image: CR69_200LMG11
	12 Tremella mesenterica group Growing on dead wood. Latitude: 32° 1' 15.5"South Longitude: 115° 24/06/2007 Fungimap Target	Yellow Brain Fungus Specimen ID: 2919 55' 16.1"East Image: CR69_200LMG12
3 0° 30 30 100	14 <i>Hjorstamia crassa</i> Growing on dead, decorticated wood. Latitude: 32° 1' 15.5"South Longitude: 115° 24/06/2007 Vouchered WA Herbarium: E8459	Specimen ID: 2920 55' 16.1"East Image: CR69_200LMG14
	17 <i>Poria</i> sp. Growing on dead wood (<i>Eucalyptus rudis</i> ?) in Latitude: 32° 1' 15.5"South Longitude: 115° 24/06/2007	Specimen ID: 2921 woodland. 55' 16.1"East Image: CR69_200LMG17
	18 <i>Phellinus</i> sp. Growing on living <i>Eucalyptus rudis</i> in woodla Latitude: 32° 1' 15.5"South Longitude: 115° 24/06/2007	Specimen ID: 2922 nd. 55' 16.1"East Image: CR69_200LMG18



Georeferenced Track and Photos

Date : 24 June 2006

Group: Perth Urban Bushland Fungi Project Leaders Kirsten Tullis and Joe Froudist led the group of volunteers from the WA Naturalists' Club and members of the public.



The numbers on the coloured dots in the fungi photos correspond to the collecting number and usually **do not** match the photo number. It is the **photo number** preceding the fungus name which correlates with the site on the map above.

Event: Canning River Regional Park Survey Date: 24/06/2007 Group Number: 201 Photographer: Joe Froudist 03 Mycena sp. Specimen ID: 2928 Growing on burnt wood in open marri/flooded gum woodland. Latitude: 32° 1' 1.7" South Longitude: 115° 55' 19.8" East Image: 24/06/2007 CR69_201JF03 04 Pisolithus sp. **Dog Poo Fungus** Specimen ID: 2929 Growing in sand near macrozamia. Latitude: 32° 1' 1.6"South Longitude: 115° 55' 19.2"East Image: 24/06/2007 CR69_201JF04

	05 Undetermined Resupinate			
	Specimen ID: 2930 Growing on dead, burnt wood on ground in <i>Eucalyptus</i>			
2				
	rudis/Melaleuca rhaphiophylla woodland.			
and the state	Latitude: 32° 1' 2.7"South Longitude: 115° 3	55' 20"East		
A CALLER AND A CALL	24/06/2007	Image:		
THE WAY AND		CR09_201JF05		
		Vellow Brain		
	06 Tremella mesenterica group	Fungus		
		Specimen ID: 2931		
	Growing on dead wood in <i>Eucalyptus rudis/M</i>	<i>Jelaleuca</i>		
A man or man of the orman	<i>rhaphiophylla</i> woodland.			
<0 ' 30	Latitude: 32° 1' 2.7"South Longitude: 115°	55' 20"East		
H	24/06/2007 Fungiman Target	Image:		
	24/00/2007 Funginiap Target	CR69_201JF06		
5 20	08 <i>Mycena</i> sp.			
T ALA		Specimen ID: 2932		
	Growing on bark in <i>Eucalyptus rudis/Melaleu</i>	ıca rhaphiophylla		
	Woodland. Latitude: 32° 1' 2 8"South Longitude: 115° 4	55' 10 3"East		
T THE DALL OF		Image:		
Charles the hards	24/06/2007	CR69_201JF08		
20 A CAR	Vouchered WA Herbarium: E8425			
		Bysso Skin		
	09 Byssomerulius corium	Fungus		
		Specimen ID: 2933		
	Growing on dead wood in Eucalyptus rudis w	voodland.		
San	Latitude: 32° 1' 2.8"South Longitude: 115° :	55' 19.3"East		
20 34	24/06/2007	Image: CR69 201JF09		
	Vouchered WA Herbarium: E8465			
	10 <i>Exidia</i> sp.	Spacimon ID: 2024		
	Growing on dead bark in woodland	Specifien ID. 2954		
8	Latitude: 32° 1' 2.8"South Longitude: 115° :	55' 19.3"East		
	24/06/2007	Image:		
80	24/06/2007	Image: CR69_201JF10		



Georeferenced Track and Photos

Date : 24 June 2006

Group: Perth Urban Bushland Fungi Project Leaders Jolanda Keeble and Margaret Langley led the group of volunteers from the WA Naturalists' Club and members of the public.



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Event: Canning River Regional Park SurveyDate: 24/06/2007Group Number: 202Photographer: Margaret Langley					
	04 Crepidotus eucalyptorum	Eucalypt Crepidotus Specimen ID: 2941			
	Growing on living <i>Eucalyptus rudis</i> (roadside Latitude: 32° 1' 4.6"South Longitude: 115° :	e tree) near wetland. 55' 4.3"East			
CONFERENCE STATE	24/06/2007	Image: CR69_202ML04			
The All All All All All All All All All Al	Vouchered WA Herbarium: E8419				
	09 Scleroderma cepa	Sussimor ID: 2042			
	Growing in sand of grass verge near wetland.	Specimen ID: 2942			
	Latitude: 32° 1' 4.6"South Longitude: 115° :	55' 4.3"East			
	24/06/2007	CR69_202ML09			
	Vouchered WA Herbarium: E8452				



