Perth
Urban
Bushland
Fungi

Bushland Fungi of Ellis Brook Valley Reserve

Written and produced by
Neale L. Bougher, Roz Hart,
Aruni Jayasekera & Brett Glossop
Department of Environment and Conservation – Perth Urban Bushland Fungi Project

Collecting group prepared for wet weather

Another of the five collecting groups

Recording information about the fungi

Wrap-up in the shade under the gazebo

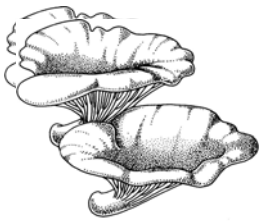
PUBF Website : www.fungiperth.org.au

Western Australian Naturalists Club

lotterywest supported

Department of Environment and Conservation

Urban Bushland Council WA Inc



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Department of Environment and Conservation (DEC)
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, Aruni Jayasekera, and Brett Glossop.

Photos and field assistance by PUBF participants

PUBF Website : www.fungiperth.org.au

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This report presents data resulting from a Perth Urban Bushland Fungi (PUBF) Project event held on 21 June 2009 at Ellis Brook Valley Reserve - an urban bushland in the Perth Hills region of southwest Western Australia. The event was organised with the assistance of the Friends of Ellis Brook Valley who provided logistical assistance as well as very welcome hot drinks and muffins after the walk. Forty three people attended the event. The participants were divided into five foray groups, led by Kirsten Tullis and Laurton McGurk; Joe Froudist and Kevn Griffiths; Phylis Robertson and Aruni Jayasekera; Roz Hart and Wayne Eddy; Jolanda Keeble and Derek Mead-Hunter; all volunteer Leaders from the PUBF Project. With assistance from the Fungi Leaders, the fungi collected were sorted and some were vouchered for permanent lodgement at the Western Australian Herbarium. Mycologist Neale Bougher identified the fungi and talked about their features and their roles in helping to keep bushlands healthy.

Ellis Brook Valley Reserve

Ellis Brook Valley Reserve is situated about 20 km east of the Perth CBD and is vested within the City of Gosnells. The Friends of Ellis Brook Valley, together with the City of Gosnells have had large roles in rehabilitating, improving and maintaining various parts of the Reserve. Barrington Quarry within the Reserve was closed in the early 1960's and has been rehabilitated with native plants. Ellis Brook Valley Reserve encompasses areas with starkly contrasting geomorphology. The eastern portion is elevated upon the lateritic landscape of the Darling Scarp and descends westwards amid exposed areas of granite down to the sands of the Swan Coastal Plain (Stephens, 1994). There is a strong rain gradient in the Reserve, with the upland part having a greater rainfall than the lowland part. The Ridge Hill shelf area on the Swan Coastal Plain contains one of the last remnants of Jarrah/Banksia woodland on ridge hill shelf sands (Ecoscape, 1997). Contrasting elevation, soil types, and a strong rain gradient at Ellis Brook Valley Reserve have developed the many different vegetation communities of Ellis Brook Valley Reserve (Stephens, 1994). Similarly it is to be expected that different fungal communities occur in the different parts of the Reserve. Numerous fungi occur in Ellis Brook Valley Reserve (as mentioned by Stephens 1994) but they have not been surveyed or identified prior to the current survey.

Ellis Brook Valley Bushland Fungi

During the survey at Ellis Brook Valley Reserve in June 2009 a total of 65 records, including 37 different fungi species were recorded, and 20 collections were vouchered into the DEC Western Australian Herbarium (Tables 1, 2). The fungi observed in the Ridge Hill Shelf area by the Blue and Red foray groups differed from those observed in other parts of Ellis Brook Valley Reserve by the Green, Orange and Yellow groups (see aerial photo). Only 5 of the 18 species on the Ridge Hill shelf area and of the 24 species in other parts were observed in both areas.

The majority of fungi observed during the survey at Ellis Brook Valley Reserve are decomposer fungi - such as the puffball *Bovista sp.* One rarely seen wood-inhabiting, decomposer fungus which was observed during this survey is Judy's Sugar Cap (*Mycena judithiana*). It is a diminutive fungus with fragile, white fruit bodies and caps no greater than 3mm across, and is a species of "sugar caps" in the section of *Mycena* aptly named *Sacchariferae*. This fungus was discovered only in 2008 and it was recently published as a species new to science (Bougher 2009a). Aside from this most recent finding at Ellis Brook Valley Reserve, *M. judithiana* is currently only known from Bold Park and the Leeuwin-Naturalist National Park near Augusta.

Judy's Sugar Cap (*Mycena judithiana*) a rarely seen diminuitive, wood-inhabiting fungus.

Eight species of mycorrhizal fungi were recorded during this survey. Mycorrhizal fungi form partnerships with native plants such as eucalypts, acacias and sheoaks. The fungi assist the plants to obtain nutrients from the soil while receiving sugars in return. The mycorrhizal fungi observed at Ellis Brook Valley Reserve vary considerably in form. For example, mycorrhizal fungi such as *Amanita umbrinella* and *Cortinarius* cf. *sublargus* produce mushroom fruit bodies, whereas *Scleroderma* and *Pisolithus* form puffball or earthball types of fruit bodies, and the possibly (though untested) mycorrhizal fungus *Sistotrema* produces an inconspicuous resupinate (skin fungus) type of fruit body. No mycorrhizal truffle fungi were observed during the survey. The lack of truffles is not surprising due to the dry conditions and because the survey was focussed on finding above-ground fungi, and it is likely that many species of native truffles occur at Ellis Brook Valley Reserve. No pathogenic fungi were observed during this survey.

Some 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. Some fungi lumped together under one name in this report may represent several species, e.g. *Mycena* sp. This is because detailed taxonomic examinations are yet to be completed. Perhaps some are undescribed species. Far more fungi are likely to occur at Ellis Brook Valley Reserve than the 37 species recorded in this inaugural survey. Fewer fungi than expected were found in the 2009 survey due to very dry weather conditions in the weeks preceding the survey.

Understanding and conserving fungi biodiversity at Ellis Brook Valley Reserve

Ellis Brook Valley Reserve has many different vegetation types that undoubtedly influence the presence, abundance and spatial distribution of fungi species at this reserve. Different fungi communities are likely to reflect differences in plant communities at the Reserve. This is highlighted by the above-mentioned differences between the fungi observed at the Ridge Hill Shelf area compared to those in other parts of the Reserve. Management and general interest in biodiversity of this reserve (as with other parts of the Perth region) in the past has primarily focussed on flora and fauna conservation. However, Flora, Fauna and Fungi need to be considered together for future management. Fungi have crucial ecological roles for maintaining bushland health, including linkages between the 3 F's. This includes beneficial mycorrhizal relationships with native plants such as eucalypts, wattles and orchids, and by providing food to native animals such as bandicoots, woylies and insects. An increased level of knowledge about the fungi at Ellis Brook Valley Reserve is required as a basis for documenting and understanding the fungi, and in turn for helping to manage and conserve the bushland's flora and fauna.

Management recommendations involving fungi include:

1. **Undertake biological surveys to build up an inventory of fungi:** Far more fungi species are likely to occur at Ellis Brook Valley Reserve than the 37 species recorded in this survey. Due to the unpredictable nature of fungi fruiting, surveys need to be conducted several times a year over many years in order to capture the biodiversity of fungi present in any given area. Such inventory data may be used to classify fungi communities at Ellis Brook Valley Reserve, to compare the fungi communities at the bushland with those at other bushlands, and as a baseline for monitoring changes in biodiversity at the bushland - e.g. any trends indicating changes 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.) and (iv) plant species associated with each of the fungi. Standard recording sheets for fungi biodiversity surveys are available on request from PUBF (DEC Western Australian Herbarium) or from the PUBF website at www.fungiperth.org.au.

3. **Georeference the surveys:** It would be desirable to georeference the surveys at Ellis Brook Valley Reserve in order 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 recognise associations between particular fungi and plants, vegetation or landscape types. A georeferencing survey kit developed by John Weaver for PUBF is available on loan from the Western Australian Herbarium.
4. **Involve community:** It is recommended that further fungi surveys, involving members of the local community, be undertaken at Ellis Brook Valley Reserve. The involvement of local community members can facilitate a greater sampling effort, a general increase in awareness about 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. The Friends of Ellis Brook Valley Reserve is a particularly active group and may be able to build up an inventory of the fungi.
5. **Determine the mycorrhizal plant partners of fungi.** To understand the mycorrhizal relationships between fungi and plants at Ellis Brook Valley Reserve, a list of known plants at the Reserve should be annotated with the likely mycorrhizal status of each plant (e.g. categories such as, ectomycorrhizal, arbuscular, epacrid, orchid and not mycorrhizal). This will help understanding of how the pattern of occurrence of various species of fungi relates to the distribution of vegetation types at Ellis Brook Valley Reserve.
6. **Determine the animal interactions with fungi:** Determine what truffle fungi are present at Ellis Brook Valley Reserve and if they and other fungi are being used as a food resource by local native mammals such as bandicoots. Such knowledge 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 Ellis Brook Valley Reserve. Insects that use fungi as food and/or habitat are also likely to be present in the bushland.
7. **Support a strategy to preserve representative landscapes:** Support a management plan that aims to preserve a variety of natural vegetation types and the diversity of plant species within the types. 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, banksia bark, twigs etc.), litter, moss beds and specific mycorrhizal partner plants. In turn, this strategy may foster fungi biodiversity and may also help to limit disease incursions at Ellis Brook Valley Reserve.
8. **Include Flora, Fauna and Fungi in signage and interpretative material at the Bushland:** Ellis Brook Valley Reserve is of local significance as a recreational reserve, and has recently improved signage and facilities to enhance public engagement and education values of the reserve. Flora, Fauna and Fungi could be included in signage and interpretative material at the reserve. This would help to promote public awareness and appreciation of the conspicuous and less conspicuous biodiversity at Ellis Brook Valley Reserve and the linkages between the 3Fs that influence the long-term health of the reserve's bushland.

References

Bougher, N.L. (2009a). Two intimately co-occurring species of *Mycena* section *Sacchariferae* in south-west Australia. *Mycotaxon* 108: 159–174.

Bougher, N.L. (2009b). Fungi of the Perth Region and Beyond. Western Australian Naturalists' Club (Inc.), Perth, Western Australia.

Ecoscape (Australia) Pty. Ltd. (1997). Ellis Brook Valley Reserve review of management plan and environmental study. Volumes 1 and 2.

Stephens, L. (1994). Ancient Origins. A natural history of Ellis Brook Valley Reserve, Martin. Friends of Ellis Brook Valley (Inc.), Perth, Western Australia.

Table 1: Ellis Brook Valley Fungi List: 21 June 2009

Life Mode Key: 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.
F map = 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 www.rbg.vic.gov.au/fungimap, and the book *Fungi Down Under* by Grey, P. and Grey, E (2005).
Page Num refers to the page number in the south-west WA fungi book (Bougher 2009b), which is available as a bound book, DVD, or for downloading from the PUBF website at www.fungiperth.org.au

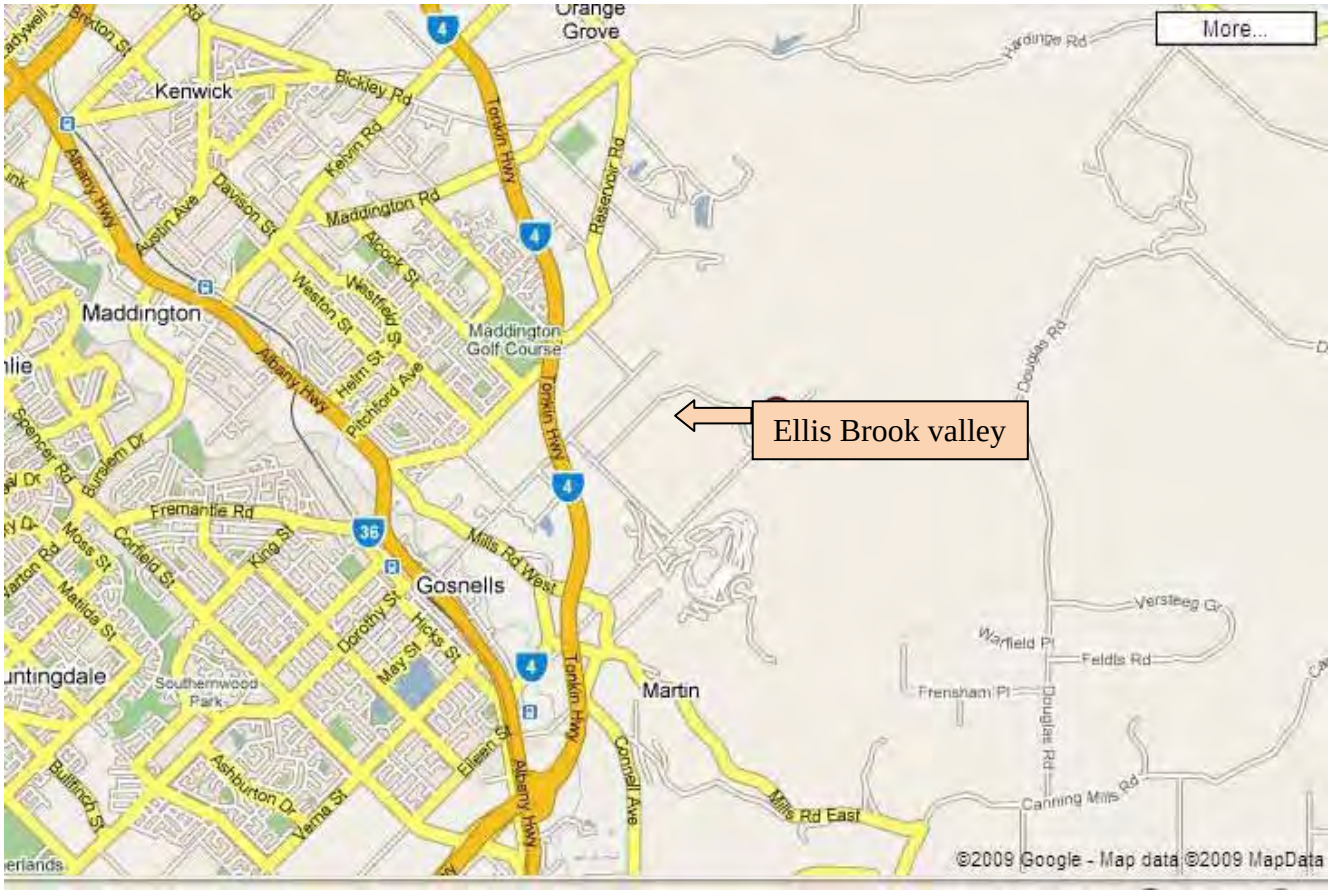
Scientific Name	Common Name	Form	Habitat	Life Mode	F map	Page Num	Specimen ID
***Agaricus* sp.**		mushroom	litter/ground	S			4098
Amanita umbrinella		mushroom	litter/ground	M		J-36	4091
***Amanita* sp.**		mushroom	litter/ground	M			4115, 4116 4117
***Bovista* sp.**		puffball	litter/ground	S			4109
***Clavulina* sp.**		coral	litter/ground	M			4084
Cortinarius* cf. *sublargus		mushroom	litter/ground	M			4101
***Cortinarius* sp.**		mushroom	litter/ground	M			4114
***Dacrymyces* sp.**		jelly fungus	dead wood	S			4110
***Exidia* sp.**		jelly fungus	dead wood	S			4076, 4118
***Galerina* sp.**		mushroom	litter/ground	S			4080
***Grandinia* sp.**		resupinate	dead wood	S			4094a
Hjortstamia crassa	**Violet Skin Fungus**	resupinate	dead wood	S		O-10	4097
***Hymenoscyphus* sp.**		cup	dead wood	S			4078
Hypoxylon bovei		resupinate	dead wood	S			4133
***Hypoxylon* sp.**		pustules	dead wood	S			4103, 4126
***Lepiota* sp.**		mushroom	litter/ground	S			4089
***Marasmius* sp.**		mushroom	litter/ground	S			4079
Mycena judithiana	**Judy's Sugar Cap**	mushroom	dead wood	S			4093
***Mycena* sp.**		mushroom	litter/ground	S			4077, 4082 4083, 4095 4106
***Phlebia* sp.**		resupinate	dead wood	S			4121
Phlebia subceracea	**Golden Splash Tooth**	resupinate	dead wood	S	Yes	O-4	4124
***Pisolithus* sp.**	**Dog Poo Fungus**	puffball	litter/ground	M		L-3	4073, 4104
***Poria* sp.**		resupinate	dead wood	S			4081, 4102 4107, 4111
Psilocybe coprophila	**Dung Cap Psilocybe**	mushroom	dung	S		J-95	4119
Pycnoporus coccineus	**Scarlet Bracket Fungus**	bracket	dead wood	S		N-8	4090, 4092 4113, 4130
Resupinatus	**Small Grey**	shell	dead wood	S		J-51	4137

subapplicatus	**Anemone**						
Scleroderma cepa		puffball	litter/ground	M			4100
***Sistotrema* sp.**		resupinate	litter/ground	S/M			4135
Stereum illudens	**Purplish Stereum**	bracket	dead wood	S		O-6	4088, 4099 4129
Stropharia semiglobata	**Dung Roundheads**	mushroom	dung	S			4074
***Trechispora* sp.**		resupinate	dead wood	S			4108
***Trichia* sp.**	**Slime Mould**	slime mould	dead wood	S			4096
***Tremella mesenterica* group**	**Yellow Brain Fungus**	jelly fungus	dead wood	S	Yes	Q-2	4086, 4131
Undetermined Agaric		mushroom	litter/ground	?			4087, 4134
Undetermined Jelly Fungus		jelly	dead wood	S			4094
Undetermined Resupinate		resupinate	dead wood	S			4075. 4085 4105, 4112 4120, 4122 4123, 4125 4127, 4128 4132
Unknown		-	-	-	-	-	4136

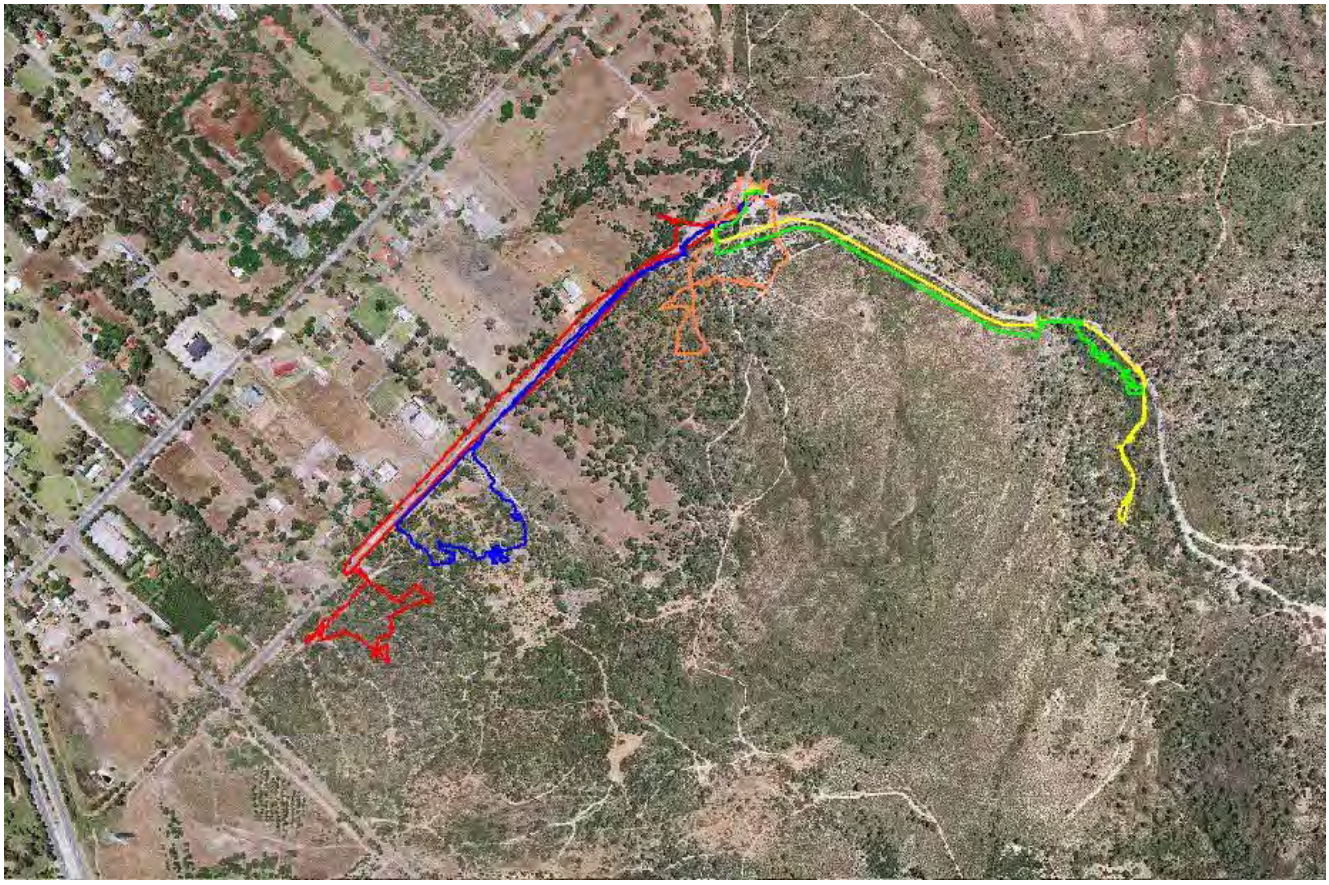
Table 2 : <u>Permanent Vouchered Specimens from Ellis Brook Valley, 2009</u>

Twenty of the fungi collected during this event were deposited into the Western Australian Herbarium with the following details:

Amanita umbrinella	Voucher ID E9330	Specimen ID 4091
Amanita sp.	Voucher ID E9329	Specimen ID 4117
Clavulina sp.	Voucher ID E9304	Specimen ID 4084
Galerina sp.	Voucher ID E9310	Specimen ID 4080
Hymenoscyphus sp.	Voucher ID E9307	Specimen ID 4078
Hypoxylon bovei	Voucher ID E9309	Specimen ID 4133
Hypoxylon sp.	Voucher ID E9316	Specimen ID 4126
Lepiota sp.	Voucher ID E9303	Specimen ID 4089
Mycena judithiana	Voucher ID E9311	Specimen ID 4093
Mycena sp.	Voucher ID E9315	Specimen ID 4083
Mycena sp.	Voucher ID E9312	Specimen ID 4082
Phlebia subceracea	Voucher ID E9313	Specimen ID 4124
Resupinatus subapplicatus	Voucher ID E9314	Specimen ID 4137
Sistotrema sp.	Voucher ID E9306	Specimen ID 4135
Stereum illudens	Voucher ID E9302	Specimen ID 4088
Stereum illudens	Voucher ID E9317	Specimen ID 4129
Trechispora sp.	Voucher ID E9305	Specimen ID 4108
Tremella mesenterica group	Voucher ID E9301	Specimen ID 4086
Undetermined Resupinate	Voucher ID E9308	Specimen ID 4075
Undetermined Resupinate	Voucher ID E9318	Specimen ID 4127



Google Map showing the location of Ellis Brook Valley in Gosnells.



Aerial photo showing the colour coded tracks walked by the five groups on 21 June 2009.

Georeferenced Tracks and Photos

Kirsten Tullis and Laurton McGurk's group, 21 June 2009

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: Ellis Brook Valley Date: 21/06/2009
Group Number: 264 Leaders Kirsten Tullis and Laurton McGurk
Photographer: Laurton McGurk

03 *Pisolithus sp.* **Dog Poo Fungus**
Specimen ID: 4073
Marri/jarrah woodland
Latitude: 32° 3' 38.1"South Longitude: 116° 1' 23.6"East
21/06/2009 Image: EB89_264LM03

06 *Stropharia semiglobata* **Dung Roundheads**
Specimen ID: 4074
On kangaroo poo near dead jarrah in jarrah/marri woodland
Latitude: 32° 3' 38.6"South Longitude: 116° 1' 24"East
21/06/2009 Image: EB89_264LM06

09 Undetermined Resupinate

Specimen ID: 4075
On dead wood near marri in jarrah/marri woodland
Latitude: 32° 3' 41.1"South Longitude: 116° 1' 24.6"East
21/06/2009 Image: EB89_264LM09
Vouchered WA Herbarium: E9308

12 *Exidia* sp.

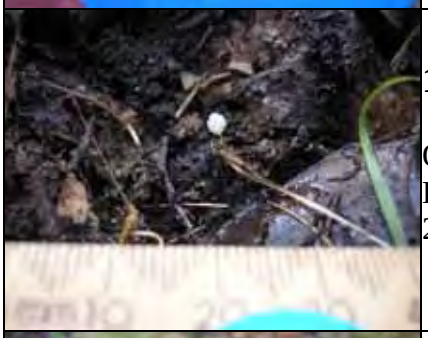
Specimen ID: 4076
On dead banksia wood in jarrah/marri woodland
Latitude: 32° 3' 41.1"South Longitude: 116° 1' 23.6"East
21/06/2009 Image: EB89_264LM12

13 *Mycena* sp.

Specimen ID: 4077
Within litter under marri leaves in jarrah/marri woodland
Latitude: 32° 3' 41.1"South Longitude: 116° 1' 23.6"East
21/06/2009 Image: EB89_264LM13

16 *Hymenoscyphus* sp.

Specimen ID: 4078
On marri nut in marri litter
Latitude: 32° 3' 41"South Longitude: 116° 1' 23.6"East
21/06/2009 Image: EB89_264LM16
Vouchered WA Herbarium: E9307



17 *Marasmius* sp.

Specimen ID: 4079
On marri nut in jarrah/marri woodland
Latitude: 32° 3' 41"South Longitude: 116° 1' 23.6"East
21/06/2009 Image: EB89_264LM17

22 *Galerina* sp.

Specimen ID: 4080
On sandy-gravelly ground near marri in jarrah/marri woodland
Latitude: 32° 3' 41.1"South Longitude: 116° 1' 23.6"East
21/06/2009 Image: EB89_264LM22
Vouchered WA Herbarium: E9310

24 *Poria* sp.

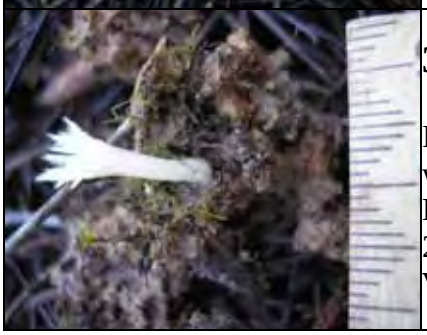
Specimen ID: 4081
In marri leaf litter in jarrah/marri woodland
Latitude: 32° 3' 41"South Longitude: 116° 1' 23.7"East
21/06/2009 Image: EB89_264LM24

25 *Mycena* sp.

Specimen ID: 4082
On bark near *Hakea trifuricata* in an excavated pit amongst marri trees in jarrah/marri woodland
Latitude: 32° 3' 41.5"South Longitude: 116° 1' 21.3"East
21/06/2009 Image: EB89_264LM25
Vouchered WA Herbarium: E9312

33 *Mycena* sp.

Specimen ID: 4083
In clay soil near *Hakea trifuricata* in an excavated pit in jarrah/marri woodland
Latitude: 32° 3' 41.5"South Longitude: 116° 1' 23.3"East
21/06/2009 Image: EB89_264LM33
Vouchered WA Herbarium: E9315



35 *Clavulina* sp.

Specimen ID: 4084
In clay soil near *Hakea trifurcata* in an excavated pit in jarrah/marri woodland
Latitude: 32° 3' 41.5"South Longitude: 116° 1' 23.3"East
21/06/2009 Image: EB89_264LM35
Vouchered WA Herbarium: E9304

Georeferenced Tracks and Photos

Joe Froudist and Kevn Griffiths's group, 21 June 2009

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: Ellis Brook Valley Date: 21/06/2009
Group Number: 265 Leaders Joe Froudist and Kevn Griffiths
Photographer: Kevn Griffiths

04 **Undetermined Resupinate**

Specimen ID: 4085
On dead wood near *Hakea sp*. in wandoo/jarrah woodland
Latitude: 32° 3' 32.5"South Longitude: 116° 1' 56.6"East
21/06/2009 Image: EB89_265KG04

05 ***Tremella mesenterica*** **group** **Yellow Brain Fungus**

Specimen ID: 4086
On dead wood near *Hakea sp*. in wandoo/jarrah woodland
Latitude: 32° 3' 32.5"South Longitude: 116° 1' 56.6"East
21/06/2009 **Fungimap Target** Image: EB89_265KG05
Vouchered WA Herbarium: E9301

06 **Undetermined Agaric**

Specimen ID: 4087
On dead wood near *Hakea* sp.in wandoo/jarrah woodland
Latitude: 32° 3' 32.5"South Longitude: 116° 1' 56.6"East
21/06/2009 Image: EB89_265KG06

08 ***Stereum illudens*** **Purplish Stereum**

Specimen ID: 4088
On dead wood near *Hakea sp*. in wandoo/jarrah woodland
Latitude: 32° 3' 32.7"South Longitude: 116° 1' 56.2"East
21/06/2009 Image: EB89_265KG08
Vouchered WA Herbarium: E9302

10 ***Lepiota*** **sp.**

Specimen ID: 4089
On ground within litter near *Calothamnus tremalium* in wandoo/jarrah woodland
Latitude: 32° 3' 32.9"South Longitude: 116° 1' 57"East
21/06/2009 Image: EB89_265KG10
Vouchered WA Herbarium: E9303

11 ***Pycnoporus coccineus*** **Scarlet Bracket Fungus**

Specimen ID: 4090
On dead wood near *Calothamnus tremalium* and marri in wandoo/jarrah woodland
Latitude: 32° 3' 34.2"South Longitude: 116° 1' 57.6"East
21/06/2009 Image: EB89_265KG11

Georeferenced Tracks and Photos

Phylis Robertson and Aruni Jayasekera's group, 21 June 2009

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: Ellis Brook Valley Date: 21/06/2009
Group Number: 266 Photographer: Aruni Jayasekera

06 *Amanita umbrinella*

Specimen ID: 4091
In sand under *Calothamnus quadrifides* in shrubland
Latitude: 32° 3' 27"South Longitude: 116° 1' 38.9"East
21/06/2009 Image: EB89_266AJ06
Vouchered WA Herbarium: **E9330**

08 *Pycnoporus coccineus* **Scarlet Bracket Fungus**

Specimen ID: 4092
On dead wood in shrubland
Latitude: 32° 3' 27"South Longitude: 116° 1' 38.9"East
21/06/2009 Image: EB89_266AJ08

13 *Mycena judithiana*

Specimen ID: 4093
On dead wood near *Calothamnus quadrifides* in shrubland
Latitude: 32° 3' 27"South Longitude: 116° 1' 38.7"East
21/06/2009 Image: EB89_266AJ13
Vouchered WA Herbarium: E9311

14 Undetermined Jelly Fungus

Specimen ID: 4094
On dead wood near *Calothamnus quadrifides* in shrubland
Latitude: 32° 3' 27"South Longitude: 116° 1' 38.7"East
21/06/2009 Image: EB89_266AJ14

16 *Grandinia* sp.

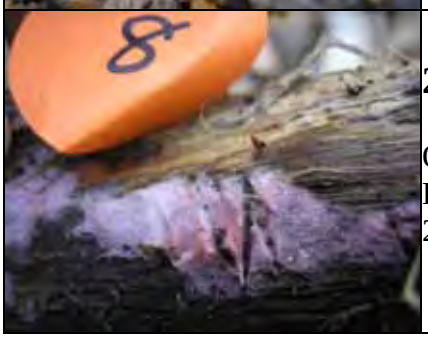
Specimen ID: 4094a
On dead wood near *Calothamnus quadrifides* in shrubland
Latitude: 32° 3' 27"South Longitude: 116° 1' 38.7"East
21/06/2009 Image: EB89_266AJ16

17 *Mycena* sp.

Specimen ID: 4095
On bark near *Calothamnus quadrifides* in shrubland
Latitude: 32° 3' 27"South Longitude: 116° 1' 38.7"East
21/06/2009 Image: EB89_266AJ17

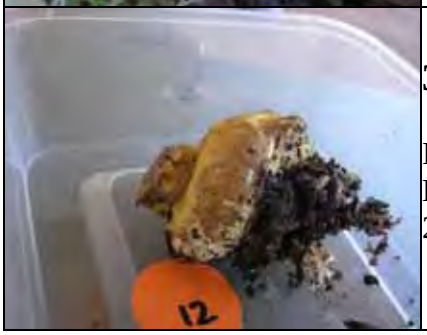
19 *Trichia* sp. **Slime Mould**

Specimen ID: 4096
In soil, leaf litter and bark in marri/wandoo woodland
Latitude: 32° 3' 27"South Longitude: 116° 1' 38.9"East
21/06/2009 Image: EB89_266AJ19



22 *Hjortstamia crassa* **Violet Skin Fungus**

Specimen ID: 4097
On dead marri bark in marri woodland
Latitude: 32° 3' 29.1"South Longitude: 116° 1' 35"East
21/06/2009 Image: EB89_266AJ22

	**27 *Agaricus* sp.** Specimen ID: 4098 In clay loam soil Latitude: 32° 3' 29.1"South Longitude: 116° 1' 35"East 21/06/2009 Image: EB89_266AJ27
	**30 *Stereum illudens*** **Purplish Stereum** Specimen ID: 4099 On dead wood in shrubland Latitude: 31° 3' 31.8"South Longitude: 116° 1' 33.6"East 21/06/2009 Image: EB89_266AJ30
	**32 *Scleroderma cepa*** Specimen ID: 4100 In clay soil in marri/wandoo woodland Latitude: 32° 3' 31.8"South Longitude: 116° 1' 33.6"East 21/06/2009 Image: EB89_266AJ32

Georeferenced Tracks and Photos

Roz Hart and Wayne Eddy's group, 21 June 2009

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: Ellis Brook Valley Date: 21/06/2009
Group Number: 267 Leaders Roz Hart and Wayne Eddy
Photographer: Wayne Eddy

03 ***Cortinarius* cf. *sublargus***

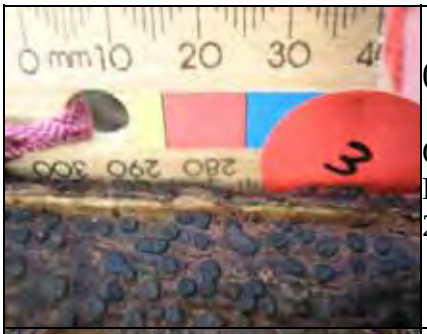
Specimen ID: 4101

On sand on the walking track
Latitude: 32° 3' 42.4"South Longitude: 116° 1' 16.18"East
21/06/2009 Image: EB89_267WE03

04 ***Poria* sp.**

Specimen ID: 4102

On dead wood in marri woodland
Latitude: 32° 3' 42.9"South Longitude: 116° 1' 16.1"East
21/06/2009 Image: EB89_267WE04



07 ***Hypoxylon*** **sp.**

Specimen ID: 4103

On dead wood in sand in marri woodland
Latitude: 32° 3' 42.4"South Longitude: 116° 1' 17.5"East
21/06/2009 Image: EB89_267WE07

10 ***Pisolithus*** **sp.** **Dog Poo Fungus**

Specimen ID: 4104

In sand in marri woodland
Latitude: 32° 3' 43.3"South Longitude: 116° 1' 18.1"East
21/06/2009 Image: EB89_267WE10

12 **Undetermined Resupinate**

Specimen ID: 4105

On dead wood under litter in marri woodland
Latitude: 32° 3' 42.9"South Longitude: 116° 1' 19.6"East
21/06/2009 Image: EB89_267WE12

16 ***Mycena*** **sp.**

Specimen ID: 4106

On dead *Xanthorrhoea preissii* in marri woodland
Latitude: 32° 3' 43.2"South Longitude: 116° 1' 20.1"East
21/06/2009 Image: EB89_267WE16

18 ***Poria*** **sp.**

Specimen ID: 4107

On burnt *Eucalyptus marginata* bark in marri woodland
Latitude: 32° 3' 43.2"South Longitude: 116° 1' 20.1"East
21/06/2009 Image: EB89_267WE18

20 ***Trechispora*** **sp.**

Specimen ID: 4108

On burnt *Eucalyptus marginata* bark in marri woodland
Latitude: 32° 3' 43.2"South Longitude: 116° 1' 20.1"East
21/06/2009 Image: EB89_267WE20
Vouchered WA Herbarium: E9305

22 ***Bovista*** **sp.**

Specimen ID: 4109

In sand in marri woodland
Latitude: 32° 3' 44.1"South Longitude: 116° 1' 18.1"East
21/06/2009 Image: EB89_267WE22

25 ***Dacrymyces*** **sp.**

Specimen ID: 4110

On *Banksia attenuata* cone in sand in marri woodland
Latitude: 32° 3' 45.0"South Longitude: 116° 1' 17.7"East
21/06/2009 Image: EB89_267WE25

26 ***Poria*** **sp.**

Specimen ID: 4111

On *Banksia attenuata* cone in marri woodland
Latitude: 32° 3' 45"South Longitude: 116° 1' 17.7"East
21/06/2009 Image: EB89_267WE26

28 **Undetermined Resupinate**

Specimen ID: 4112

On *Banksia attenuata* cone in marri woodland
Latitude: 32° 3' 45"South Longitude: 116° 1' 17.7"East
21/06/2009 Image: EB89_267WE28

33 ***Pycnoporus coccineus*** **Scarlet Bracket Fungus**

Specimen ID: 4113

On dead *Eucalyptus marginata* wood in marri woodland
Latitude: 32° 3' 46.1"South Longitude: 116° 1' 17.9"East
21/06/2009 Image: EB89_267WE33

34 ***Cortinarius*** **sp.**

Specimen ID: 4114

On dead wood in marri woodland
Latitude: 32° 3' 44.7"South Longitude: 116° 1' 15.5"East
21/06/2009 Image: EB89_267WE34

36 ***Amanita*** **sp.**

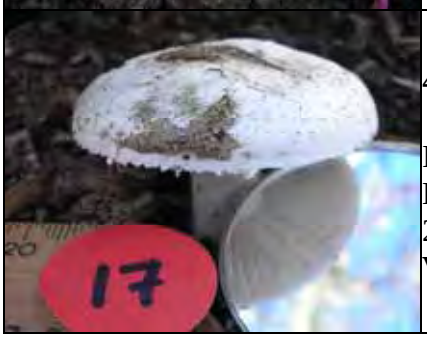
Specimen ID: 4115

On track in sand under *Stirlingia latifolia*
Latitude: 32° 3' 45"South Longitude: 116° 1' 14.3"East
21/06/2009 Image: EB89_267WE36

37 ***Amanita*** **sp.**

Specimen ID: 4116

In sand in marri woodland
Latitude: 32° 3' 45.3"South Longitude: 116° 1' 13.5"East
21/06/2009 Image: EB89_267WE37



43 ***Amanita*** **sp.**

Specimen ID: 4117

In sand under *Acacia saligna* and *Xanthorrhoea preissii*
Latitude: 32° 3' 44.5"South Longitude: 116° 1' 15.1"East
21/06/2009 Image: EB89_267WE43
Vouchered WA Herbarium: E9329

Georeferenced Tracks and Photos

Jolanda Keeble and Derek Mead-Hunter's group, 21 June 2009

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: Ellis Brook Valley Date: 21/06/2009
Group Number: 268 Leaders Jolanda Keeble and Derek Mead-Hunter
Photographer: Derek Mead-Hunter

05 ***Exidia* sp.**

Specimen ID: 4118

On marri bark in jarrah/marri woodland
Latitude: 32° 3' 39.6"South Longitude: 116° 1' 57.2"East
21/06/2009 Image: EB89_268DMH05

08 ***Psilocybe coprophila*** **Dung Cap Psilocybe**

Specimen ID: 4119

On dung in jarrah/marri woodland
Latitude: 32° 3' 39.6"South Longitude: 116° 1' 57.2"East
21/06/2009 Image: EB89_268DMH08

09 **Undetermined Resupinate**

Specimen ID: 4120
On grevillea leaf in jarrah/marri woodland
Latitude: 32° 3' 39.6"South Longitude: 116° 1' 57.2"East
21/06/2009 Image: EB89_268DMH09

11 ***Phlebia* sp.**

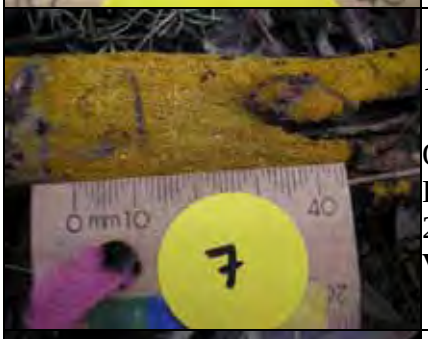
Specimen ID: 4121
On dead marri wood in jarrah/marri woodland
Latitude: 32° 3' 39.6"South Longitude: 115° 1' 57.2"East
21/06/2009 Image: EB89_268DMH11

14 **Undetermined Resupinate**

Specimen ID: 4122
On dead marri wood in jarrah/marri woodland
Latitude: 32° 3' 39.6"South Longitude: 116° 1' 57.2"East
21/06/2009 Image: EB89_268DMH14

16 **Undetermined Resupinate**

Specimen ID: 4123
On dead marri wood in jarrah/marri woodland
Latitude: 32° 3' 39.6"South Longitude: 116° 1' 57.2"East
21/06/2009 Image: EB89_268DMH16



17 ***Phlebia subceracea*** **Golden Splash Tooth**

Specimen ID: 4124
On dead marri wood in jarrah/marri woodland
Latitude: 32° 3' 39.1"South Longitude: 116° 1' 57.4"East
21/06/2009 **Fungimap Target** Image: EB89_268DMH17
Vouchered WA Herbarium: **E9313**

19 **Undetermined Resupinate**

Specimen ID: 4125
On dead wandoo leaf in jarrah/marri woodland
Latitude: 32° 3' 39.3"South Longitude: 116° 1' 57.4"East
21/06/2009 Image: EB89_268DMH19

23 ***Hypoxylon*** **sp.**

Specimen ID: 4126
On dead wandoo wood in jarrah/marri woodland
Latitude: 32° 3' 39.5"South Longitude: 116° 1' 57.4"East
21/06/2009 Image: EB89_268DMH23
Vouchered WA Herbarium: E9316

24 **Undetermined Resupinate**

Specimen ID: 4127
On dead wandoo in jarrah/marri woodland
Latitude: 32° 3' 39.1"South Longitude: 116° 1' 57.4"East
21/06/2009 Image: EB89_268DMH24
Vouchered WA Herbarium: **E9318**

26 **Undetermined Resupinate**

Specimen ID: 4128
On dead wandoo wood in jarrah/marri woodland
Latitude: 32° 3' 39.1"South Longitude: 116° 1' 57.4"East
21/06/2009 Image: EB89_268DMH26

29 ***Stereum illudens*** **Purplish Stereum**

Specimen ID: 4129
On dead wandoo in jarrah/marri woodland
Latitude: 32° 3' 39.1"South Longitude: 116° 1' 57.6"East
21/06/2009 Image: EB89_268DMH29
Vouchered WA Herbarium: **E9317**

31 ***Pycnoporus coccineus*** **Scarlet Bracket Fungus**

Specimen ID: 4130
On marri bark in jarrah/marri woodland
Latitude: 32° 3' 36.7"South Longitude: 116° 1' 57.1"East
21/06/2009 Image: EB89_268DMH31

36 ***Tremella mesenterica*** **group** **Yellow Brain Fungus**

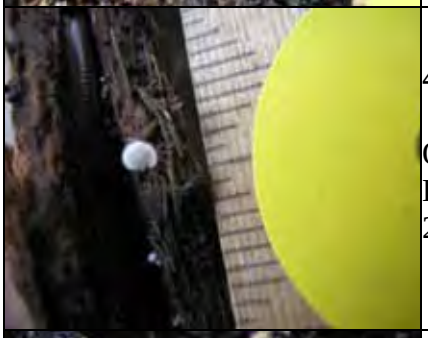
Specimen ID: 4131
On dead calothamnus wood in jarrah/marri woodland
Latitude: 32° 3' 36.6"South Longitude: 116° 1' 57.1"East
21/06/2009 **Fungimap Target** Image: EB89_268DMH36

37 **Undetermined Resupinate**

Specimen ID: 4132
On dead marri wood in jarrah/marri woodland
Latitude: 32° 3' 36.5"South Longitude: 116° 1' 57.7"East
21/06/2009 Image: EB89_268DMH37

41 ***Hypoxylon bovei***

Specimen ID: 4133
On the underside of dead marri wood in jarrah/marri woodland
Latitude: 32° 3' 36.5"South Longitude: 116° 1' 57.7"East
21/06/2009 Image: EB89_268DMH41
Vouchered WA Herbarium: **E9309**



45 **Undetermined Agaric**

Specimen ID: 4134
On marri bark in jarrah/marri woodland
Latitude: 32° 3' 36.5"South Longitude: 116° 1' 57.7"East
21/06/2009 Image: EB89_268DMH45

47 ***Sistotrema* sp.**

Specimen ID: 4135
Under marri litter in jarrah/marri woodland
Latitude: 32° 3' 36.2"South Longitude: 116° 1' 57.9"East
21/06/2009 Image: EB89_268DMH47
Vouchered WA Herbarium: **E9306**

50 **Unknown**

Specimen ID: 4136
On marri leaf in jarrah/marri woodland
Latitude: 32° 3' 34.6"South Longitude: 116° 1' 58.5"East
21/06/2009 Image: EB89_268DMH50

51 ***Resupinatus subapplicatus*** **Small Grey Anemone**

Specimen ID: 4137
On dead marri wood in jarrah/marri woodland
Latitude: 32° 3' 39.3"South Longitude: 116° 1' 57.4"East
21/06/2009 Image: EB89_268DMH51
Vouchered WA Herbarium: E9314