Perth
Urban
Bushland
Fungi

Bushland Fungi of Paruna Wildlife Sanctuary

Written and produced by

Neale L. Bougher, Roz Hart,
Aruni Jayasekera & Brett Glossop

Department of Environment and Conservation – Perth Urban Bushland Fungi Project

Learning about the fungi collected

Foraying group at Paruna

Examining the fungi collected

The finds of the day attract great interest

PUBF Website : www.fungiperth.org.au

Western Australian Naturalists Club

lotterywest supported

Department of Environment and Conservation

Urban Bushland Council WA Inc

Perth Urban Bushland Fungi

Bushland Fungi of Paruna Wildlife Sanctuary

Written and produced by

Neale L. Bougher, Roz Hart,

Aruni Jayasekera & Brett Glossop

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

This report may be quoted as: Bougher, N.L., Hart, R., Jayasekera, A., & Glossop, B. (2009). Bushland Fungi of Paruna Wildlife Sanctuary. Perth Urban Bushland Fungi Project Report.

This report presents data from the Perth Urban Bushland Fungi (PUBF) Project event held on 14 June 2009 at Paruna Wildlife Sanctuary - a privately managed bushland area in the Perth hills region of southwest Western Australia. The event was organised with the assistance of the Australian Wildlife Conservancy (AWC) who manage the Sanctuary. The event was supported by the Darling Range Branch of the Western Australian Naturalists' Club, many of whose members participated in the fungi walk.

Forty six people attended the event. The participants were divided into five foray groups, led by Mark Brundrett, Laurton McGurk and Derek Mead-Hunter; Kevn Griffiths and Phylis Robertson; Margaret Langley and Tanja Lambe; Joe Froudist and Kirsten Tullis; and Roz Hart and Jolanda Keeble; all volunteer Leaders from the PUBF Project. As it was an unseasonally warm and sunny day, the fungi collected were examined on the outdoor tables and there was great interest and discussion about the fungi found in this area. Mycologist Neale Bougher identified the fungi and talked about their features and their roles in helping to keep bushlands healthy. After lunch, the fungi leaders and Neale Bougher went to the Paruna research shed where some of the fungi were described and vouchered for permanent lodgement at the Western Australian Herbarium.

Paruna Wildlife Sanctuary

Paruna Wildlife Sanctuary is situated in the Avon Valley east of Perth in the Shire of Swan, and occurs mainly on laterite duricrust (*the thin hard layer on or near the surface of soil, formed in semiarid climates by precipitation of salts*) on the western edge of the Darling Plateau. The Sanctuary spans about 2,000 hectares of bushland and forms a wildlife corridor linking the Avon Valley National Park and Walyunga National Park. Paruna has four major vegetation complexes including open forest, woodland, shrubland and heathland (Paruna Sanctuary Ltd., Karakamia Sanctuary Ltd., 1998). Wandoo (*Eucalyptus wandoo*) and powderbark wandoo (*Eucalyptus accedens*) predominate in woodland over much of the area. Paruna Wildlife Sanctuary has been managed by the Australian Wildlife Conservancy since 1998. Fencing and baiting programs since that time working to eliminate feral species have eliminated or reduced foxes and cats at Paruna. As a result the populations of some native mammals such as western quolls have increased. A total of 16 mammal species are known to occur at Paruna; many more species are thought to have become locally extinct in recent decades.

A major aim of Paruna Wildlife Sanctuary is to re-establish natural plant and animal communities and to contribute to recovery programs for WA's threatened wildlife species (Paruna Sanctuary Ltd., Karakamia Sanctuary Ltd. (1998). Fungi directly interact with native plant and animal communities and therefore have significant roles to play in determining the success or otherwise of this aim. For example, in recent years, woylies (*Bettongia penicillata*) have been translocated into Paruna. Woylies are mycophagous, i.e. they feed on fungi (Claridge *et al*., 1996; Maser *et al*, 2008), and studies are now underway to understand their ecology, including how their fungal diet may influence the health and size of their populations.

Paruna Wildlife Sanctuary Fungi

During the survey at Paruna Wildlife Sanctuary in June 2009 a total of 46 records, including 29 different fungi species were recorded. Of these fungi species,17 collections were vouchered into the DEC Western Australian Herbarium (Tables 1, 2).

The majority of fungi observed during the survey at Paruna Wildlife Sanctuary were decomposer fungi - such as the Gregarious Bells *Campanella gregaria* found on the underside of fallen wood. Only two species of beneficial mycorrhizal fungi were recorded – of the genera *Tomentella* and *Royoungia*. They represent very different forms of fungi. *Tomentella* cf. *pilosa* is not a conspicuous fungus as it is a fully resupinate fungus appearing as a mould-like growth on old dead logs or fallen wood. It usually only occurs on the underside of logs and often favours burnt wood. *Royoungia boletoides* is also an inconspicuous fungus, in its case because it is a truffle and occurs under the litter. However once it is uncovered this fungus is extremely conspicuous because its surface is bright golden yellow. The fruit bodies are up to 35 mm, broad, ellipsoid to subglobose, and with blunt undulations especially in lower part. The internal structure is pale yellow to citrine yellow and minutely chambered. Interestingly, *Royoungia boletoides* is a truffle relative of the boletes (mushrooms with a sponge-like tubular structure instead of gills). The Paruna collection provides a significant clue to this relationship – a clue hitherto not recorded in the scientific literature. The peridium (surface) of the Paruna truffles displayed a distinct blue colouration when handled or bruised. A similar blueing reaction occurs in many of the boletes. *Royoungia boletoides* was first discovered during expeditions in Queensland in the late 1980's and early 1990's (Castellano *et al.*, 1992). The Paruna collection is the first confirmed collection of this fungus in Western Australia. Three collections tentatively identified as *Royoungia* sp. from the Warren Region in south west WA (species no. WDP 10, Robinson *et al*, 2007) have yet to be confirmed.

Golden Orbs (*Royoungia boletoides*) – the first confirmed collection of this truffle species in WA

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. This is because detailed taxonomic examinations are yet to be completed, or perhaps some are undescribed species. Far more fungi will occur at Paruna Wildlife Sanctuary than the 29 species recorded in this inaugural survey. Fewer fungi than may have been expected were found in the 2009 survey due to very dry weather conditions in the weeks preceding the 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. Most of the fungi observed during this survey have tough, persistent fruit bodies, e.g. bracket fungi with a hard consistency such as *Fomitiporia robusta*. Only a few types of fleshy mushroom-like fungi were observed, e.g. *Psathyrella* sp. This indicates how dry conditions were at the time of survey. Fleshy fungi respond to rainfall and rapidly emerge. Their fruit bodies usually do not persist for long after rainfall. The main types of fleshy fungi observed during this survey were those that emerge from logs or substantial dead woody material, e.g. Gregarious Bells *Campanella gregaria*, or from dung, e.g. the Dung Cap Psilocybe *Psilocybe coprophila*. Presumably the logs or dung may have been able to retain some moisture within them during the dry conditions, and this enabled the wood-inhabiting and dung-inhabiting fungi to remain sufficiently active to enable fruiting to occur. No pathogenic fungi were observed during this survey, but it is likely that as many of them would occur at Paruna as occur elsewhere in similar areas. The lack of truffle collections aside from *Royoungia boletoides* obtained in this survey is not surprising due to the dry conditions and because the survey focussed on finding above-ground fungi. It is likely that many species of native truffles occur in the bushland at Paruna Wildlife Sanctuary such as is the case at the nearby Karakamia Wildlife Sanctuary (Bougher 2006) and other parts of the Darling Scarp.

Management recommendations for understanding and conserving the diversity and ecological functions of fungi at Paruna Wildlife Sanctuary

Conservation of biodiversity and general interest in the Paruna Wildlife Sanctuary has primarily focussed on flora and fauna until recently. The major aims of Paruna Sanctuary (Paruna Sanctuary Ltd., Karakamia Sanctuary Ltd. (1998) include re-establishment of natural plant and animal communities and to contribute to recovery programs for WA's threatened wildlife species. Fungi directly interact with native plant and animal communities and therefore have significant roles to play in determining the success or otherwise of such aims. The bushland's Flora, Fauna and Fungi need to be considered together for future management of the bushland's long-term health. An increased level of knowledge about the fungi at Paruna Wildlife Sanctuary 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. Of particular interest at Paruna Wildlife Sanctuary is the need to understand the role of fungi as a food source for sustaining healthy populations of mycophagous (fungus-feeding) mammals such as woylies, quokkas and bandicoots.

Management recommendations involving fungi include:

1. **Undertake biological surveys to build up an inventory of fungi and to monitor changes in relation to management and revegetation operations:** Broader surveys undertaken elsewhere in similar areas of woodlands and unpublished current studies suggest that many more fungi species occur in Paruna Wildlife Sanctuary than the 29 species recorded in the current survey. The fruiting of fungi is very weather dependent and one season will not provide sufficient data to document the fungi of any particular area. Due to 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 may be used to classify fungi communities in the Paruna Wildlife Sanctuary, and may serve as a baseline for monitoring changes in biodiversity in the area, e.g. any trend towards changes in the diversity of significant ecological groups of fungi such as mycorrhizal truffle species, and the effects of major disturbances such as fire. It is also of significance to help determine if revegetation efforts have been successful at Paruna. By monitoring the diversity of fungi in revegetation over time, it becomes possible to determine if a diversity of native fungi approaching towards the diversity of the original vegetation is returning in revegetation areas.
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 website at www.fungiperth.org.au.
3. **Georeference the surveys:** It is desirable to georeference future surveys at Paruna Wildlife Sanctuary 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, or vegetation and 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 Avon community, be undertaken at the Paruna Wildlife Sanctuary. 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.
5. **Determine the mycorrhizal plant partners of fungi.** Paruna Wildlife Sanctuary has a wide range of vegetation types that undoubtedly influence the presence, abundance and spatial

distribution of fungi species in the bushland. Vegetation-fungi patterns could be clarified if surveys of fungi were carried out annually over many years. To understand the beneficial mycorrhizal relationships between particular fungi and particular plants at the Paruna Wildlife Sanctuary, a list of known plants at the bushland 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 and mammals at Paruna Wildlife Sanctuary. Of particular significance at Paruna is to recognize that over 1,000 species of native truffles may occur in Australia (Bougher and Lebel 2001) and that all truffle fungi are considered to be mycorrhizal partners of native plants. There is need to better understand this truffle diversity, the patterns in their mycorrhizal relationships, and how they may impinge on the survival of local populations of mycophagous (fungus-feeding) mammals.

6. **Understand fungi-mammal interdependencies:** A number of mycophagous (fungus-feeding) mammals occur in the Avon Valley or are believed once present but now extinct in the region (Paruna Sanctuary Ltd., Karakamia Sanctuary Ltd. 1998). These include woylies, quokkas, and quendas (southern brown bandicoot). Translocation of such mammals into Paruna Wildlife Sanctuary is already being implemented (at least woylies) towards achieving one of Paruna's major aims – re-establishment of natural plant and animal communities and to contribute to recovery programs for WA's threatened wildlife species. Paruna may be a highly significant refuge for woylies as their populations have declined in many other areas (Wayne *et al*. 2006). Key questions involving fungi-mammal interdependencies that require investigation include: Which mammals use fungi as a food resource at Paruna? What species of fungi are consumed? How does the relationship change seasonally? To what degree do fungi contribute to and correlate with the health and size of mycophagous mammal populations? What are the plants associated in partnership with the mycorrhizal truffles? What is the diversity and abundance of fungi present at Paruna and how does it compare with other linkage and surrounding areas? Are suitable fungi present to sustain particular species of mammals targeted for current and future translocations into Paruna? Do translocated mammals rapidly find a diverse range of truffle fungi upon their translocation into Paruna? What could be the ecological consequences on bushland ecology if mammal populations expanded to a level that over-exploited the fungi?

7. **Include Flora, Fauna and Fungi in signage and interpretative material:** To promote public awareness and appreciation of the conspicuous and less conspicuous biodiversity at the Paruna Wildlife Sanctuary and the linkages between the 3Fs that influence the long-term health of the bushland.

8. **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 which in turn may foster flora and fauna that interact with the fungi.

References

Bougher, N.L. (2006). Identity and taxonomy of truffle fungi from an initial survey at Karakamia Wildlife Sanctuary. Department of Environment and Conservation, Kensington.

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

Bougher, N.L. & Lebel, T. (2001). Sequestrate (truffle-like) fungi of Australia and New Zealand. Australian Systematic Botany 14, 439-484.

Castellano, M. A., Trappe, J. M., and Malajczuk, N. (1992). Australasian truffle-like fungi. III. *Royoungia* gen. nov. and *Mycoamaranthus* gen. nov. (Basidiomycotina). *Australian Systematic Botany* 5, 613-616.

Claridge, A.W., Castellano, M.A., & Trappe, J.M. (1996) Fungi as a food resource for mammals in Australia. In: Fungi of Australia: Volume 1B, Introduction- Fungi in the Environment, Australian Biological Resources Study, Canberra.

Paruna Sanctuary Ltd., Karakamia Sanctuary Ltd. (1998). Paruna Sanctuary Management Plan.

Maser C., Claridge A.W. and Trappe J.M. (2008). Trees, truffles, and beasts: how forests function. Rutgers University Press: New Brunswick.

Robinson, R., Fielder, J., Maxwell, M., Bougher, N., Sicard, W., & Wayne, A. (2007). Preliminary survey of hypogeous fungi in the Upper Warren region. Department of Environment and Conservation report.

Wayne, A., Wilson, I., Northin, J., Barton, B., Gillard, J., Morris, K., Orell, P., Richardson, J. (2006). Situation report and project proposal: Identifying the cause(s) for the recent declines of woylies in south-western Australia: A report to the Department of Conservation and Land Management Corporate Executive.

Table 1: Paruna Wildlife Sanctuary Fungi List: 14 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 2009), which is available as a bound book, DVD, or for downloading from the PUBF website at www.fungiperth.org.au

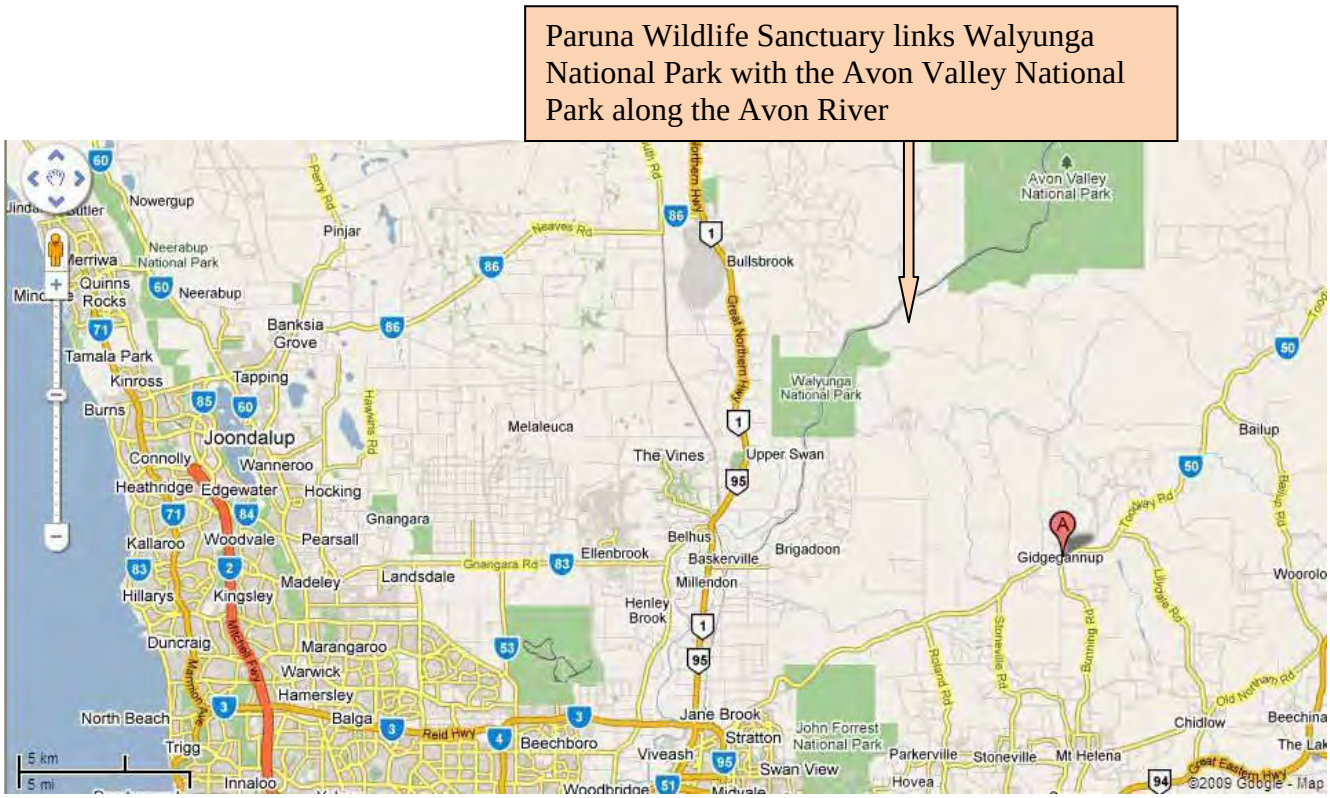
Scientific Name	Common Name	Form	Habitat	Life Mode	F map	Page Num	Specimen ID
Campanella gregaria	**Gregarious Bells**	shell	dead wood	S		J-66	4069
Ceratiomyxa fruticulosa	**Icicle Fairy Fans**	slime mould	dead wood	S	Yes	Z-2	4030
Coltriciella dependens		mushroom	litter/ground	S		N-10	4031, 4040
Fomitiporia robusta	**Wood Layered Bracket Fungus**	bracket	dead wood	S		N-6	4038
Fomitopsis lilacinogilva	**Lilac Bracket Fungus**	bracket	dead wood	S		N-2	4037, 4061
Fuligo septica	**Dog Vomit Slime Mould**	slime mould	dead wood	S	Yes	Z-4	4044
Hymenoscyphus sp.		cup	dead wood	S			4043
Hjortstamia crassa	**Violet Skin Fungus**	resupinate	dead wood	S		O-10	4048, 4050
***Marasmius* sp.**		mushroom	litter/ground	S			4034
***Phlebia* sp.**		resupinate	dead wood	S			4028, 4032 4058, 4067 4071
***Pleurotellus* sp.**		shell	dead wood	S			4033, 4042
***Poria* sp.**		resupinate	dead wood	S			4051
***Psathyrella* sp.**		mushroom	litter/ground	S			4045
Psilocybe coprophila	**Dung Cap Psilocybe**	mushroom	litter/ground	S		J-95	4056
***Psilocybe* sp.**		mushroom	litter/ground	S			4062
Pycnoporus coccineus	**Scarlet Bracket Fungus**	bracket	dead wood	S		N-8	4068
Royoungia boletoides		truffle	underground	S			4049
Schizophyllum commune	**Split Gill Fungus**	shell	dead wood	S	Yes	R-2	4047
Stereum illudens	**Purplish Stereum**	bracket	dead wood	S		O-6	4036, 4060 4064
***Stereum* sp.**		bracket	dead wood	S			4057
Stropharia semiglobata	**Dung**	mushroom	dung	S			4026, 4041

	Roundheads						4063, 4070
Tomentella* cf. *pilosa		resupinate	dead wood	M			4072
Undetermined Agaric		mushroom	litter/ground	?			4052, 4054
Undetermined Jelly Fungus		jelly	dead wood	S			4053
Undetermined Myxomycete	**Slime Mould**	slime mould	dead wood	S			4029, 4046
Undetermined Polypore		bracket	dead wood	S			4066
Undetermined Resupinate		resupinate	dead wood	S			4027, 4039 4065
Undetermined Truffle		truffle	litter/ground	M			4035
Unknown							4055, 4059

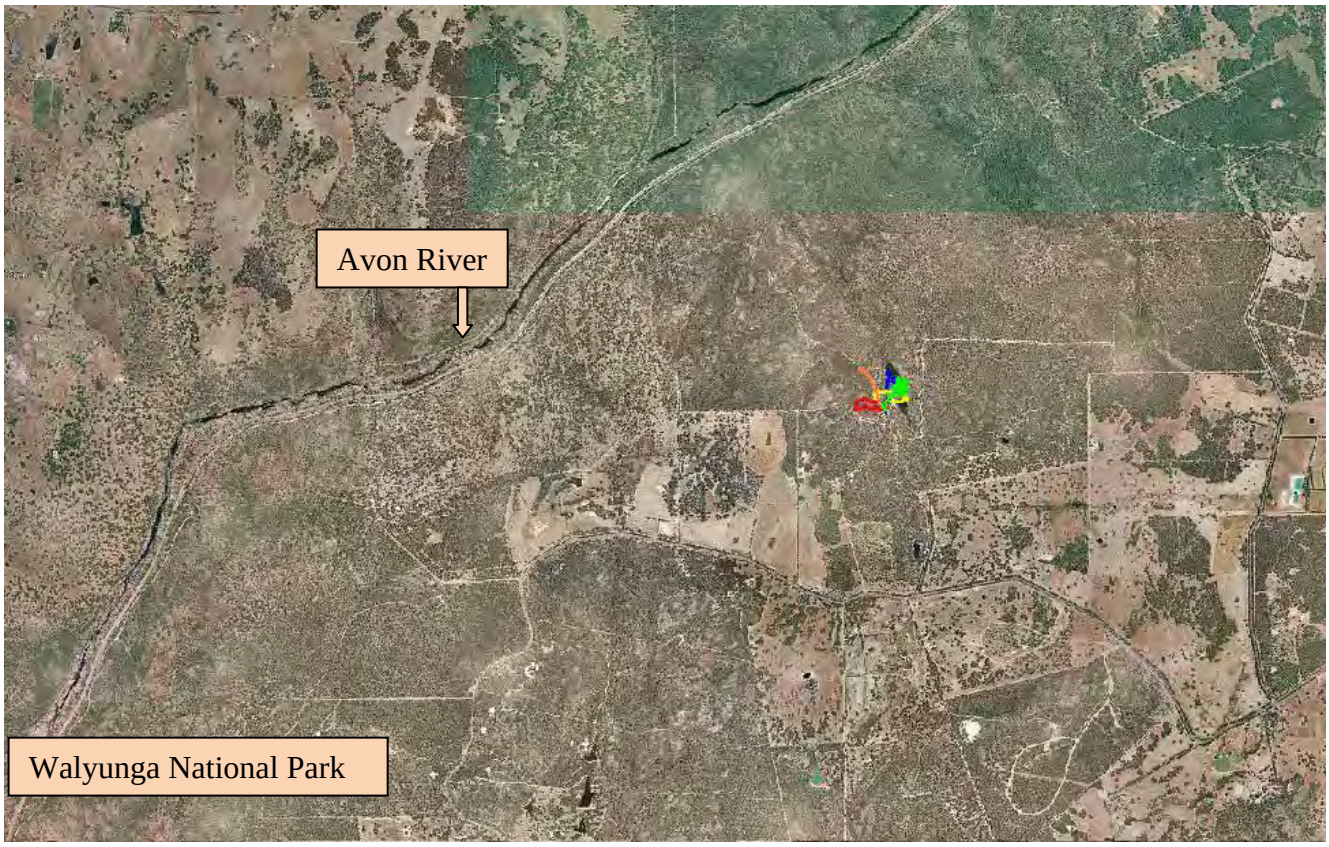
Table 2 : Permanent Vouchered Specimens from Paruna Wildlife Sanctuary, 2009

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

Campanella gregaria	Voucher ID E9288	Specimen ID 4069
Coltriciella dependens	Voucher ID E9293	Specimen ID 4031
Fomitopsis lilacinogilva	Voucher ID E9283	Specimen ID 4061
Hjortstamia crassa	Voucher ID E9295	Specimen ID 4050
Hymenoscyphus sp.	Voucher ID E9297	Specimen ID 4043
Phlebia sp.	Voucher ID E9285	Specimen ID 4028
Phlebia sp.	Voucher ID E9284	Specimen ID 4032
Pleurotellus sp.	Voucher ID E9289	Specimen ID 4033
Poria sp.	Voucher ID E9291	Specimen ID 4051
Psathyrella sp.	Voucher ID E9292	Specimen ID 4045
Pycnoporus coccineus	Voucher ID E9287	Specimen ID 4068
Royoungia boletoides	Voucher ID E9299	Specimen ID 4049
Schizophyllum commune	Voucher ID E9290	Specimen ID 4047
Stropharia semiglobata	Voucher ID E9282	Specimen ID 4026
Stropharia semiglobata	Voucher ID E9286	Specimen ID 4041
Tomentella cf. *pilosa*	Voucher ID E9298	Specimen ID 4072
Undetermined Myxomycete	Voucher ID E9296	Specimen ID 4046



Google Map showing the location of Paruna Wildlife Sanctuary in the Perth Hills.



Aerial photo showing the colour coded tracks walked by the five groups on 14 June 2009.

Georeferenced Tracks and Photos

Mark Brundrett, Laurton McGurk and Derek Mead-Hunter's group, 14 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 : Paruna Date 14/6/2009
Group Number: 259 Leaders Mark Brundrett, Laurton McGurk and Derek Mead-Hunter
Photographer: Laurton McGurk

09 *Stropharia semiglobata* **Dung Roundheads**

Specimen ID: 4026

On dung in marri/wandoo woodland
Latitude: 31° 41' 43.9"South Longitude: 116° 8' 2.9"East
14/06/2009 Image: PA88_259LM09

Vouchered WA Herbarium: E9282

10 Undetermined Resupinate

Specimen ID: 4027

On dead marri wood in marri/wandoo woodland
Latitude: 31° 41' 43.3"South Longitude: 116° 8' 2.8"East
14/06/2009 Image: PA88_259LM10

18 *Phlebia* sp.

Specimen ID: 4028

On dead marri wood in marri/wandoo woodland
Latitude: 31° 41' 43.5"South Longitude: 116° 8' 2.6"East
14/06/2009 Image: PA88_259LM18
Vouchered WA Herbarium: E9285

22 Undetermined Myxomycete **Slime Mould**

Specimen ID: 4029

On dead wood
Latitude: 31° 41' 45.1"South Longitude: 116° 8' 1"East
14/06/2009 Image: PA88_259LM22

23 *Ceratiomyxa fruticulosa* **Icicle Fairy Fans**

Specimen ID: 4030

On dead marri wood in marri/wandoo woodland
Latitude: 31° 41' 45.1"South Longitude: 116° 8' 1"East
14/06/2009 **Fungimap Target** Image: PA88_259LM23

25 *Coltriciella dependens*

Specimen ID: 4031

On dead grass tree in marri/wandoo woodland
Latitude: 31° 41' 43.9"South Longitude: 116° 8' 1.6"East
14/06/2009 Image: PA88_259LM25
Vouchered WA Herbarium: **E9293**

28 *Phlebia* sp.

Specimen ID: 4032

On dead marri in marri/wandoo woodland
Latitude: 31° 41' 43.9"South Longitude: 116° 8' 1.6"East
14/06/2009 Image: PA88_259LM28
Vouchered WA Herbarium: E9284

32 *Pleurotellus* sp.

Specimen ID: 4033

On dead marri in marri/wandoo woodland
Latitude: 31° 41' 43.2"South Longitude: 116° 8' 1.7"East
14/06/2009 Image: PA88_259LM32
Vouchered WA Herbarium: E9289

35 *Marasmius* sp.

Specimen ID: 4034

On leaf litter in marri/wandoo woodland
Latitude: 31° 41' 42.6"South Longitude: 116° 8' 1.6"East
14/06/2009 Image: PA88_259LM35

37 Undetermined Truffle

Specimen ID: 4035

On dead wood under jarrah in marri/wandoo woodland
Latitude: 31° 41' 42.6"South Longitude: 116° 8' 1.6"East
14/06/2009 Image: PA88_259LM37

38 *Stereum illudens* **Purplish Stereum**

Specimen ID: 4036

On dead eucalypt branch in marri/wandoo woodland
Latitude: 31° 41' 50.6"South Longitude: 116° 8' .7"East
14/06/2009 Image: PA88_259LM38
Vouchered WA Herbarium: E9281

Georeferenced Tracks and Photos

Kevn Griffiths and Phylis Robertson's group, 14 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: Paruna Date: 14/06/2009
Group Number: 260 Leaders Kevn Griffiths and Phylis Robertson
Photographer: Phylis Robertson

02 ***Fomitopsis lilacinogilva*** **Lilac Bracket Fungus**
Specimen ID: 4037

On dead marri wood in marri woodland
Latitude: 31° 41' 46.5"South Longitude: 116° 8' 1.8"East
14/06/2009 Image: PA88_260PR02

04 ***Fomitiporia robusta*** **Wood Layered Bracket Fungus**
Specimen ID: 4038

On dead wandoo wood in marri woodland
Latitude: 31° 41' 46.5"South Longitude: 116° 8' 2.9"East
14/06/2009 Image: PA88_260PR04

05 **Undetermined Resupinate**

Specimen ID: 4039

On dead wood in marri woodland
Latitude: 31° 41' 45.1"South Longitude: 116° 8' 2.9"East
14/06/2009 Image: PA88_260PR05

06 ***Coltriciella dependens***

Specimen ID: 4040

On dead marri wood in marri woodland
Latitude: 31° 41' 45.1"South Longitude: 116° 8' 2.9"East
14/06/2009 Image: PA88_260PR06

07 ***Stropharia semiglobata*** **Dung Roundheads**

Specimen ID: 4041

On wallaby dung in marri woodland
Latitude: 31° 41' 45.1"South Longitude: 116° 8' 2.6"East
14/06/2009 Image: PA88_260PR07
Vouchered WA Herbarium: **E9286**

08 ***Pleurotellus*** **sp.**

Specimen ID: 4042

On marri bark in marri woodland
Latitude: 31° 41' 44.9"South Longitude: 116° 8' 2.7"East
14/06/2009 Image: PA88_260PR08

09 ***Hymenoscyphus*** **sp.**

Specimen ID: 4043

On marri bark in marri woodland
Latitude: 31° 41' 44.9"South Longitude: 116° 8' 2.7"East
14/06/2009 Image: PA88_260PR09
Vouchered WA Herbarium: E9297

10 ***Fuligo septica*** **Dog Vomit Slime Mould**

Specimen ID: 4044

On dead, burnt marri wood in marri woodland
Latitude: 31° 41' 44.7"South Longitude: 116° 8' 4.3"East
14/06/2009 **Fungimap Target** Image: PA88_260PR10

11 ***Psathyrella* sp.**

Specimen ID: 4045
On ground in clay mud at the edge of dam in marri woodland
Latitude: 31° 41' 44.7"South Longitude: 116° 8' 4.7"East
14/06/2009 Image: PA88_260PR11
Vouchered WA Herbarium: E9292

13 **Undetermined Myxomycete** **Slime Mould**

Specimen ID: 4046
On marri nut on the ground in marri woodland
Latitude: 31° 41' 44.7"South Longitude: 116° 8' 4.7"East
14/06/2009 Image: PA88_260PR13
Vouchered WA Herbarium: E9296

14 ***Schizophyllum commune*** **Split Gill Fungus**

Specimen ID: 4047
On dead christmas tree in woodland
Latitude: 31° 41' 45.7"South Longitude: 116° 8' 5.6"East
14/06/2009 **Fungimap Target** Image: PA88_260PR14
Vouchered WA Herbarium: E9290

16 ***Hjortstamia crassa*** **Violet Skin Fungus**

Specimen ID: 4048
On dead marri wood in marri woodland
Latitude: 31° 41' 45.7"South Longitude: 116° 8' 5.2"East
14/06/2009 Image: PA88_260PR16

18 ***Royoungia boletoides*** **Golden Orb Truffle**

Specimen ID: 4049
In litter in marri woodland
Latitude: 31° 41' 45.6"South Longitude: 116° 8' 3.8"East
14/06/2009 Image: PA88_260PR18
Vouchered WA Herbarium: **E9299**

Georeferenced Tracks and Photos

Margaret Langley and Tanja Lambe's group, 14 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: Paruna Date: 14/06/2009
Group Number: 261 Leaders Margaret Langley and Tanja Lambe
Photographer: Tanja Lambe

07 ***Hjortstamia crassa*** **Violet Skin Fungus**
Specimen ID: 4050
On dead wandoo branch in wandoo woodland
Latitude: 31° 41' 41.9"South Longitude: 116° 7' 56.1"East
14/06/2009 Image: PA88_261TL07
Vouchered WA Herbarium: **E9295**

08 ***Poria*** **sp.**
Specimen ID: 4051
On dead wandoo branch in wandoo woodland
Latitude: 31° 41' 41.7"South Longitude: 116° 7' 55.8"East
14/06/2009 Image: PA88_261TL08
Vouchered WA Herbarium: **E9291**

10 **Undetermined Agaric**

Specimen ID: 4052

On dead xanthorrhoea in wandoo woodland
Latitude: 31° 41' 41.7"South Longitude: 116° 7' 56.1"East
14/06/2009 Image: PA88_261TL10

11 **Undetermined Jelly Fungus**

Specimen ID: 4053

On dead xanthorrhoea in wandoo woodland
Latitude: 31° 41' 41.7"South Longitude: 116° 7' 55.8"East
14/06/2009 Image: PA88_261TL11

13 **Undetermined Agaric**

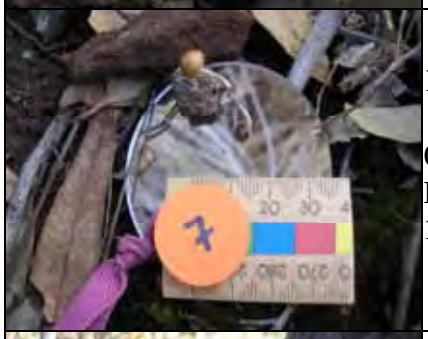
Specimen ID: 4054

On dead xanthorrhoea in wandoo woodland
Latitude: 31° 41' 41.9"South Longitude: 116° 7' 55.7"East
14/06/2009 Image: PA88_261TL13

15 **Mycelium on dead wood**

Specimen ID: 4055

On dead wood within litter in wandoo woodland
Latitude: 31° 41' 41.7"South Longitude: 116° 7' 55.5"East
14/06/2009 Image: PA88_261TL15



16 ***Psilocybe coprophila*** **Dung Cap Psilocybe**

Specimen ID: 4056

On dung in wandoo woodland
Latitude: 31° 41' 41.7"South Longitude: 116° 7' 55.6"East
14/06/2009 Image: PA88_261TL16

17 ***Stereum*** **sp.**

Specimen ID: 4057

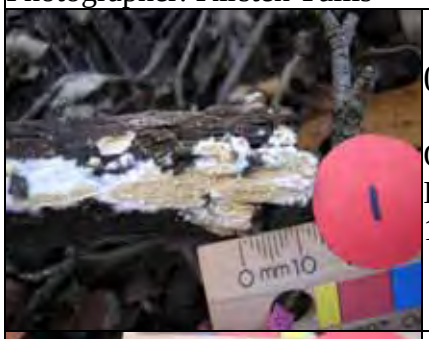
On dead wandoo wood in wandoo woodland
Latitude: 31° 41' 41.5"South Longitude: 116° 7' 55.5"East
14/06/2009 Image: PA88_261TL17

Georeferenced Tracks and Photos

Joe Froudist and Kirsten Tullis's group, 14 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: Paruna Date: 14/06/2009
Group Number: 262 Leaders Joe Froudist and Kirsten Tullis
Photographer: Kirsten Tullis



06 ***Phlebia*** **sp.**

Specimen ID: 4058

On dead wood in wandoo/jarrah woodland
Latitude: 31° 41' 48.8"South Longitude: 116° 7' 59.2"East
14/06/2009 Image: PA88_262KT06

07 **Unknown**

Specimen ID: 4059

On dead wood in wandoo/jarrah woodland
Latitude: 31° 41' 48.8"South Longitude: 116° 7' 59.2"East
14/06/2009 Image: PA88_262KT07

	08 ***Stereum illudens*** **Purplish Stereum** Specimen ID: 4060 On dead wood in wandoo/jarrah woodland Latitude: 31° 41' 48.7"South Longitude: 116° 7' 49.4"East 14/06/2009 Image: PA88_262KT08
	10 ***Fomitopsis lilacinogilva*** **Lilac Bracket Fungus** Specimen ID: 4061 On dead wood in marri/wandoo woodland Latitude: 31° 41' 48.5"South Longitude: 116° 7' 58.9"East 14/06/2009 Image: PA88_262KT10 **Vouchered WA Herbarium: E9283**
	11 ***Psilocybe*** **sp.** Specimen ID: 4062 Within litter in marri woodland with hakea, dryandra, balga and marri. Latitude: 31° 41' 48.3"South Longitude: 116° 7' 58.6"East 14/06/2009 Image: PA88_262KT11
	16 ***Stropharia semiglobata*** **Dung Roundheads** Specimen ID: 4063 On old poo in wandoo woodland Latitude: 31° 41' 49"South Longitude: 116° 7' 55.6"East 14/06/2009 Image: PA88_262KT16
	17 ***Stereum illudens*** **Purplish Stereum** Specimen ID: 4064 On dead wood in marri woodland with hakea and zamia. Latitude: 31° 41' 47.5"South Longitude: 116° 7' 54.7"East 14/06/2009 Image: PA88_262KT17

Georeferenced Tracks and Photos

Roz Hart and Jolanda Keeble's group, 14 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: Paruna Date: 14/06/2009
Group Number: 263 Leaders Roz Hart and Jolanda Keeble
Photographer: Roz Hart

10 **Undetermined Resupinate**

Specimen ID: 4065

On dead wood in wandoo woodland
Latitude: 31° 41' 46.2"South Longitude: 116° 7' 58.3"East
14/06/2009 Image: PA88_263RH10

11 **Undetermined Polypore**

Specimen ID: 4066

On dead wood in wandoo woodland
Latitude: 31° 41' 46.2"South Longitude: 116° 7' 58.3"East
14/06/2009 Image: PA88_263RH11

14 ***Phlebia*** **sp.**

Specimen ID: 4067

On dead wood in marri woodland
Latitude: 31° 41' 45.9"South Longitude: 116° 8' .2"East
14/06/2009 Image: PA88_263RH14

17 ***Pycnoporus coccineus*** **Scarlet Bracket Fungus**

Specimen ID: 4068

On dead wood in wandoo/marri woodland
Latitude: 31° 41' 45.9"South Longitude: 116° 8' .2"East
14/06/2009 Image: PA88_263RH17
Vouchered WA Herbarium: E9287

18 ***Campanella gregaria*** **Gregarious Shells**

Specimen ID: 4069

On dead wood in marri woodland
Latitude: 31° 41' 45.7"South Longitude: 116° 8' 3.4"East
14/06/2009 Image: PA88_263RH18
Vouchered WA Herbarium: E9288

25 ***Stropharia semiglobata*** **Dung Roundheads**

Specimen ID: 4070

On dung in wandoo/marri woodland
Latitude: 31° 41' 46.3"South Longitude: 116° 8' 5"East
14/06/2009 Image: PA88_263RH25

30 ***Phlebia*** **sp.**

Specimen ID: 4071

On a dead grastree stump in wandoo/marri woodland
Latitude: 31° 41' 46.6"South Longitude: 116° 8' 5.2"East
14/06/2009 Image: PA88_263RH30

31 ***Tomentella*** **cf.** ***pilosa***

Specimen ID: 4072

Inside bark on dead wood in wandoo/marri woodland
Latitude: 31° 41' 45.7"South Longitude: 116° 8' 3.4"East
14/06/2009 Image: PA88_263RH31
Vouchered WA Herbarium: E9298