

Perth Urban Bushland Fungi

Fungi of West Bay Bushland, Augusta, Western Australia

A PUBF report written and produced by

Neale L. Bougher, Roz Hart, Sarah de Bueger, Joe Froudist and Brett Glossop

Department of Environment and Conservation – Perth Urban Bushland Fungi Project



'Orange group' at Flat Rock examining fungi



'Yellow group' in the bushland



Examining some of the fungi collected



Learning about fungi at the workshop

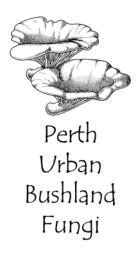
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Photos and field assistance by participants of the Perth Urban Bushland Fungi Project (PUBF) and the Environmental Research Group Augusta (ERGA)

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This report presents data resulting from Perth Urban Bushland Fungi Project (PUBF) fungi events held over two days in June 2007 at bushland in the town of Augusta in southwest Western Australia. This report also summarises and integrates data from a listing in 2006 of 25 fungi from Augusta's Donovan Street Bushland (N.L. Bougher). Additionally, the report provides management recommendations for understanding, and conserving fungi biodiversity at the bushland. In 2007, thirty five people attended a workshop on Saturday 16th June, and twenty two went on a walk on Sunday 17th June, both in areas of natural vegetation encompassed by the West Bay Bushland (see map). The events were organised with the assistance of the Environmental Research Group Augusta (ERGA) who hosted the weekend. These events at Augusta were the first time protocols for community-based fungi surveys developed by PUBF had been applied outside the Perth region.

A workshop for interested members of the public was held on Saturday with six groups surveying for fungi in the Donovan Street section of the West Bay Bushland (see map) and learning about fungi in the Community Hall in the afternoon. Mycologist Neale Bougher led the Saturday workshop session where he identified many of the fungi and talked about their characteristics. At the workshop, members of the public learnt about the 3 Fs, and about why considering Flora, Fauna and Fungi together is important for managing bushland. A walk for ERGA members was held on the Sunday morning. Three groups walked in the Leeuwin-Naturaliste National Park outlier section of the West Bay Bushland (see map) and one group walked in the Flat Rock area of the Donovan Street section. The four groups were again led by volunteer Fungi Leaders from the PUBF Project. Participants of both events also learnt how to voucher fungi and assisted PUBF to voucher 52 fungi, a great effort.

The West Bay Bushland

The West Bay Bushland encompasses 182 hectares of natural bushland located in the north of the town of Augusta in southwest Western Australia (see map). The Donovan Street section of the Bushland comprises 78 hectares and is on the southern side of West Bay directly adjacent to residential areas of Augusta. The other major part of the West Bay Bushland is on the northern side of West Bay and lies within the Leeuwin-Naturaliste National Park. The West Bay Bushland is part of the proposed West Bay Regional Park, agreed to by the Augusta-Margaret River Shire Council in 2004. An extensive biological survey undertaken in 2005 and 2006 in the Donovan Street section confirmed that the bushland has a diverse range of landforms, fauna, and vegetation types (ERGA, 2006). The Donovan Street section has five major plant communities and includes areas of eucalypt forest, banksia woodland, clay-based winter wetland, sand plain, granite outcrop, and riparian ecosystems (ERGA, 2006). Dominant tall trees at West Bay Bushland include marri (*Corymbia calophylla*), jarrah (*Eucalyptus marginata*), and karri (*Eucalyptus diversicolor*).

The fungi events at Augusta in June 2007 were the first time protocols for community-based fungi surveys developed by the Perth Urban Bushland Fungi project (PUBF) had been applied outside the Perth region.

West Bay Bushland Fungi

The two fungi surveys at the West Bay Bushland in June 2007 resulted in 166 records, including 78 different fungi and 52 specimens vouchered into the Western Australian Herbarium (Tables 1, 2). These include genera of decomposer fungi such as *Clitocybe*, *Panaeolus*, and *Psathyrella*, and mycorrhizal fungi belonging to genera such as *Amanita*, *Inocybe and Lactarius*. The surveys recorded many mycorrhizal truffles (fungi with fruit bodies under the ground): e.g. *Gymnomyces* sp., *Pogisperma* sp., and some other unidentified truffles. Scratches observed in the soil near some of these truffles indicated that some of the local animals at the West Bay Bushland may seek truffles as food. The pathogenic (disease) fungus *Armillaria luteobubalina* was observed within the Leeuwin-Naturaliste National Park section of the West Bay Bushland (fungus voucher E8431). The *Armillaria* was fruiting in jarrah-peppermint woodland near *Eucalyptus marginata*, *Corymbia calophylla*, *Agonis* sp. and *Xanthorrhoea* sp. In this woodland, there were no obvious disease symptoms shown by the vegetation (such as deaths of trees or shrubs) that could be attributable to *Armillaria*.

The occurrence of different fungal communities in different parts of the West Bay Bushland was apparent. For example in the northern part of the Donovan Street Bushland, sites with thin soil overlying granite outcrops or adjacent areas with clay-loam and low heath were found to have different fungi to nearby areas of marri-jarrah woodland – see and compare the fungi recorded by Phylis Robertson's group at Flat Rock (granite outcrop), Karen Clarke's group (heath and marri), Augusta Yacht Club area, and Louise Little and Mark Brundrett's group, Blackwood River Houseboats area (woodland).

Fungi were not included in the biological survey undertaken in 2005 and 2006 in the Donovan Street section of the West Bay Bushland, but the survey report (ERGA, 2006) did acknowledge their presence as part of the bushland's biodiversity, and flagged future fungi surveys. Indeed soon after the ERGA report was published, 25 fungi were recorded in the Donovan Street section by Joe Froudist, who provided an unpublished list to the ERGA. This was in the period June to August 2006 (Table 3).

Only 11 out of 78 (14%) of the fungi species recorded in the 2007 surveys were the same as those recorded in the 2006 survey. The surveys so far at the West Bay Bushland have yielded a total of 92 species of fungi. It is likely that many more fungi species occur in the bushland. This is emphasised by the finding that 67 of the 78 (86%) fungi recorded in the year 2007 survey are new records for the bushland. The percentage figures are estimates, because some of the fungi recorded in this and the previous survey remain tentatively identified or 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.

Management recommendations for understanding and conserving fungi biodiversity at the West Bay Bushland

The West Bay Bushland has a wide range of vegetation types (ERGA, 2006) that undoubtedly influence the presence, abundance and spatial distribution of fungi species in the bushland. The occurrence of different fungal communities in different parts of the bushland is apparent in the surveys of fungi so far (see above). Vegetation-fungi patterns could be clarified if surveys of fungi were carried out annually over many years. Conservation of biodiversity and general interest in the West Bay Bushland has primarily focussed on flora and fauna. However, the bushland's Flora, Fauna and Fungi may need to considered together for future management of the bushland's long-term health. Fungi have crucial ecological roles for maintaining bushland health, including linkages between the 3 Fs. An increased level of knowledge about the fungi at the West Bay Bushland 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 are likely to occur in the West Bay Bushland than the 92 species recorded in the surveys conducted so far. 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 at the West Bay Bushland, 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 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.) 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).
- 3. **Georeference the surveys:** It would be desirable to georeference the surveys at the West Bay Bushland: 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 Augusta-Margaret River community, be undertaken at the West Bay Bushland. 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.** To understand the mycorrhizal relationships between fungi and plants at the West Bay Bushland, 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 at the West Bay Bushland.

- 6. **Determine the animal interactions with fungi:** Determine what truffle fungi are present at the West Bay Bushland 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 the West Bay Bushland. Insects that use fungi as food and/or habitat are also likely to be present in the bushland.
- 7. **Management and monitoring of Armillaria:** *Armillaria luteobubalina* was recorded during the 2007 surveys at the West Bay Bushland. This fungus is a pathogenic (disease) fungus that can infect and kill many types of native and exotic trees. The most obvious consequences of *Armillaria* infestation can include the death of trees and shrubs, but the overall effect on bushland ecology and the capacity of bushlands to recover is not known. *Armillaria luteobublalina* is considered to be a native fungus in southwest Australia, so presumably has long been part of bushland ecology in the region, probably including the West Bay Bushland. For the West Bay Bushland, the presence of *Armillaria* is probably not a major concern at the present time as it may be infrequent and in balance with the ecosystem. The occurrence of high biodiversity of all types of fungi in bushlands and therefore the various contributions of those fungi to the overall health of bushlands may be one factor determining the frequency and severity of infestations of *Armillaria* (and other disease fungi).

Management strategies that aim to nurture fungi biodiversity in bushlands such as the West Bay Bushland therefore may be desirable from a disease management perspective as well as from a more general biodiversity perspective. Direct management to contain particular *Armillaria* infestations is complex and an analysis of the various intervention options is beyond the scope of this report. In most cases in southwest Australia, *Armillaria* infestations have been periodic, often flaring up and diminishing after a period of time. The underlying causes of such fluxes are not fully understood. *Armillaria* may or may not ever cause major disease issues at the West Bay Bushland. However, it is recommended that georeferenced surveys of *Armillaria* be undertaken to create a spatial map of the distribution of this fungus. This data can be overlain onto vegetation, soil and fire-age maps so as to potentially recognise associations between its occurrence and plants or vegetation and landscape types. It would be desirable to undertake the surveys successively over time to be able to monitor the spread, intensity and duration of *Armillaria* in the bushland.

- 8. **Include Flora, Fauna and Fungi in signage and interpretative material at the Bushland:** to promote public awareness and appreciation of the conspicuous and less conspicuous biodiversity at the West Bay Bushland and the linkages between the 3Fs that influence the long-term health of the bushland.
- 9. **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 also help to limit disease incursions at the West Bay Bushland.

References

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

Environmental Research Group Augusta (2006) Report on the Biodiversity survey of the Donovan Street Bushland, Augusta.

Table 1: Augusta Fungi List: 16 & 17 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.

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

<u>Fungimap Target</u>: 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).

| Scientific Name | Common Name | Form | Habitat | | Fungimap Target | | Specimen ID |
|--------------------------------|-----------------------------|-----------------|------------------------------|---|--------------------|-----|---|
| Agaricus sp. | | mushroom | litter/ground | S | | | 2737, 2822 |
| Aleurina ferruginea | Fleshy Cup Fungus | cup | litter/ground | S | | A-1 | 2799 |
| Amanita sp. | | mushroom | litter/ground | M | | | 2740, 2741, 2752, 2759, 2792, 2795, 2872 |
| Amanita xanthocephala | Yellow Headed Amanita | mushroom | litter/ground | M | Yes | | 2732, 2762, 2783, 2802, 2826, 2861 |
| Antrodiella citra | Lemon Peel Fungus | bracket | dead wood | S | | | 2808 |
| Armillaria luteobubalina | Australian Honey Fungus | mushroom | dead/living trees & roots | P | Yes | J-2 | 2876 |
| Boletellus obscurecoccineus | Rhubarb Bolete | mushroom | litter/ground | M | Yes | K-1 | 2753, 2780, 2819, 2824, 2875 |
| Boletus sp. | | mushroom | litter/ground | M | | | 2825 |
| Calocera guepinioides | Scotsman's Beard | jelly fungus | dead wood | S | | Q-1 | 2730, 2744 |
| Cantharellus concinnius | | mushroom | litter/ground | M | | | 2796 |
| Ceratiomyxa fruticulosa | Slime Mould | slime mould | dead wood | S | Yes | Z-2 | 2727 |
| Clavaria amoena | | coral | litter/ground | M | | | 2823 |
| Clavaria sp. | | coral | litter/ground | M | | | 2765, 2820, 2842 |
| Clitocybe sp. | | mushroom | litter/ground | S | | | 2810 |
| Coltricia cinnamomea | Tough Cinnamon Fungus | mushroom | litter/ground | S | | N-1 | 2760, 2782, 2811, 2854, 2864 |

| Scientific Name | Common Name | Form | Habitat | Life Mode | Fungimap Target | | |
|-------------------------|---------------------------|----------|------------------------|--------------|--------------------|------|---|
| Cortinarius fibrillosus | | mushroom | litter/ground | M | | | 2809 |
| Cortinarius sp. | | | litter/ground | M | | | 2736, 2761, 2766, 2769, 2776, 2778, 2781, 2806, 2818, 2821, 2827, 2843, 2844, 2858, 2867 |
| Dermocybe sp. | | mushroom | litter/ground | M | | | 2768, 2846 |
| Dermocybe splendida | | mushroom | litter/ground | M | Yes | | 2815 |
| Entoloma sp. | | mushroom | litter/ underground | S | | | 2788, 2789 |
| Fistulina hepatica | Beefsteak Fungus | bracket | dead wood | P/S | Yes | N-9 | 2862, 2882 |
| Fistulinella mollis | | mushroom | litter/ground | M | | | 2847 |
| Galerina sp. | | mushroom | litter/ground | S | | | 2790, 2793, 2804, 2805, 2834, 2870 |
| Grifola sp. | | bracket | dead wood | S | | | 2757 |
| Gymnomyces sp. | | truffle | underground | M | | | 2833 |
| Gymnopilus junonius | | mushroom | dead wood | S | Yes | | 2755 |
| Gymnopilus sp. | | mushroom | dead wood | S | | | 2884 |
| Gyroporus sp. | | mushroom | litter/ground | M | | | 2871 |
| Henningsomyces candidus | Miniature Chimney Pots | tubular | dead wood | S | | R-1 | 2794 |
| Hydnum repandum | | mushroom | litter/ground | M | | | 2817 |
| Hygrocybe sp. | | mushroom | litter/ground | S | | | 2852 |
| Inocybe sp. | | mushroom | litter/ground | М | | | 2758, 2831, 2832, 2850, 2865, 2866, 2883 |
| Laccaria lateritia | Brick Red Laccaria | mushroom | litter/ground | M | | J-17 | 2849 |
| Laccaria sp. | | mushroom | litter/ground | M | | | 2851 |
| Lactarius eucalypti | | | litter/ground | M | | | 2835 |
| Leptonia sp. | Green Goblin | mushroom | litter/ground | S | | | 2739, 2812 |

| Scientific Name | Common Name | Form | Habitat | | Fungimap Target | |
|-------------------------------|-------------|----------|---------------|-----|--------------------|------|
| Lichenomphalia chromacea | | mushroom | moss bed | S/P | | 2887 |
| Lichenomphalia umbellifera | | mushroom | moss bed | S/P | | 2742 |
| Mycena kuurkacea | | mushroom | litter/ground | S | | 2885 |

| Scientific Name | Common Name | Form | Habitat | | Fungimap Target | | Specimen ID |
|--|---------------------------|------------|------------------------------|-----|--------------------|------|---|
| Mycena sp. | | mushroom | litter/ground | S | | | 2728, 2733, 2738, 2773, 2784, 2787, 2807, 2880 |
| Omphalotus nidiformis | Ghost Fungus | mushroom | dead wood | S/P | Yes | J-21 | 2800, 2886 |
| Panaeolus sphinctrinus | | mushroom | dung | S | | | 2829 |
| Peziza sp. | | cup | litter/ground | S | | | 2830 |
| Phellinus sp. | | bracket | dead wood | S | | | 2803 |
| Phellodon niger | | mushroom | litter/ground | M | | | 2743, 2774 |
| Pisolithus sp. | Dog Poo Fungus | puffball | litter/ground | M | | L-3 | 2853, 2857 |
| Pleurotellus sp. | | shell | dead wood | S | | | 2756 |
| Pogisperma sp. | | truffle | underground/ under litter | M | | | 2888 |
| Poria sp. | | resupinate | dead wood | S | | | 2868 |
| Psathyrella sp. | | | litter/ground | S | | | 2767 |
| Pycnoporus coccineus | Scarlet Bracket Fungus | bracket | dead wood | S | | N-8 | 2763 |
| Ramaria capitata var. ochraceosalmonicolor | | coral | litter/ground | M | | | 2747, 2772, 2786, 2798, 2877 |
| Ramaria lorithamnus | | coral | litter/ground | M | | | 2749, 2771, 2840 |
| Ramaria sp. | | coral | litter/ground | M | | | 2725, 2816, 2836 |
| Resupinatus sp. | | shell | dead wood | S | | | 2839 |
| Rhodocybe sp. | | mushroom | litter/ground | S | | | 2855 |
| Rickenella fibula | Orange Mosscap | mushroom | litter/ground | S | | J-27 | 2750, 2801, 2881 |
| Russula aff. cyanoxantha | | mushroom | litter/ground | M | | | 2748 |
| Russula clelandii | | mushroom | litter/ground | M | | | 2777, 2860, 2873 |
| Russula delica group | | mushroom | litter/ground | M | | | 2775 |
| Russula neerimea group | | mushroom | litter/ground | M | | | 2745, 2813 |
| Russula nigricans group | | mushroom | litter/ground | M | | | 2797 |
| Russula persanguinea | | mushroom | litter/ground | M | | | 2845 |
| Russula purpureoflava | | mushroom | litter/ground | M | | | 2764, 2814 |
| Russula sp. | | mushroom | litter/ground | M | | | 2779, 2791, 2874 |
| Scleroderma cepa | | puffball | litter/ground | M | | | 2735, 2770 |
| Stereum hirsutum | Hairy Curtain Fungus | bracket | dead wood | S | Yes | | 2726 |
| Suillus luteus | | mushroom | litter/ground | M | | | 2746 |
| Tricholoma sp. | | mushroom | litter/ground | S | | | 2863 |

| Scientific Name | Common Name | Form | Habitat | | Fungimap Target | | Specimen ID |
|--------------------------------|------------------------|------------|---------------|---|--------------------|-----|---------------------------|
| Tubaria sp. | | mushroom | litter/ground | S | | | 2879 |
| Undetermined Agaric | | mushroom | litter/ground | ? | | | 2785, 2848, 2856, 2869 |
| Undetermined Ascomycete | | cup | litter/ground | S | | | 2837, 2841, 2878 |
| Undetermined Bracket Fungus | | bracket | dead wood | S | | | 2731 |
| Undetermined Discomycete | | cup | dead wood | S | | | 2751, 2838 |
| Undetermined Resupinate | | resupinate | dead wood | M | | | 2729, 2734 |
| Undetermined Truffle | | truffle | litter/ground | M | | | 2754, 2889, 2890 |
| Xylaria hypoxylon | Candle Snuff Fungus | other | litter/ground | S | | D-2 | 2859 |
| Zelleromyces sp. | | truffle | underground | M | | | 2828 |

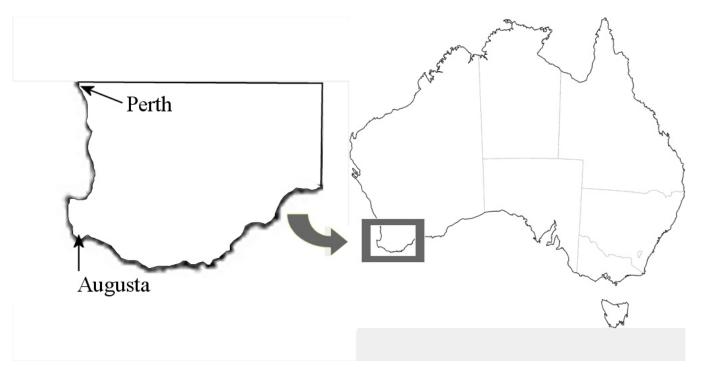
Table 2: Permanent Vouchered Specimens from the West Bay Bushland 2007

Fifty two of the fungi were deposited into the Western Australian Herbarium with the following details:

| They two of the rungi were deposited into the west | ciii i tasti aiiaii i | ricioariani wini | the following a | cuiis. |
|--|-------------------------|------------------|------------------------------|--------|
| Aleurina ferruginea | Voucher ID: | E8444 | Specimen ID: | 2799 |
| Amanita xanthocephala | Voucher ID: | E8403 | Specimen ID: | 2783 |
| Amanita sp. | Voucher ID: | | Specimen ID: | 2759 |
| Amanita xanthocephala | Voucher ID: | | Specimen ID: | |
| Antrodiella citra | Voucher ID: | | Specimen ID: | |
| Armillaria luteobubalina | Voucher ID: | | Specimen ID: | |
| Boletellus obscurecoccineus | Voucher ID: | | Specimen ID: | |
| Cantharellus concinnius | Voucher ID: | | Specimen ID: | |
| Clavaria sp. | Voucher ID: | | Specimen ID: | |
| Coltricia cinnamomea | Voucher ID: | | Specimen ID: | |
| Coltricia cinnamomea | Voucher ID: | | Specimen ID: | |
| Cortinarius sp. | Voucher ID: | | Specimen ID: | |
| Cortinarius fibrillosus | Voucher ID: | | Specimen ID: | |
| Cortinarius sp. | Voucher ID: | | Specimen ID: | |
| Fistulina hepatica | Voucher ID: | | Specimen ID: | |
| Fistulinella mollis | Voucher ID: | | Specimen ID: | |
| Gymnomyces sp. | Voucher ID: | | Specimen ID: | |
| Gymnopilus sp. | Voucher ID: | | Specimen ID: | |
| Gyroporus sp. | Voucher ID: | | Specimen ID: | |
| Hydnum repandum | Voucher ID: | | Specimen ID: | |
| Hygrocybe sp. | Voucher ID: | | Specimen ID: | |
| Inocybe sp. | Voucher ID: | | Specimen ID: | |
| Laccaria sp. | Voucher ID: | | Specimen ID: | |
| Lactarius eucalypti | Voucher ID: | | Specimen ID: | |
| Liebona sp. | Voucher ID: | | Specimen ID: | |
| Lichenomphalia umbellifera | Voucher ID: | | Specimen ID: | |
| Lichenomphalia chromacea | Voucher ID: | | Specimen ID: | |
| Mycena sp. | Voucher ID: Voucher ID: | | Specimen ID: | |
| Mycena kuurkacea | Voucher ID: | | Specimen ID: Specimen ID: | |
| Omphalotus nidiformis Panaeolus sphinctrinus | Voucher ID: | | Specimen ID: Specimen ID: | |
| Phellodon niger | Voucher ID: | | Specimen ID: | |
| Pisolithus sp. | Voucher ID: | | Specimen ID: | |
| Pogisperma sp. | Voucher ID: | | Specimen ID: | |
| Pycnoporus coccineus | Voucher ID: | | Specimen ID: | |
| Ramaria lorithamnus | Voucher ID: | | Specimen ID: | |
| Ramaria lorithamnus | Voucher ID: | | Specimen ID: | |
| Ramaria capitata var. ochraceosalmonicolor | Voucher ID: | | Specimen ID: | |
| Ramaria capitata var. ochraceosalmonicolor | Voucher ID: | | Specimen ID: | |
| Resupinatus sp. | Voucher ID: | | Specimen ID: | |
| Rhodocybe sp. | Voucher ID: | | Specimen ID: | |
| Rickenella fibula | Voucher ID: | | Specimen ID: | |
| Russula persanguinea | Voucher ID: | | Specimen ID: | |
| Russula clelandii | Voucher ID: | E8393 | Specimen ID: | |
| Russula sp. | Voucher ID: | | Specimen ID: | |
| Russula delica gp. | Voucher ID: | | Specimen ID: | |
| Scleroderma cepa | Voucher ID: | E8396 | Specimen ID: | |
| Stereum hirsutum | Voucher ID: | E8408 | Specimen ID: | |
| Tricholoma sp. | Voucher ID: | E8428 | Specimen ID: | |
| Undetermined Truffle | Voucher ID: | E8450 | Specimen ID: | 2889 |
| Undetermined Truffle | Voucher ID: | | Specimen ID: | |
| Zelleromyces sp. | Voucher ID: | E8441 | Specimen ID: | 2828 |
| | | | | |

<u>Table 3: Fungi recorded from the Donovan Street section of the West Bay Bushland during June to August 2006</u>

| Fungus name | Form | Recorded in 2007 surveys |
|------------------------------|---------------------|-----------------------------|
| Agaricus sp. | Gilled fungus | |
| Amanita umbrinella | Gilled fungus | |
| Amanita xanthocephala | Gilled fungus | + |
| Boletellus obscurecoccineus | Bolete | + |
| Coltricia cinnamomea | Tough, pored fungus | + |
| Dermocybe splendida | Gilled fungus | + |
| Fomitopsis lilacinogilva | Bracket fungus | |
| Geastrum sp. | Earthstar | |
| Gymnopilus allantopus | Gilled fungus | |
| Gymnopilus sp. | Gilled fungus | +? |
| Inocybe sp. | Gilled fungus | |
| Laccaria lateritia | Gilled fungus | + |
| Melanophyllum haematospermum | Gilled fungus | |
| Paxillus infundibuliformis | Gilled fungus | |
| Phellodon aff. niger | Toothed fungus | + |
| Pholiota multicingulata | Gilled fungus | |
| Pisolithus sp. | Earthball | +? |
| Pleurotus australis | Gilled fungus | |
| Poronia erici | Dung Buttons | |
| Psathyrella echinata | Gilled fungus | |
| Pycnoporus coccineus | Bracket fungus | + |
| Scleroderma sp. | Earthball | +? |
| Stereum hirsutum | Bracket fungus | + |
| Tremella sp. | Jelly fungus | |
| Tricholomopsis rutilans | Gilled fungus | |



Map showing the location of Augusta relative to Perth, in the southwest of Western Australia.



Aerial photo of West Bay Bushland showing the northern section, Leeuwin-Naturaliste National Park and the southern section, Donovan Street Bushland.



Aerial photo showing the entire West Bay Bushland area with the colour coded routes followed by the ten groups which collected over the weekend.

Six groups collected in the Donovan Street Bushland, the southern section of the West Bay Bushland, as part of the Saturday workshop.

Four groups collected as part of the Sunday walk. Three of these groups collected in the Leeuwin-Naturaliste National Park section of West Bay, as can be seen on the map above, and one group, 'orange', collected around the Flat Rock area of the Donovan Street Bushland.

Roz Hart and Kirsten Tullis's group, Donovan Street Bushland, 16 June 2007.



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 that correlates with the site on the map above.

Event: Augusta Date: 16/06/2007

Group Number: 189 Photographer: Roz Hart



66 Ramaria sp.

Specimen ID: 2725

Growing in loam amongst litter in jarrah/marri forest.

Latitude: 34° 18' 20.4"South Longitude: 115° 9' 13.7"East

16/06/2007 Image: A68 189KT666

69 Stereum hirsutum

Hairy Curtain Fungus

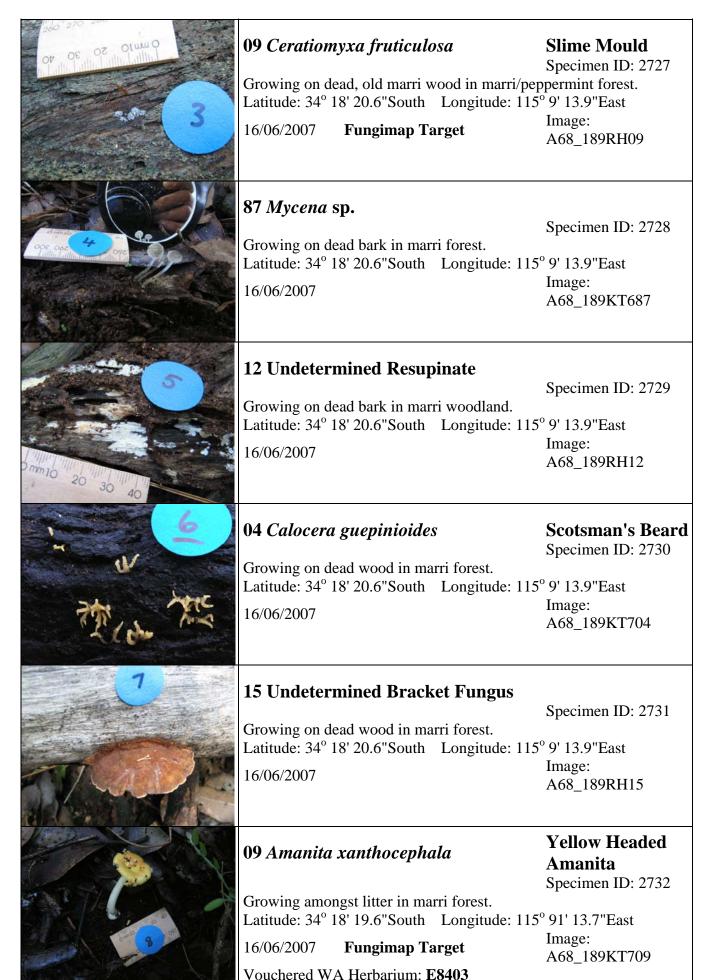
Specimen ID: 2726

Growing on dead, old marri wood in marri/peppermint forest. Latitude: 34° 18' 20.6"South Longitude: 115° 9' 13.9"East

16/06/2007 **Fungimap Target** Image:

Vouchered WA Herbarium: E8408

A68_189KT669





27 Mycena sp.

Growing on dead wood in marri forest.

Latitude: 34° 18' 19.6"South Longitude: 115° 91' 13.7"East

Image: 16/06/2007

A68_189RH27

Specimen ID: 2733

20 Undetermined Resupinate

Specimen ID: 2734

Growing on dead wood in marri forest.

Latitude: 34° 18' 19.6"South Longitude: 115° 91' 13.7"East

Image:

16/06/2007 A68_189KT720

Karen Clarke and Phylis Robertson's group, Yacht club area, Donovan Street bushland, 16 June 2007.



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 that correlates with the site on the map above.

Event: Augusta Date: 16/06/2007

Group Number: 190 Photographer: Phylis Robertson



02 Scleroderma cepa

Specimen ID: 2735

Growing in sandy loam next to track in marri/jarrah forest. Latitude: 34° 17' 49.2"South Longitude: 115° 9' 29"East

16/06/2007 Image: A68_190PR02



03 Cortinarius sp.

Specimen ID: 2736

Growing in clay/loam amongst heath (*Hypocalymma angustifolium*) beside granite outcrop.

Latitude: 34° 17′ 51.15″South Longitude: 115° 9′ 28.12″East

16/06/2007 Image: A68_190PR03

05 Agaricus sp.

Specimen ID: 2737

Growing in clay/loam amongst *Hypocalymma angustifolium* beside granite outcrop on the boundary of marri/jarrah forest.

Latitude: 34° 17′ 50.94″South Longitude: 115° 9′ 28.19″East

16/06/2007 Image: A68_190PR05



08 Mycena sp.

Specimen ID: 2738

Growing in clay/loam amongst heath (*Astroloma* sp.) beside granite outcrop.

Latitude: 34° 17' 51.16"South Longitude: 115° 9' 28.12"East

16/06/2007 Image: A68_190PR08



10 Leptonia sp.

Green Goblin

Specimen ID: 2739

Growing in clay/loam in heath beside granite outcrop.

Latitude: 34° 17' 51.26" South Longitude: 115° 09' 28.06"East 16/06/2007 Image: A68_190PR10



11 Amanita sp.

Specimen ID: 2740

Growing in open clay/loam in heath over granite.

Latitude: 34° 17' 49.2" South Longitude: 115° 09' 29.0" East

16/06/2007 Image: A68_190PR11

12 Amanita sp.

Specimen ID: 2741

Growing in clay/loam at the base of lepidosperma in heath. Latitude: 34° 17' 52.00" South Longitude: 115° 9' 27.58"+East

Latitude: 34° 17° 52.00° South Longitude: 115° 9° 27.58° + East 16/06/2007 Image: A68_190PR12



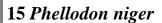
Specimen ID: 2742

Growing in loam amongst moss covered open heath.

Latitude: 34° 17' 52.66" South Longitude: 115° 09' 27.72"East

16/06/2007 Image: A68_190PR14

Vouchered WA Herbarium: E8398



Specimen ID: 2743

Growing in sand amongst deep litter in marri/jarrah forest. Latitude: 34° 17' 50.68" South Longitude: 115° 09' 27.97"East

16/06/2007 Image: A68 190PR15



16 Calocera guepinioides

Scotsman's Beard

Specimen ID: 2744

Growing on old marri log lying on the ground in marri/jarrah forest. Latitude: 34° 17' 49.67" South Longitude: 115° 09' 27.58"East 16/06/2007 Image: A68_190PR16

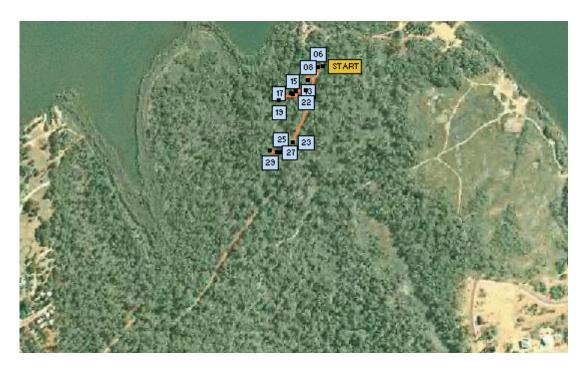
17 Russula neerimea group

Specimen ID: 2745

Growing in sand amongst deep litter in marri/jarrah forest.

Latitude: 34° 17' 49.37" South Longitude: 115° 09' 27.72"East
16/06/2007 Image: A68_190PR17

Louise Little and Mark Brundrett's group, Blackwood River Houseboats area, Donovan Street Bushland, 16 June 2007.



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 that correlates with the site on the map above.

Event: Augusta Date: 16/06/2007

Group Number: 191 Photographer: Louise Little



06 Suillus luteus

Specimen ID: 2746 Growing amongst litter in sandy loam under pine at track origin.

Latitude: 34° 17' 50.06" South Longitude: 115° 09' 19.56"East 16/06/2007 Image: A68_191LL06

08 Ramaria capitata var. ochraceosalmonicolor

Specimen ID: 2747

Growing in sandy loam amongst litter in marri forest.

Latitude: 34° 17′ 50.8"South Longitude: 115° 09′ 18.8"East

16/06/2007 Image: A68_191LL08

Vouchered WA Herbarium: E8402



12 Russula aff. cyanoxantha

Specimen ID: 2748

Growing in sandy loam amongst litter in marri forest.

Latitude: 34° 17′ 51.4"South Longitude: 115° 09′ 18.5"East

16/06/2007 Image: A68_191LL12

13 Ramaria lorithamnus

Specimen ID: 2749

Growing in sandy loam amongst litter in marri/jarrah forest. Latitude: 34° 17′ 51.5″South Longitude: 115° 9′ 17.5″East

16/06/2007 Image: A68_191LL13

Vouchered WA Herbarium: **E8401**

15 Rickenella fibula

Orange Mosscap

Specimen ID: 2750

Growing in loam amongst litter and moss in forest.

Latitude: 34° 17' 51.6"South Longitude: 115° 9' 17.8"East

16/06/2007 Image: A68_191LL15

17 Undetermined Discomycete

Specimen ID: 2751

Growing in sandy loam amongst litter and moss in forest.

Latitude: 34° 17' 51.5"South Longitude: 115° 9' 17.6"East

16/06/2007 Image: A68_191LL17

19 Amanita sp.

Specimen ID: 2752

Growing in sandy loam amongst litter and bracken/sedges in

marri/jarrah forest.

Latitude: 35° 17' 52"South Longitude: 115° 9' 17.7"East

16/06/2007 Image: A68_191LL19

22 Boletellus obscurecoccineus

Rhubarb Bolete

Specimen ID: 2753

Growing amongst litter in sandy loam in marri forest.

Latitude: 35° 17′ 51.4"South Longitude: 115° 9′ 18.7"East

16/06/2007 **Fungimap Target** Image: A68 191LL22

Vouchered WA Herbarium: E8394



23 Gymnopilus junonius

Specimen ID: 2755

Growing on living marri tree in forest.

Latitude: 35° 18' 45"South Longitude: 115° 9' 17.7"East

16/06/2007 **Fungimap Target** Image: A68_191LL23

25 Pleurotellus sp.

Specimen ID: 2756

Growing on burnt living jarrah tree in forest.

Latitude: 34° 17' 55.1"South Longitude: 115° 9' 16.8"East

16/06/2007 Image: A68_191LL25

27 Grifola sp.

Specimen ID: 2757

Growing amongst litter in marri forest.

Latitude: 34° 18′ 51″ South Longitude: 115° 9′ 16.5″ East

16/06/2007 Image: A68_191LL27

29 Inocybe sp.

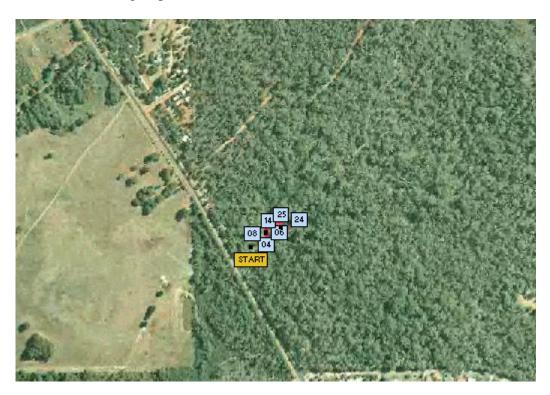
Specimen ID: 2758

Growing in sandy gravel amongst litter in forest.

Latitude: 34° 18′ 5.1″South Longitude: 115° 9′ 16.1″East

16/06/2007 Image: A68_191LL29

Jolanda Keeble's group, Donovan Street bushland, 16 June 2007.



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Event: Augusta Date: 16/06/2007

Group Number: 192 Photographer: Jolanda Keeble



04 Amanita sp.

Growing in sand in open marri woodland.

Latitude: 34° 18′ 13.2"South Longitude: 115° 9′ 5.3"East

16/06/2007 Image: A68_192JK04

Vouchered WA Herbarium: E8406

06 Coltricia cinnamomea

Tough Cinnamon Fungus

Specimen ID: 2759

Specimen ID: 2760

Growing in sand in open marri woodland.

Latitude: 34° 18' 13.2"South Longitude: 115° 9' 5.3"East

16/06/2007 Image: A68_192JK06

Vouchered WA Herbarium: E8404



08 Cortinarius sp.

Specimen ID: 2761

Growing in sand in open marri woodland.

Latitude: 34° 18′ 13.5"South Longitude: 115° 9′ 5.4"East

16/06/2007 Image: A68_192JK08

09 Amanita xanthocephala

Yellow Headed Amanita

Specimen ID: 2762

Growing in sand amongst litter, in open marri woodland. Latitude: 34° 18' 12.5" South Longitude: 115° 9' 6.1" East

Fungimap Target 16/06/2007

Image: A68_192JK09

14 Pycnoporus coccineus

Scarlet Bracket Fungus

Specimen ID: 2763

Growing on dead paperbark in open woodland.

Latitude: 34° 18′ 12.4"South Longitude: 115° 9′ 6.4"East

16/06/2007 Image: A68_192JK14

Vouchered WA Herbarium: E8397

17 Russula purpureoflava

Specimen ID: 2764

Growing in sand in woodland.

Latitude: 34° 18' 12.04"South Longitude: 115° 9' 6.04"East

16/06/2007 Image: A68 192JK17

18 Clavaria sp.

Specimen ID: 2765

Growing amongst sedge litter in woodland.

Latitude: 34° 18' 12.04"South Longitude: 115° 9' 6.04"East

16/06/2007 Image: A68_192JK18

19 Cortinarius sp.

Specimen ID: 2766

Growing in sand in woodland.

Latitude: 34° 18' 12.04"South Longitude: 115° 9' 6.04"East

16/06/2007 Image: A68 192JK19



20 Psathyrella sp.

Specimen ID: 2767

Growing in sand in woodland.

Latitude: 34° 18' 12.04"South Longitude: 115° 9' 6.04"East

16/06/2007 Image: A68_192JK20

22 Dermocybe sp.

Specimen ID: 2768

Growing in sand in woodland.

Latitude: 34° 18' 12.04"South Longitude: 115° 9' 6.04"East

16/06/2007 Image: A68_192JK22

24 Cortinarius sp.

Specimen ID: 2769

Growing in sand in woodland.

Latitude: 34° 18' 12.4"South Longitude: 115° 9' 6.9"East

16/06/2007 Image: A68_192JK24

25 Scleroderma cepa

Specimen ID: 2770

Growing in sandy bank of path in woodland.

Latitude: 34° 18' 12.9"South Longitude: 115° 9' 6.5"East

16/06/2007 Image: A68_192JK25

Vouchered WA Herbarium: E8396

Margaret Langley's group, near the West Bay Retreat Caravan Park, Donovan Street bushland, 16 June 2007.



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Event: Augusta Date: 16/06/2007

Group Number: 193 Photographer: Margaret Langley



04 Ramaria lorithamnus

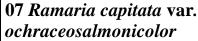
Specimen ID: 2771

Growing in sandy loam amongst litter, in mixed jarrah/marri woodland with hypocalymma/hibbertia understorey.

Latitude: 34° 17' 55.5"South Longitude: 115° 9' 1.3"East

16/06/2007 Image:

A68_193ML04



Specimen ID: 2772

Growing in sandy loam amongst litter, in mixed jarrah/marri woodland with hypocalymma/hibbertia understorey.

Latitude: 34° 17' 55.5"South Longitude: 115° 9' 1.3"East

16/06/2007 Image:

A68_193ML07





10 Mycena sp.

Specimen ID: 2773

Growing in sandy loam amongst litter, in mixed jarrah/marri woodland with hypocalymma/hibbertia understorey

Latitude: 34° 17′ 55.5"South Longitude: 115° 9′ 1.3"East

16/06/2007 Image:

A68_193ML10

13 Phellodon niger

Specimen ID: 2774

Growing in sandy loam amongst litter, in mixed jarrah/marri woodland with hypocalymma/hibbertia understorey

Latitude: 34° 17' 55.7"South Longitude: 115° 9' 1.5"East

16/06/2007 Image: A68_193ML13

Vouchered WA Herbarium: E8392

15 Russula delica group

Specimen ID: 2775

Growing in sandy loam amongst litter, in mixed jarrah/marri woodland with hypocalymma/hibbertia understorey

Latitude: 34° 17' 55.7"South Longitude: 115° 9' 1.5"East

16/06/2007 Image: A68_193ML15

Vouchered WA Herbarium: E8395

19 Cortinarius sp.

Specimen ID: 2776

Growing in sandy loam amongst litter, near xanthorrhoea stump in marri woodland.

Latitude: 34° 17' 56.1"South Longitude: 115° 9' 2.6"East

16/06/2007 Image: A68_193ML19

22 Russula clelandii

Specimen ID: 2777

Growing in sandy loam amongst litter, near xanthorrhoea stump in marri woodland with acacia/hibbertia/lepidosperma understorey. Latitude: 34° 17' 55.6"South Longitude: 115° 9' 3.1"East

Image:

16/06/2007 A68_193ML22

Vouchered WA Herbarium: E8393

33 Cortinarius sp.

Specimen ID: 2778

Growing in sandy loam amongst litter, near xanthorrhoea stump in marri woodland (hibbertia/lepidosperma understorey).

Latitude: 34° 17′ 55.2″South Longitude: 115° 9′ 3″East Image:

16/06/2007 A68_193ML33

Joe Froudist's group, Granite outcrop, Donovan Street Bushland, 16 June 2007.



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 that correlates with the site on the map above.

Event: Augusta Date: 16/06/2007

Group Number: 194 Photographer: Joe Froudist



12 Russula sp.

Specimen ID: 2779

Growing amongst litter under scrub in jarrah/marri woodland. Latitude: 34° 18' 6"South Longitude: 115° 9' 29.9"East

16/06/2007 Image: A68_194JF12

13 Boletellus obscurecoccineus

Rhubarb Bolete Specimen ID: 2780

Growing amongst litter in marri/jarrah woodland.

Latitude: 34° 18' 6"South Longitude: 115° 9' 29.9"East

16/06/2007 **Fungimap Target** Image: A68_194JF13

14 Cortinarius sp.

Specimen ID: 2781

Growing amongst litter in marri/jarrah woodland.

Latitude: 34° 18′ 6″South Longitude: 115° 9′ 29.9″East

16/06/2007 Image: A68 194JF14



16 Coltricia cinnamomea

Tough Cinnamon Fungus

Specimen ID: 2782

Growing on dead burnt wood in woodland.

Latitude: 34° 18' 6"South Longitude: 115° 9' 29.9"East

16/06/2007 Image: A68_194JF16

17 Amanita xanthocephala

Yellow Headed Amanita

Specimen ID: 2783

Growing amongst litter in jarrah/marri woodland.

Latitude: 34° 18′ 6″South Longitude: 115° 9′ 29.9″East

16/06/2007 **Fungimap Target** Image: A68_194JF17

Vouchered WA Herbarium: E8403

18 Mycena sp.

Specimen ID: 2784

Growing amongst moss on dead eucalypt nut near granite outcrop.

Latitude: 34° 18′ 6″South Longitude: 115° 9′ 29.9″East

16/06/2007 Image: A68_194JF18

20 Undetermined Agaric

Specimen ID: 2785

Growing amongst moss near granite outcrop.

Latitude: 34° 18′ 6″South Longitude: 115° 9′ 29.9″East

16/06/2007 Image: A68_194JF20

21 Ramaria capitata var. ochraceosalmonicolor

Specimen ID: 2786

Growing amongst litter on clay soil in low heath adjacent to granite.

Latitude: 34° 18′ 6″South Longitude: 115° 9′ 29.9″East

16/06/2007 Image: A68_194JF21

22 Mycena sp.

Specimen ID: 2787

Growing amongst litter in low heath on granite.

Latitude: 34° 18′ 6″South Longitude: 115° 9′ 29.9″East

16/06/2007 Image: A68 194JF22



23 Entoloma sp.

Specimen ID: 2788

Growing amongst litter in low heath on granite.

Latitude: 34° 18′ 6″South Longitude: 115° 9′ 29.9″East

16/06/2007 Image: A68_194JF23

24 Entoloma sp.

Specimen ID: 2789

Growing amongst litter in low heath on granite.

Latitude: 34° 18′ 6″South Longitude: 115° 9′ 29.9″East

16/06/2007 Image: A68_194JF24

25 Galerina sp.

Specimen ID: 2790

Growing on dead bark lying on the ground in jarrah/peppermint woodland.

woodiand.

Latitude: 34° 18′ 6″South Longitude: 115° 9′ 29.9″East

16/06/2007 Image: A68_194JF25

26 Russula sp.

Specimen ID: 2791

Growing amongst litter in jarrah/peppermint woodland. Latitude: 34° 18' 6"South Longitude: 115° 9' 29.9"East

16/06/2007 Image: A68_194JF26

27 Amanita sp.

Specimen ID: 2792

Growing amongst litter in jarrah/peppermint woodland. Latitude: 34° 18' 6"South Longitude: 115° 9' 29.9"East

16/06/2007 Image: A68_194JF27

28 Galerina sp.

Specimen ID: 2793

Growing on dead wood amongst moss in jarrah/peppermint woodland. Latitude: 34° 18' 6"South Longitude: 115° 9' 29.9"East

16/06/2007 Image: A68_194JF28



33 Henningsomyces candidus

Miniature Chimney Pots

Specimen ID: 2794

Growing on dead wood in jarrah woodland.

Latitude: 34° 18' 6.8"South Longitude: 115° 9' 30.3"East

16/06/2007 Image: A68_194JF33

34 Amanita sp.

Specimen ID: 2795

Growing on brick and blue metal aggregate in open shrubland, on the edge of jarrah/marri woodland.

Latitude: 34° 18' 6.8"South Longitude: 115° 9' 30.3"East

16/06/2007 Image: A68_194JF34

Jolanda Keeble and Kirsten Tullis's group, in the West Bat Bushland section of the Leeuwin-Naturaliste National Park 17 June 2007.



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 that correlates with the site on the map above.

Event: Augusta Date: 17/06/2007

Group Number: 195 Photographer: Jolanda Keeble



02 Cantharellus concinnius

Specimen ID: 2796

Growing in loam in marri/peppermint woodland.

Latitude: 34° 17' 17.7"South Longitude: 115° 8' 50.5"East

17/06/2007 Image: A68_195KT02

Vouchered WA Herbarium: E8438

04 Russula nigricans group

Specimen ID: 2797

Growing in loam in marri/peppermint woodland.

Latitude: 34° 17' 15.9"South Longitude: 115° 8' 50.5"East

17/06/2007 Image: A68_195KT04



06 Ramaria capitata var. ochraceosalmonicolor

Specimen ID: 2798

Growing in loam in marri/peppermint woodland.

Latitude: 34° 17′ 16.1"South Longitude: 115° 8′ 50.6"East

17/06/2007 Image: A68_195KT06

Vouchered WA Herbarium: E8447



07 Aleurina ferruginea

Fleshy Cup Fungus

Specimen ID: 2799

Growing on dead eucalypt wood in marri/peppermint woodland. Latitude: 34° 17' 15.7"South Longitude: 115° 8' 50.8"East

17/06/2007 Image: A68_195KT07

Vouchered WA Herbarium: E8444

08 Omphalotus nidiformis

Ghost Fungus

Specimen ID: 2800

Growing on dead wood in marri/peppermint woodland. Latitude: 34° 17' 15.6"South Longitude: 115° 8' 51"East

17/06/2007 **Fungimap Target** Image: A68_195KT08

Vouchered WA Herbarium: E8439

13 Rickenella fibula

Orange Mosscap

Specimen ID: 2801

Growing on eucalypt wood amongst moss in marri/peppermint woodland.

Latitude: 34° 17′ 15.6"South Longitude: 115° 8′ 50.9"East

17/06/2007 Image: A68_195KT13

Vouchered WA Herbarium: E8432

14 Amanita xanthocephala

Yellow Headed Amanita

Specimen ID: 2802

Growing in loam beneath xanthorrhoea in marri/peppermint woodland.

Latitude: 34° 17′ 15.4"South Longitude: 115° 8′ 50.8"East

17/06/2007 **Fungimap Target** Image: A68_195KT14

16 Phellinus sp.

Specimen ID: 2803

Growing on dead eucalypt lying on the ground in marri/peppermint woodland.

Latitude: 34° 17′ 15.5"South Longitude: 115° 8′ 50.6"East

17/06/2007 Image: A68_195KT16

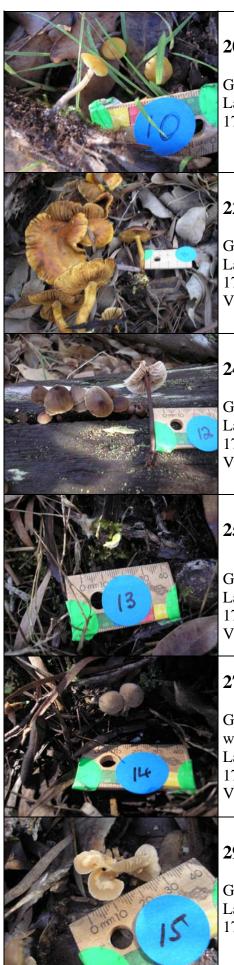
19 Galerina sp.

Specimen ID: 2804

Growing on old bark on the ground in marri/peppermint woodland.

Latitude: 34° 17′ 15.1″South Longitude: 115° 8′ 50.4″East

17/06/2007 Image: A68 195KT19



20 Galerina sp.

Specimen ID: 2805

Growing on old bark on the ground in marri/peppermint woodland. Latitude: 34° 17' 15.1"South Longitude: 115° 8' 50.4"East

Latitude, 54-17-15.1 South Longitude, 115-6-50.4 East

17/06/2007 Image: A68_195KT20

22 Cortinarius sp.

Specimen ID: 2806

Growing in loam in marri woodland.

Latitude: 34° 17' 14.4"South Longitude: 115° 8' 50.7"East

17/06/2007 Image: A68_195KT22

Vouchered WA Herbarium: **E8400**

24 Mycena sp.

Specimen ID: 2807

Growing on dead wood in marri woodland.

Latitude: 34° 17′ 14.4"South Longitude: 115° 8′ 51.3"East

17/06/2007 Image: A68_195KT24

Vouchered WA Herbarium: E8445

25 Antrodiella citra

Lemon Peel Fungus

Specimen ID: 2808

Growing on dead wood (on the ground) in marri woodland. Latitude: 34° 17′ 14.5"South Longitude: 115° 8′ 51.3"East

17/06/2007 Image: A68_195KT25

Vouchered WA Herbarium: E8449

27 Cortinarius fibrillosus

Specimen ID: 2809

Growing in soil or leaf litter at the base of old burnt stump in marri woodland.

Latitude: 34° 17′ 14.7"South Longitude: 115° 8′ 51.5"East

17/06/2007 Image: A68_195KT27

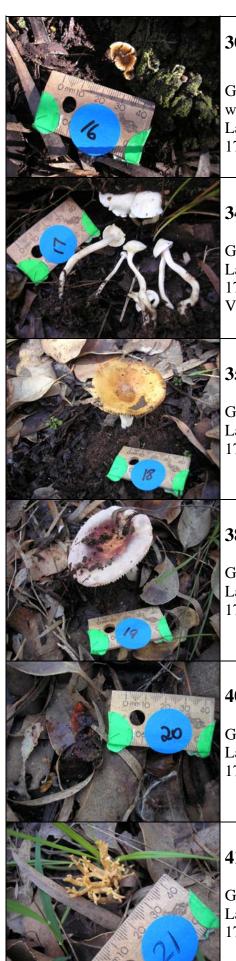
Vouchered WA Herbarium: E8414

29 Clitocybe sp.

Specimen ID: 2810

Growing in soil and decomposing litter in marri woodland. Latitude: 34° 17' 14.7"South Longitude: 115° 8' 51.5"East

17/06/2007 Image: A68_195KT29



30 Coltricia cinnamomea

Tough Cinnamon Fungus

Specimen ID: 2811

Growing at the base of dead burnt eucalypt in marri/peppermint woodland.

Latitude: 34° 17′ 14.8"South Longitude: 115° 8′ 51.6"East

17/06/2007 Image: A68_195KT30

34 Leptonia sp.

Green Goblin

Specimen ID: 2812

Growing in loam under litter in marri/peppermint woodland. Latitude: 34° 17′ 15″South Longitude: 115° 8′ 51.5″East

17/06/2007 Image: A68_195KT34

Vouchered WA Herbarium: E8443

35 Russula neerimea group

Specimen ID: 2813

Growing in soil in marri/peppermint woodland.

Latitude: 34° 17′ 51.1″South Longitude: 115° 8′ 51.5″East

17/06/2007 Image: A68_195KT35

38 Russula purpureoflava

Specimen ID: 2814

Growing in soil in marri/peppermint woodland.

Latitude: 34° 17′ 15.3"South Longitude: 115° 8′ 51.8"East

17/06/2007 Image: A68_195KT38

40 Dermocybe splendida

Specimen ID: 2815

Growing in soil in marri/peppermint woodland.

Latitude: 34° 17′ 15.3"South Longitude: 115° 8′ 51.8"East

17/06/2007 **Fungimap Target** Image: A68_195KT40

41 Ramaria sp.

Specimen ID: 2816

Growing in soil in marri/peppermint woodland.

Latitude: 34° 17′ 15.3"South Longitude: 115° 8′ 51.8"East

17/06/2007 Image: A68_195KT41



44 Hydnum repandum

Specimen ID: 2817

Growing in soil in marri/peppermint woodland.

Latitude: 34° 17' 15.4"South Longitude: 115° 8' 51.9"East

17/06/2007 Image: A68_195KT44

Vouchered WA Herbarium: E8426

48 Cortinarius sp.

Specimen ID: 2818

Growing on wood in soil and litter in marri/peppermint woodland. Latitude: 34° 17' 15.3"South Longitude: 115° 8' 51.5"East

17/06/2007 Image: A68_195KT48

Vouchered WA Herbarium: E8437

49 Boletellus obscurecoccineus

Rhubarb Bolete

Specimen ID: 2819

Growing in woodland.

Latitude: 34° 17' 15.3"South Longitude: 115° 8' 51.5"East

17/06/2007 **Fungimap Target** Image: A68_195KT49

52 Clavaria sp.

Specimen ID: 2820

Growing in loam in marri/peppermint woodland.

Latitude: 34° 17' 16.3"South Longitude: 115° 8' 52.3"East

17/06/2007 Image: A68_195KT52

Vouchered WA Herbarium: **E8442**

58 Agaricus sp.

Specimen ID: 2822

Growing in marri/peppermint woodland.

Latitude: 34° 17′ 16.5"South Longitude: 115° 8′ 52.6"East

17/06/2007 Image: A68_195KT58

60 Clavaria amoena

Specimen ID: 2823

Growing in marri/peppermint woodland.

Latitude: 34° 17′ 16.5"South Longitude: 115° 8′ 52.6"East

17/06/2007 Image: A68_195KT60

Georeferenced Track and Photos

Karen Clarke, Mark Brundrett and Roz Hart's group, in the West Bay Bushland section of the Leeuwin-Naturaliste National Park, 17 June 2007.



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 that correlates with the site on the map above.

Event: Augusta Date: 17/06/2007

Group Number: 196 Photographer: Roz Hart



20 Boletellus obscurecoccineus

Rhubarb Bolete

Specimen ID: 2824

Growing amongst litter in low marri/peppermint forest. Latitude: 34° 17' 16.3"South Longitude: 115° 9' 41.7"East

17/06/2007 **Fungimap Target** Image: A68_196RH20

22 Boletus sp.

Specimen ID: 2825

Growing amongst litter in marri/peppermint low forest. Latitude: 34° 17' 16.3"South Longitude: 115° 9' 41.7"East

17/06/2007 Image: A68 196RH22



24 Amanita xanthocephala

Yellow Headed Amanita

Specimen ID: 2826

Growing amongst litter in marri/peppermint low forest.

Latitude: 34° 17' 16.4"South Longitude: 115° 9' 40.5"East

17/06/2007 **Fungimap Target** Image: A68_196RH24



27 Cortinarius sp.

Specimen ID: 2827

Growing in loam in marri/peppermint low forest.

Latitude: 34° 17′ 16.4″South Longitude: 115° 9′ 40.5″East

17/06/2007 Image: A68_196RH27



30 Zelleromyces sp.

Specimen ID: 2828

Growing under litter at the foot of marri in marri/peppermint low forest

Latitude: 34° 17′ 16.8″South Longitude: 115° 9′ 38.9″East

17/06/2007 Image: A68_196RH30

Vouchered WA Herbarium: **E8441**

31 Panaeolus sphinctrinus

Specimen ID: 2829

Growing amongst horse dung on loam track in marri/peppermint

Latitude: 34° 17' 17.1"South Longitude: 115° 9' 37.9"East

17/06/2007 Image: A68_196RH31

Vouchered WA Herbarium: E8434



33 Peziza sp.

Specimen ID: 2830

Growing in loam in marri/peppermint forest.

Latitude: 34° 17' 17.1"South Longitude: 115° 9' 37.7"East

17/06/2007 Image: A68_196RH33



34 Inocybe sp.

Specimen ID: 2831

Growing in loam in marri/peppermint forest.

Latitude: 34° 17' 17.1"South Longitude: 115° 9' 37.7"East

17/06/2007 Image: A68_196RH34



35 Inocybe sp.

Specimen ID: 2832

Growing in loam in marri/peppermint forest.

Latitude: 34° 17' 17.1"South Longitude: 115° 9' 37.7"East

17/06/2007 Image: A68_196RH35



37 Gymnomyces sp.

Specimen ID: 2833

Growing in loam in marri/peppermint forest.

Latitude: 34° 17' 17.4"South Longitude: 115° 9' 37.7"East

17/06/2007 Image: A68_196RH37

Vouchered WA Herbarium: E8418

40 Galerina sp.

Specimen ID: 2834

Growing under litter in forest.

Latitude: 34° 17' 17.4"South Longitude: 115° 9' 36.6"East

17/06/2007 Image: A68_196RH40

41 Lactarius eucalypti

Specimen ID: 2835

Growing in loam under litter in forest.

Latitude: 34° 17' 17.3"South Longitude: 115° 9' 36.4"East

17/06/2007 Image: A68_196RH41

Vouchered WA Herbarium: E8429

47 Ramaria sp.

Specimen ID: 2836

Growing in loam under litter in forest.

Latitude: 34° 17′ 17.3"South Longitude: 115° 9′ 36.4"East

17/06/2007 Image: A68_196RH47

49 Undetermined Ascomycete

Specimen ID: 2837

Growing in loam in forest.

Latitude: 34° 17' 17.3"South Longitude: 115° 9' 36.2"East

17/06/2007 Image: A68_196RH49

53 Undetermined Discomycete

Specimen ID: 2838

Growing on marri nut amongst litter in forest.

Latitude: 34° 17′ 17.3"South Longitude: 115° 9′ 36.2"East

17/06/2007 Image: A68_196RH53



54 Resupinatus sp.

Specimen ID: 2839

Growing on gall on a marri stick amongst litter in forest. Latitude: 34° 17' 17.4"South Longitude: 115° 9' 36.2"East

17/06/2007 Image: A68_196RH54

Vouchered WA Herbarium: E8427

56 Ramaria lorithamnus

Specimen ID: 2840

Growing amongst litter in forest.

Latitude: 34° 17′ 17.4"South Longitude: 115° 9′ 36.1"East

17/06/2007 Image: A68_196RH56

Vouchered WA Herbarium: **E8433**

59 Undetermined Ascomycete

Specimen ID: 2841

Growing in moss bed near old marri log in forest.

Latitude: 34° 17' 17.2"South Longitude: 115° 9' 36.3"East

17/06/2007 Image: A68_196RH59

60 Clavaria sp.

Specimen ID: 2842

Growing amongst litter near old marri log in forest.

Latitude: 34° 17′ 16.9"South Longitude: 115° 9′ 36"East

17/06/2007 Image: A68_196RH60

61 Cortinarius sp.

Specimen ID: 2843

Growing under litter in forest.

Latitude: 34° 17′ 16.9"South Longitude: 115° 9′ 36"East

17/06/2007 Image: A68_196RH61

66 Cortinarius sp.

Specimen ID: 2844

Growing amongst litter in forest.

Latitude: 34° 17′ 16.8"South Longitude: 115° 9′ 35.6"East

17/06/2007 Image: A68_196RH66

Perth Urban Bushland Fungi Project, West Bay Bushland, Augusta, Fungi Report 2007



68 Russula persanguinea

Specimen ID: 2845

Growing amongst litter on the foot of living marri in forest. Latitude: 34° 17' 16.6"South Longitude: 115° 9' 35.3"East

17/06/2007 Image: A68_196RH68

Vouchered WA Herbarium: **E8411**

69 Dermocybe sp.

Specimen ID: 2846

Growing amongst litter in forest.

Latitude: 34° 17′ 16.6″South Longitude: 115° 9′ 35.3″East

17/06/2007 Image: A68_196RH69

71 Fistulinella mollis

Specimen ID: 2847

Growing in grey sand amongst lichen in heath.

Latitude: 34° 17′ 17.5"South Longitude: 115° 9′ 33"East

17/06/2007 Image: A68_196RH71

Georeferenced Track and Photos

Phylis Robertson's group, Flat Rock area, Donovan Street bushland, 17 June 2007.



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Event: Augusta Date: 17/06/2007

Group Number: 197 Photographer: Phylis Robertson



38 Laccaria lateritia

Brick Red Laccaria

Specimen ID: 2849

Growing in sand on track near *Calothamnus graniticus*. Latitude: 34° 17' 52.2"South Longitude: 115° 9' 32.8"East

17/06/2007 Image: A68 197PR38



39 Inocybe sp.

Specimen ID: 2850

Growing in shallow sand, amongst moss growing over granite, in granite outcrop.

Latitude: 34° 17′ 52.2″South Longitude: 115° 9′ 32.8″East

17/06/2007 Image: A68_197PR39

40 Laccaria sp.

Specimen ID: 2851

Growing in dense moss over granite in granite outcrop. Latitude: 34° 17' 52.2"South Longitude: 115° 9' 32.7"East

17/06/2007 Image: A68 197PR40



41 Hygrocybe sp.

Specimen ID: 2852

Growing amongst hibbertia and native grass in thin soil over granite outcrop.

Latitude: 34° 17′ 52″ South Longitude: 115° 9′ 31.2″ East

17/06/2007 Image: A68_197PR41

Vouchered WA Herbarium: E8412

42 Pisolithus sp.

Dog Poo Fungus

Specimen ID: 2853

Growing in thin soil on granite outcrop.

Latitude: 34° 17' 52.7"South Longitude: 115° 9' 28.4"East

17/06/2007 Image: A68_197PR42

Vouchered WA Herbarium: E8446

43 Coltricia cinnamomea

Tough Cinnamon

Fungus

Specimen ID: 2854

Growing amongst moss in granite outcrop.

Latitude: 34° 17′ 52.7″South Longitude: 115° 9′ 28.4″East

17/06/2007 Image: A68_197PR43

46 Rhodocybe sp.

Specimen ID: 2855

Growing amongst moss in granite outcrop.

Latitude: 34° 17′ 52"South Longitude: 115° 9′ 28.1"East

17/06/2007 Image: A68_197PR46

Vouchered WA Herbarium: **E8436**

47 Undetermined Agaric

Specimen ID: 2856

Growing near sedge on granite outcrop.

Latitude: 34° 17' 52"South Longitude: 115° 9' 28.1"East

17/06/2007 Image: A68_197PR47

48 Pisolithus sp.

Dog Poo Fungus

Specimen ID: 2857

Growing amongst moss on granite outcrop.

Latitude: 34° 17′ 52″South Longitude: 115° 9′ 28.1″East

17/06/2007 Image: A68_197PR48



49 Cortinarius sp.

Specimen ID: 2858

Growing amongst native grass in sand over granite outcrop. Latitude: 34° 17' 51.4"South Longitude: 115° 9' 27.9"East

17/06/2007 Image: A68_197PR49

50 Xylaria hypoxylon

Candle Snuff

Fungus

Specimen ID: 2859

Growing on live burnt wood in marri forest.

Latitude: 34° 17′ 51"South Longitude: 115° 9′ 26.2"East

17/06/2007 Image: A68_197PR50

51 Russula clelandii

Specimen ID: 2860

Growing in loam under burnt wood in marri forest.

Latitude: 34° 17′ 51″ South Longitude: 115° 9′ 26.2″ East

17/06/2007 Image: A68_197PR51

53 Amanita xanthocephala

Yellow Headed Amanita

Specimen ID: 2861

Growing in sand over granite amongst *Hypocalymma angustifolium* on granite outcrop.

Latitude: 34° 17′ 53″ South Longitude: 115° 9′ 26.5″ East

17/06/2007 **Fungimap Target** Image: A68_197PR53

55 Fistulina hepatica

Beefsteak Fungus

Specimen ID: 2862

Growing on burnt jarrah wood.

Latitude: 34° 17' 53.4"South Longitude: 115° 9' 25.8"East

17/06/2007 **Fungimap Target** Image: A68_197PR55

Vouchered WA Herbarium: E8440

56 Tricholoma sp.

Specimen ID: 2863

Growing amongst *Leucopogon* sp. and mixed vegetation. Latitude: 35° 17' 53.4"South Longitude: 115° 9' 26.3"East

17/06/2007 Image: A68 197PR56

Georeferenced Track and Photos

Joe Froudist and Margaret Langley's group, West Bay Bushland section of Leeuwin-Naturaliste National Park, 17 June 2007.



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Event: Augusta Date: 17/06/2007

Group Number: 198 Photographer: Joe Froudist



34 Coltricia cinnamomea

Tough Cinnamon Fungus

Specimen ID: 2864

Growing in sand at entrance to track next to marri woodland. Latitude: 34° 17′ 16.8″South Longitude: 115° 9′ 18.4″East

17/06/2007 Image: A68_198JF34

Vouchered WA Herbarium: BOU 00257

35 *Inocybe* sp.

Specimen ID: 2865

Growing in sand at entry to track, next to marri woodland with sedges and grass trees.

Latitude: 34° 17′ 16.8″South Longitude: 115° 9′ 18.4″East

17/06/2007 Image: A68_198JF35



36 Inocybe sp.

Specimen ID: 2866

Growing in sand on a track next to marri woodland.

Latitude: 34° 17′ 16.8″South Longitude: 115° 9′ 18.6″East

17/06/2007 Image: A68_198JF36

37 Cortinarius sp.

Specimen ID: 2867

Growing in sand on a track next to open marri woodland. Latitude: 34° 17' 16.8"South Longitude: 115° 9' 18.8"East

17/06/2007 Image: A68_198JF37

38 Poria sp.

Specimen ID: 2868

Growing in sand in open marri woodland.

Latitude: 34° 17′ 16.7″South Longitude: 115° 9′ 18.4″East

17/06/2007 Image: A68_198JF38

39 Undetermined Agaric

Specimen ID: 2869

Growing in sand at base of dead jarrah tree in marri/jarrah woodland. Latitude: 34° 17′ 17.2"South Longitude: 115° 9′ 18.9"East

17/06/2007 Image: A68 198JF39

40 *Galerina* sp.

Specimen ID: 2870

Growing in sand amongst moss in marri woodland.

Latitude: 34° 17′ 17.2"South Longitude: 115° 9′ 18.9"East

17/06/2007 Image: A68_198JF40

42 Gyroporus sp.

Specimen ID: 2871

Growing in sand in marri woodland.

Latitude: 34° 17′ 17.5"South Longitude: 115° 9′ 18.4"East

17/06/2007 Image: A68 198JF42



43 Amanita sp.

Specimen ID: 2872

Growing amongst litter in jarrah/peppermint woodland. Latitude: 34° 17' 21.2"South Longitude: 115° 9' 22.6"East

17/06/2007 Image: A68_198JF43

44 Russula clelandii

Specimen ID: 2873

Growing amongst litter in jarrah/peppermint woodland. Latitude: 34° 17' 21.2"South Longitude: 115° 9' 23"East

17/06/2007 Image: A68_198JF44

45 Russula sp.

Specimen ID: 2874

Growing amongst litter in jarrah/peppermint woodland. Latitude: 34° 17' 21.3"South Longitude: 115° 9' 22.1"East

17/06/2007 Image: A68 198JF45

Vouchered WA Herbarium: E8448

46 Boletellus obscurecoccineus Rhubarb Bolete

Specimen ID: 2875

Growing amongst litter in jarrah/peppermint woodland. Latitude: 34° 17' 21.9"South Longitude: 115° 9' 22.1"East

17/06/2007 **Fungimap Target** Image: A68_198JF46

48 Armillaria luteobubalina

Australian Honey Fungus

Specimen ID: 2876

Growing amongst litter in jarrah/peppermint woodland. Latitude: 34° 17' 21.6"South Longitude: 115° 9' 21.6"East

17/06/2007 **Fungimap Target** Image: A68 198JF48

Vouchered WA Herbarium: E8431

49 Ramaria capitata var. ochraceosalmonicolor

Specimen ID: 2877

Growing amongst litter in jarrah/peppermint woodland. Latitude: 34° 17' 21.7"South Longitude: 115° 9' 21.5"East

17/06/2007 Image: A68_198JF49



50 Undetermined Ascomycete

Specimen ID: 2878

Growing amongst litter in marri/peppermint woodland. Latitude: 34° 17' 22.2"South Longitude: 115° 9' 22.4"East

17/06/2007 Image: A68_198JF50

51 Tubaria sp.

Specimen ID: 2879

Growing on dead wood amongst litter under patersonia in jarrah woodland.

Latitude: 34° 17' 22.2"South Longitude: 115° 9' 22.2"East

17/06/2007 Image: A68_198JF51

52 Mycena sp.

Specimen ID: 2880

Growing on marri nut amongst litter in marri woodland.. Latitude: 34° 17' 21.4"South Longitude: 115° 9' 22.3"East

17/06/2007 Image: A68_198JF52

53 Rickenella fibula

Orange Mosscap

Specimen ID: 2881

Growing amongst litter and moss under sedge in marri woodland. Latitude: 34° 17' 21.1"South Longitude: 115° 9' 22.5"East

17/06/2007 Longitude: 113 9 22.5 East Image: A68 198JF53

54 Fistulina hepatica

Beefsteak Fungus

Specimen ID: 2882

Growing on dead wood in marri woodland.

Latitude: 34° 17′ 19.8″South Longitude: 115° 9′ 20.5″East

17/06/2007 **Fungimap Target** Image: A68_198JF54

55 Inocybe sp.

Specimen ID: 2883

Growing on dead wood in marri/jarrah woodland.

Latitude: 34° 17′ 19.8"South Longitude: 115° 9′ 20.5"East

17/06/2007 Image: A68 198JF55



56 Gymnopilus sp.

Specimen ID: 2884

Growing on dead wood in marri/jarrah woodland.

Latitude: 34° 17′ 19.8″South Longitude: 115° 9′ 20.5″East

17/06/2007 Image: A68_198JF56

Vouchered WA Herbarium: E8410

57 Mycena kuurkacea

Specimen ID: 2885

Growing amongst litter in marri/jarrah woodland.

Latitude: 34° 19' 19.8"South Longitude: 115° 9' 20.5"East

17/06/2007 Image: A68_198JF57

Vouchered WA Herbarium: E8409

59 Omphalotus nidiformis

Ghost Fungus

Specimen ID: 2886

Growing in sandy soil on dead wood in open heath.

Latitude: 34° 17′ 19.8"South Longitude: 115° 9′ 20.5"East

17/06/2007 **Fungimap Target** Image: A68_198JF59

60 Lichenomphalia chromacea

Specimen ID: 2887

Growing in sandy soil amongst moss.

Latitude: 34° 17′ 17.9"South Longitude: 115° 9′ 27.9"East

17/06/2007 Image: A68 198JF60

Vouchered WA Herbarium: **E8430**

61 *Pogisperma* sp.

Specimen ID: 2888

Growing underground in woodland.

Latitude: 34° 17' 17.6"South Longitude: 115° 9' 24.4"East

17/06/2007 Image: A68_198JF61

Vouchered WA Herbarium: E8415

63 Undetermined Truffle

Specimen ID: 2889

Growing underground in woodland.

Latitude: 34° 17′ 17.4"South Longitude: 115° 9′ 23.2"East

17/06/2007 Image: A68 198JF63