

Perth Urban Bushland Fungi

Fungi of West Bay Bushland, Augusta, Western Australia – 2008 report

A PUBF report written and produced by

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

Department of Environment and Conservation – Perth Urban Bushland Fungi Project



Workshop with the fungi collected



Examining fungi under the microscopes



Recording fungi in the bushland



Prepared for the wintery conditions

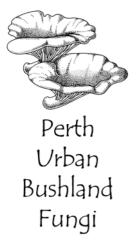
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Photos and field assistance by participants of the Perth Urban Bushland Fungi Project (PUBF) and the Environmental Research Group Augusta (ERGA)

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This report presents data resulting from the second Perth Urban Bushland Fungi Project (PUBF) fungi event held at bushland near the town of Augusta in southwest Western Australia, including part of the Leeuwin-Naturaliste National Park. The event took place over two days in June 2008. This report also summarises and integrates previous fungi data from the region, including from the first PUBF event there in 2007 (Bougher *et al.*, 2007). Management recommendations for understanding and conserving fungi biodiversity at the bushland as outlined in the previous report are again included.

In 2008, 36 people attended a workshop on Saturday 28th June, and 31 went on a walk on Sunday 29th June, both in areas of natural vegetation encompassed by the West Bay Bushland (see Maps 1, 2 and 3). The events were organised with the assistance of the Environmental Research Group Augusta (ERGA) who hosted the weekend. A workshop for interested members of the public was held on Saturday with four groups surveying for fungi in the Donovan Street section of the West Bay Bushland (see Map 3) and learning about fungi in the Augusta Historical Society's 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. Four groups walked in Reserve 14779, an outlier of the Leeuwin-Naturaliste National Park, which forms the northern section of the West Bay Bushland (see Map 3) and one group returned to the Donovan Street Bushland. The five groups were led by volunteer Fungi Leaders from the PUBF Project. Participants learnt to voucher fungi and assisted PUBF to voucher 33 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 Maps 1 and 2). The Donovan Street section of the Bushland comprises 78 hectares and is on the southern side of West Bay adjacent to residential areas of Augusta. Reserve 14779, the other section of the West Bay Bushland, is on the northern side of West Bay and forms part of 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). The Leeuwin Naturaliste National Park section has two major plant communities. Dominant tall trees at West Bay Bushland include marri (*Corymbia calophylla*), jarrah (*Eucalyptus marginata*), and karri (*Eucalyptus diversicolor*).

West Bay Bushland Fungi

The 2008 surveys at West Bay Bushland

The two fungi surveys at the West Bay Bushland in June 2008 resulted in 198 records, including 122 different fungi species and 33 collections vouchered into the Western Australian Herbarium (Tables 1 - 4). In the Donovan Street area 65 fungi species were recorded, and in the Leeuwin-Naturaliste National Park area 57 species were recorded. Thirteen of the species were recorded in both the Donovan Street and the Leeuwin-Naturaliste National Park sections of the West Bay Bushland. Fungi collected in 2008 include genera of decomposer fungi such as *Pholiota*, *Pycnoporus*, and *Stereum*, and mycorrhizal fungi belonging to genera such as *Cortinarius*, *Russula*, *and Scleroderma*. Mycorrhizal truffles (fungi with fruit bodies under the ground) included *Descomyces*, and *Zelleromyces* sp. Scratches observed in the soil near some of these truffles as food. Unlike in the previous 2007 survey, the pathogenic (disease) fungus *Armillaria luteobubalina* was not observed at this time. However different areas of the West Bay Bushland were visited.

Only 30 out of 122 (approx. 24%) of the fungi species recorded in the 2008 surveys were the same as those recorded in the previous surveys (see discussion below about cumulative diversity). The percentage figures are estimates, because some of the fungi recorded in this and the previous surveys 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. Some may be undescribed species.

Case study – diminutive mycenoid fungi at West Bay Bushland

Two particular collections of tiny white fungi found at the West Bay Bushland in 2008 became the subject of a thorough taxonomic investigation. Diminutive fungi with fragile, white fruit bodies with caps no greater than 3mm across are frequently encountered in eucalypt dominated ecosystems of Australia. They are often referred to as "mycenoid" as they resemble the genus *Mycena* which includes diminutive species and larger, more familiar species – such as *Mycena clarkeana* (see page J-38 of the online field book at <u>www.fungiperth.org.au</u>).

To date, very few of the diminutive mycenoid fungi have been studied or identified from Western Australia's bushlands. Collections of these fungi are often meagre and consist of very few tiny fruit

bodies that shrivel up to next to nothing when dried. Most of them usually end up simply being designated as *Mycena* sp., and shelved away for future study. One such mycenoid fungus with a frosty cap was collected at the Leeuwin-Naturaliste National Park section of West Bay Bushland during the surveys in 2008. Also, on the same day, about 30 metres away within the same bushland, another collection was made which appeared to be the same species. By coincidence, a collection of what was initially considered to be this same species of fungus also had been obtained 18 days earlier during a fungi survey at Bold Park, an urban bushland in Perth. In the field all these fungi constituted meagre collections typical of diminutive mycenoid fungi. Immediately after collecting the fungi, to encourage production of more fruit bodies, fragments of the wood on which each of the three collections were found (two from Augusta and one from Bold Park) were brought back to the fungi lab at the Western Australian Herbarium. The wood was incubated in separate humid chambers for a period of four weeks. In each case, the wood yielded many specimens of fungi.

Detailed study of their macroscopic and microscopic characteristics revealed that the Augusta collections, though barely distinguishable in the field, actually represent two distinct species of *Mycena*. One of the Augusta collections (specimen ID 3849, BOUGHER 453, see page 57) turned out to be *Mycena adscendens*, a species that occurs in many parts of the world but had not been reported for Western Australia or confirmed anywhere in Australia. Further comparison with other herbarium specimens, and investigation of the scientific literature confirmed that the second Augusta collection (specimen ID 3856, BOUGHER 454, see page 60) matched the Bold Park fungus and represents a new species of *Mycena* section *Sacchariferae*. In the field it had not been possible to distinguish *M. adscendens* from the new species, but microscopically they are quite different. These fungi are listed in Table 2 as *Mycena adscendens* (specimen 3849) and *Mycena* sp. "frosty cap" (specimen 3856).

As a final twist in the tale, after about 25 days incubation, the wood fragment from the West Bay Bushland on which *Mycena adscendens* was fruiting began to also yield fruit bodies of the new species, indicating how closely the two species can co-occur in south west Australia. Details of the putatively new species of *Mycena* and the first record for Western Australia of *M. adscendens* are in draft and will be published in a scientific journal in 2009 (Bougher, unpublished data).

Cumulative fungi diversity at West Bay Bushland

A total of 174 species of fungi have been recorded so far at the West Bay Bushland (Table 5, Bougher *et al.*, 2007). This total is subject to change as some of the fungi recorded in this and the previous surveys remain tentatively identified or unidentified pending further collections, or more detailed comparative analyses. In some cases, multiple records given the same identity in this report or in the previous report may represent different species.

Only three species have been recorded in all years and locations - *Amanita xanthocephala*, *Coltricia cinnamomea*, and *Pycnoporus coccineus*. These fungi are either easily recognised and produce fruit bodies over a long period such as *Amanita xanthocephala*, or they are tough, perennial, and conspicuous fungi such as the scarlet bracket fungus (*Pycnoporus coccineus*). All other fungi were recorded only for some of the times and locations, e.g. 62 of the 92 different fungi recorded prior to 2008 were not recorded in the 2008 survey. It is likely that many more fungi would have been recorded in each year and location if a greater sampling effort had been undertaken, probably resulting in a higher level of commonality between the Donovan Street and the Leeuwin-Naturaliste National Park sections of the West Bay Bushland. Overall, it is likely that many more than 174 fungi species occur in the West Bay Bushland. This likelihood is emphasised by the finding that approximately 76% (92 of the 122) of the fungi recorded in the year 2008 survey are new records for the bushland.

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 be 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 (adapted from Bougher et al., 2007) include:

- 1. Undertake biological surveys to build up an inventory of fungi: Far more fungi species are likely to occur in the West Bay Bushland than the 174 species recorded in the surveys conducted since 2006. Due to the unpredictable nature of fungi fruiting, surveys need to be conducted several times a year over many years in order to capture the biodiversity of fungi present in any given area. Such inventory data may be used to classify fungi communities at 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 trends indicating changes in the diversity of significant ecological groups of fungi such as mycorrhizal species, and the effects of major disturbances such as fire or disease incursions.
- 2. **Record comprehensive data on surveys:** (i) the identity of the fungi (ii) the main features of the fungi (including close-up photographs) (iii) habitat (in litter, on dead wood etc.) and (iv) plant species associated with each of the fungi. Standard recording sheets for fungi biodiversity surveys are available on request from PUBF (DEC Western Australian Herbarium) or from the PUBF website at www.fungiperth.org.au.
- 3. **Georeference the surveys:** It would be desirable to georeference the surveys at 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. It was not recorded in 2008, but probably would have been sighted if forays had been longer or undertaken at more locations. 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).

Therefore, 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.

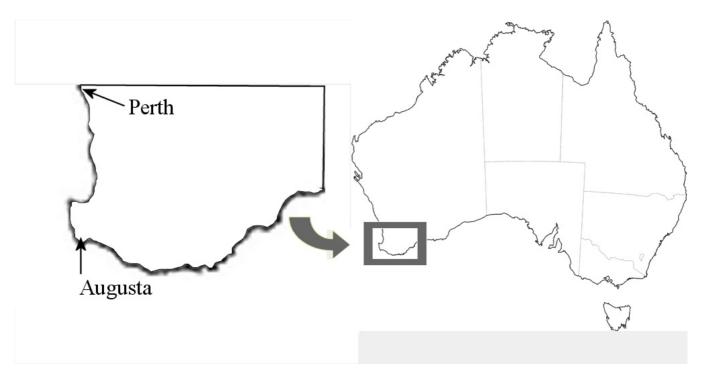
- 8. Include Flora, Fauna and Fungi in signage and interpretative material at the **Bushland:** To promote public awareness and appreciation of the conspicuous and less conspicuous biodiversity at the West Bay Bushland and the linkages between the 3Fs that influence the long-term health of the bushland.
- 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 may 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 <u>www.fungiperth.org.au</u>).

Bougher, N.L., Hart, R., De Bueger, S., Froudist, J., & Glossop, B. (2007). Fungi of West Bay Bushland, Augusta, Western Australia. Perth Urban Bushland Fungi Project Client Report for Lotterywest and the Environmental Research Group Augusta (ERGA). 49 pages.

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



Map 1 : showing the location of Augusta relative to Perth, in the southwest of Western Australia.



Map 2 : Aerial photo of West Bay Bushland showing the northern section, an outlier of the Leeuwin-Naturaliste National Park and the southern section, the Donovan Street Bushland.



Map 3 : Aerial photo showing the entire West Bay Bushland area with the colour coded routes followed by the nine groups which collected over the weekend.

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

Five groups collected as part of the Sunday walk. Four of these groups collected in Reserve 14779, the northern section of West Bay Bushland which forms part of the Leeuwin-Naturaliste National Park, as can be seen on the map above. One group, 'green', collected in Donovan Street Bushland, the small area of the Donovan Street bushland which is on the western side of Bussell Highway.

Tables 1 and 2: <u>Augusta Fungi List : 28 & 29 June 2008</u>

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

Field Book Page #: refers to the Perth Urban Bushland Fungi Field Book (Bougher 2007) which is available for downloading from the project website at www.fungiperth.org.au

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

Table 1: Donovan Street Bushland Fungi, West Bay Bushland28 and 29 June 2008

Scientific Name	Common Name	Form	Habitat	Life Mode	Fungimap	Field Book Page #	Specimen ID
Alboleptonia sericella		mushroom	litter/ground	S			3689
Aleurina rhenana	Stalked Orange Peek Fungus	cup	litter/ground	S			3680
Aleurina ferruginea	Fleshy Cup Fungus	cup	litter/ground	S		A-1	3750
Amanita sp.		mushroom	litter/ground	Μ			3724
Amanita umbrinella		mushroom	litter/ground	Μ		J-36	3670
Amanita xanthocephala	Yellow Headed Amanita	mushroom	litter/ground	М	Yes		3684, 3741 3749
Anthracophyllum archeri	Orange Fan	shell	dead wood	S	Yes		3733
Calocera guepinioides	Scotsman's Beard	jelly fungus	dead wood	S		Q-1	3687
Campanella gregaria		shell	dead wood	S			3715, 3729
<i>Clavaria</i> sp.		coral	litter/ground	Μ			3690
<i>Clavulina</i> sp.		coral	litter/ground	Μ			3705, 3790
Coltricia cinnamomea	Tough Cinnamon Fungus	mushroom	litter/ground	S		N-1	3675, 3703 3742, 3758
<i>Cortinarius</i> sp.		mushroom	litter/ground	М			3696, 3708 3714, 3722 3740, 3759
Dermocybe splendida		mushroom	litter/ground	Μ	Yes		3787
Descomyces albellus		truffle	litter/underground	Μ			3671
Entoloma cf. incarna		mushroom	litter/ground	S			3719
Entoloma sp.		mushroom	litter/ground	S			3697, 3710 3720, 3731
Fistulina hepatica	Beefsteak Fungus	bracket	dead wood	P/S	Yes	N-9	3688, 3745
Galerina sp.		mushroom	litter/ground	S			3672, 3676 3756

Scientific Name	Common Name	Form	Habitat	Life Mode		Field Book Page #	Specimen ID
Geoglossum sp.		club	litter/ground	S			3691
Grifola sp.		bracket	dead wood	S			3693
Gymnopilus allantopus	Golden Wood Fungus	mushroom	dead wood	S		J-15	3692, 3712 3728
<i>Gymnopilus</i> sp.	0	mushroom	dead wood	S			3746
Henningsomyces candidus	Miniature Chimney Pots	tubular	dead wood	S		R-1	3673
Hydnum repandum		mushroom	litter/ground	Μ			3789
<i>Hygrocybe</i> sp.		mushroom	litter/ground	S			3702, 3704 3784
Hymenochaete sp.		resupinate	dead wood	S			3686, 3694 3735, 3739
Hypholoma australe		mushroom	dead wood litter/ground	S			3785
Inocybe sp.		mushroom	litter/ground	М			3699, 3707 3786
Laccaria masonii		mushroom	litter/ground	Μ			3698, 3726
Lactarius eucalypti		mushroom	litter/ground	Μ			3723, 3791
<i>Leptonia</i> sp.	Green Goblin	mushroom	litter/ground	S			3678
Marasmius sp.		mushroom	litter/ground	S			3737
Mycena cf. austrororida		mushroom	dead wood	S			3730
<i>Mycena</i> sp.		mushroom	litter/ground	S			3679, 3732 3752, 3794
Phellinus sp.		bracket	dead wood	S			3701
Pholiota communis	Common Pholiota	mushroom	litter/ground	S		J-26	3738
Pholiota multicingulata		mushroom	litter/ground	S			3743
Plicaria sp.		cup	litter/ground	S			3709
Poria sp.		resupinate	dead wood	S			3711
Poronia erici	Dung Buttons	button	dung	S	Yes	D-1	3783
Psathyrella pygmaea		mushroom	dead wood	S			3725
Psathyrella sp.		mushroom	litter/ground	S			3727
Pycnoporus coccineus	Scarlet Bracket Fungus	bracket	dead wood	S		N-8	3734
Quambalaria sp.		spots	dead/living trees & roots	Р			3677
Ramaria cristata		coral	litter/ground	Μ			3792
Ramariopsis pulchella		coral	litter/ground	М			3674

Scientific Name	Common Name	Form	Habitat	Life Mode	Fungimap	Field Book Page #	Specimen ID
Resupinatus cinerascens		shell	dead wood	S			3713
<i>Russula neerimea</i> group		mushroom	litter/ground	М			3682, 3760
Russula purpureoflava		mushroom	litter/ground	М			3795
<i>Russula</i> sp.		mushroom	litter/ground	Μ			3718, 3721
Scleroderma cepa		puffball	litter/ground	Μ			3748
Scleroderma sp.		puffball	litter/ground	Μ		L-4	3695, 3788
Stereum hirsutum	Hairy Curtain Fungus	bracket	dead wood	S	Yes		3683, 3717 3736, 3747
Trechispora cf. farinacea		resupinate	litter	S			3753
Tubaria rufofulva		mushroom	litter/ground	S	Yes		3755
Tubaria serrulata		mushroom	litter/ground	S			3716
Tubifera ferruginosa	Strawberry Slime Mould	slime mould	dead wood	S			3757
Undetermined Agaric		mushroom	litter/ground	?			3700
Undetermined Ascomycete		cup	litter/ground	S			3793
Undetermined Discomycete		cup	dead wood	S			3681
Undetermined Jelly Fungus		jelly	dead wood	S			3685
Undetermined Myxomycete	Slime Mould	slime mould	dead wood	S			3706
Undetermined Resupinate		resupinate	dead wood	М			3744, 3751 3782
Zelleromyces sp.		truffle	underground	М			3754

Table 2 : Leeuwin-Naturaliste National Park Fungi, West Bay Bushland, 29 June 2008

Scientific Name	Common Name	Form	Habitat	Life Mode		Page Num	_
Agaricus austrovinaceus		mushroom	litter/ground	S			3846
Agaricus vinaceus group		mushroom	litter/ground	S			3847
Aleurina ferruginea	Fleshy Cup Fungus	cup	litter/ground	S		A-1	3861
Amanita xanthocephala	Yellow Headed Amanita	mushroom	litter/ground	М	Yes		3808
Anthracophyllum archeri	Orange Fan	shell	dead wood	S	Yes		3831, 3866

Scientific Name	Common Name	Form	Habitat	Life Mode	F map	Page Num	Specimen ID
Boletellus obscurecoccineus	Rhubarb Bolete	mushroom	litter/ground	М	Yes	K-1	3836
Calocera guepinioides	Scotsman's Beard	jelly fungus	dead wood	S		Q-1	3814, 3865
Camarophyllopsis sp.		mushroom	litter/ground	Μ			3829
Cantharellus concinnius		mushroom	litter/ground	М			3834
Clavaria amoena		coral	litter/ground	М			3775, 3824 3867
<i>Clavaria</i> sp.		coral	litter/ground	М			3774, 3825
<i>Clavulina</i> sp.		coral	litter/ground	Μ			3810
<i>Clitocybe</i> sp.		mushroom	litter/ground	S			3852
Coltricia cinnamomea	Tough Cinnamon Fungus	mushroom	litter/ground	S		N-1	3771, 3820
Coprinus micaceus- truncorum		mushroom	dead wood	S			3801, 3802
<i>Cortinarius</i> sp.		mushroom	litter/ground	Μ			3767
Crepidotus sphaerosporus		shell	dead wood	S			3764
Descolea maculata		mushroom	litter/ground	Μ			3857, 3858
Descolea sp.	Spotted Descolea	mushroom	litter/ground	М		J-33	3796
Entoloma sp.		mushroom	litter/underground	S			3822
Exidia sp.		jelly fungus	dead wood	S			3804, 3848
<i>Galerina</i> sp.		mushroom	litter/ground	S			3772, 3806 3816, 3845
Ganoderma sp.		bracket	dead/living trees & roots	S/P			3813
Hydnum cf.repandum		mushroom	litter/ground	М			3762, 3763 3833
<i>Hygrocybe</i> sp.		mushroom	litter/ground	S			3765, 3768 3777, 3818 3823, 3843
<i>Hymenochaete</i> sp.		resupinate	dead wood	S			3761, 3809 3827,3854
Hyphodontia sp.		resupinate	dead wood	S			3812
Hypholoma australe		mushroom	dead wood litter/ground	S			3776
Hypoxylon sp.		clubs	dead wood	S			3807, 3860 3864
Hysterangium sp.		truffle	underground under litter	М			3769
<i>Inocybe</i> sp.		mushroom	litter/ground	Μ			3766
Laccaria sp.		mushroom		М			3811, 3828 3853
Lactarius eucalypti		mushroom	litter/ground	Μ			3779
Lichenomphalia sp.		mushroom	litter/ground	S			3798

Scientific Name	Common Name	Form	Habitat	Life Mode	F man		Specimen ID
Lycogala epidendrum	Slime Mold	slime	dead wood	S	шар	INUIII	3851
Lycoguiu epiuenurum	Horse Hair	SIIIIC	ucau woou				5051
Marasmius crinisequi	Fungus	mushroom	litter/ground	S			3826, 3839
Mycena adscendens		mushroom	dead wood	S			3849
<i>Mycena</i> sp. "frosty cap"		mushroom	dead wood	S			3856
<i>Mycena</i> sp. 1 Leeuwin		mushroom	dead wood	S			3778
<i>Mycena</i> sp. 2 Leeuwin		mushroom	litter/ground	S			3838
Omphalotus nidiformis	Ghost Fungus	mushroom	dead wood	S/P	Yes	J-21	3832
Phallus hadriani	Stinkhorn Egg	phalloid	litter/ground	S			3819
Pholiota communis	Common Pholiota	mushroom	litter/ground	S		J-26	3840
Polyporus sp.		bracket	dead wood	S			3781
Pycnoporus coccineus	Scarlet Bracket Fungus	bracket	dead wood	S		N-8	3817
Rickenella fibula	Orange Mosscap	mushroom	litter/ground	S		J-27	3863
<i>Rickenella</i> sp.		mushroom	litter/ground	S			3770
<i>Russula neerimea</i> group		mushroom	litter/ground	М			3835
Russula persanguinea		mushroom	litter/ground	М			3837, 3855
Scleroderma sp.		puffball	litter/ground	Μ		L-4	3815
<i>Tremella mesenterica</i> group	Yellow Brain Fungus	jelly fungus	dead wood	S	Yes	Q-2	3862
Trechispora sp.		resupinate	dead wood	S			3850
Tubaria rufofulva		mushroom	litter/ground	S			3844
Tubaria serrulata		mushroom	litter/ground	S	Yes		3821
<i>Tubaria</i> sp.		mushroom	litter/ground	S			3780
Undetermined Agaric		mushroom	litter/ground	?			3773, 3797
Undetermined Ascomycete		cup	litter/ground	S			3803, 3841
Undetermined Jelly Fungus		jelly	dead wood	S			3830
Undetermined Resupinate		resupinate	dead wood	М			3799, 3800 3805, 3842 3859

Tables 3 and 4 : Permanent Vouchered Specimens from the West Bay Bushland Augusta, 2008

Thirty three of the fungi were deposited into the Western Australian Herbarium with the following details:

Table 3 : <u>Twenty seven Permanent Vouchered Specimens from the Donovan Street Bushland</u>

Alboleptonia sericella	Voucher ID: E9134	Specimen ID: 3689
Campanella gregaria	Voucher ID: E9151	Specimen ID: 3715
Clavulina sp.	Voucher ID: E9169	Specimen ID: 3790
Coltricia cinnamomea	Voucher ID: E9156	Specimen ID: 3758
Descomyces sp.	Voucher ID: E9143	Specimen ID: 3671
Entoloma sp.	Voucher ID: E9146	Specimen ID: 3697
Fistulina hepatica	Voucher ID: E9138	Specimen ID: 3688
Henningsomyces candidus	Voucher ID: E9144	Specimen ID: 3673
Hygrocybe sp.	Voucher ID: E9145	Specimen ID: 3702
Hygrocybe sp.	Voucher ID: E9154	Specimen ID: 3704
Hygrocybe sp.	Voucher ID: E9162	Specimen ID: 3784
Hymenochaete sp.	Voucher ID: E9152	Specimen ID: 3694
Hymenochaete sp.	Voucher ID: E9150	Specimen ID: 3735
Inocybe sp.	Voucher ID: E9141	Specimen ID: 3707
Laccaria masonii	Voucher ID: E9155	Specimen ID: 3698
Marasmius sp.	Voucher ID: E9149	Specimen ID: 3737
Mycena sp.	Voucher ID: E9137	Specimen ID: 3732
Mycena sp.	Voucher ID: E9147	Specimen ID: 3752
Pholiota communis	Voucher ID: E9142	Specimen ID: 3738
Pycnoporus coccineus	Voucher ID: E9135	Specimen ID: 3734
Ramaria cristata	Voucher ID: E9157	Specimen ID: 3792
Ramariopsis pulchella	Voucher ID: E9153	Specimen ID: 3674
Resupinatus cinerascens	Voucher ID: E9139	Specimen ID: 3713
Stereum hirsutum	Voucher ID: E9133	Specimen ID: 3747
Trechispora cf. farinacea	Voucher ID: E9148	Specimen ID: 3753
Tubaria rufofulva	Voucher ID: E9140	Specimen ID: 3755
Tubaria serrulata	Voucher ID: E9131	Specimen ID: 3716

Table 4 : <u>Six Permanent Vouchered Specimens from the Leeuwin-Naturaliste National Park,</u> West Bay Bushland

Descolea sp.	Voucher ID: E9183	Specimen ID: 3796
Coprinus micaceus-truncorum	Voucher ID: E9171	Specimen ID: 3801
Hypholoma australe	Voucher ID: E9177	Specimen ID: 3776
Mycena adscendens	Voucher ID: BOUGHER 453	Specimen ID: 3849
Mycena sp."frosty cap"	Voucher ID: BOUGHER 454	Specimen ID: 3856
Pholiota communis	Voucher ID: E9189	Specimen ID: 3840

Table 5: Fungi of West Bay Bushland: Cumulative Total 2006-2008

Records for each of 2006, 2007 and 2008 for the Donovan Street bushland, and the Leeuwin-Naturaliste National Park section of the West Bay Bushland are indicated by +.

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

Field Book Page #: refers to the Perth Urban Bushland Fungi Field Book (Bougher 2007) which is available for downloading from the project website at www.fungiperth.org.au

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

NOTE: In some cases the names of species are provisional only as many of these fungi have not been examined in detail to confirm their identities.

Scientific Name	Common Name	Form	Habitat	Life Mode	F map	Page No.	2006	2007	2008 Donovan	2008 Leeuwin
Agaricus austrovinaceus /Agaricus vinaceus group		mushroom	litter/ground	S						+
Agaricus sp. 1		mushroom	litter/ground	S				+		
Agaricus sp. 2		mushroom					+			
Alboleptonia sericella		mushroom	litter/ground						+	
Aleurina ferruginea	Fleshy Cup Fungus	cup	litter/ground	s		A-1		+	+	+
Aleurina rhenana		cup	litter/ground	S					+	
Amanita sp. 1		mushroom	litter/ground	М				+		
Amanita sp. 2		mushroom	litter/ground	М					+	
Amanita umbrinella		mushroom	litter/ground	М		J-36	+		+	
Amanita xanthocephala	Yellow Headed Amanita	mushroom	litter/ground	М	Y		+	+	+	+
Anthracophyllum archeri	Orange Fan	shell	dead wood	S	Y				+	+
Antrodiella citra	Lemon Peel Fungus	bracket	dead wood	S				+		
Armillaria luteobubalina	Australian Honey Fungus	mushroom	dead/living trees & roots	Р	Y	J-2		+		
Austropaxillus infundibuliformis	Funnel cap pax	mushroom	litter/ground	М			+			
Boletellus obscurecoccineus	Rhubarb Bolete	mushroom	litter/ground	М	Y	K-1	+	+		+
Boletus sp.		mushroom	litter/ground	М				+		
Calocera guepinioides	Scotsman's Beard	jelly fungus	dead wood	S		Q-1		+	+	+
Camarophyllopsis sp.		mushroom	litter/ground							+
Campanella gregaria		shell	dead wood	S					+	
Cantharellus concinnius		mushroom	litter/ground	М				+		+
Ceratiomyxa fruticulosa	Slime Mould	slime mould	dead wood	S	Y	Z-2		+		
Clavaria amoena		coral	litter/ground	М				+		+

Scientific Name	Common Name	Form	Habitat	Life Mode	F map	Page No.	2006	2007	2008 Donovan	2008 Leeuwin
Clavaria sp. 1		coral	litter/ground	М				+		
Clavaria sp. 2		coral	litter/ground	М					+	
Clavaria sp. 3		coral	litter/ground	М						+
Clavulina sp. 1		coral	litter/ground	М					+	
Clavulina sp. 2		coral	litter/ground	М						+
<i>Clitocybe</i> sp. 1		mushroom	litter/ground	S				+		
<i>Clitocybe</i> sp. 2		mushroom	litter/ground	S						+
Coltricia cinnamomea	Tough Cinnamon Fungus	mushroom	litter/ground	S		N-1	+	+	+	+
Coprinus micaceus		mushroom	dead wood	S						+
Cortinarius fibrillosus		mushroom	litter/ground	М				+		
Cortinarius sp. 1		mushroom	litter/ground	М				+		
Cortinarius sp. 2		mushroom	litter/ground	М					+	
Cortinarius sp. 3		mushroom	litter/ground	М						+
Crepidotus		shell	dead wood	S						+
sphaerosporus										•
Dermocybe sp.		mushroom	litter/ground	М				+		
Dermocybe splendida	~	mushroom	litter/ground	М	Y		+	+	+	
Descolea maculata	Spotted Descolea	mushroom	litter/ground	М		J-33				+
Descolea sp.		mushroom	litter/ground	М						+
Descomyces albellus		truffle		М					+	
Entoloma cf. incarna		mushroom	litter/ground	S					+	
Entoloma sp. 1		mushroom	litter/underground	S				+		
Entoloma sp. 2		mushroom	litter/underground	S					+	
Entoloma sp. 3		mushroom	litter/underground	S						+
Exidia sp.		jelly	dead wood	S						+
Fistulina hepatica	Beefsteak Fungus	fungus bracket	dead wood	P/S	Y	N-9		+	+	
Fistulinella mollis (Gastrotylopilus)		mushroom	litter/ground	М				+		
Fomitopsis		bracket fungus	dead wood	S			+			
lilacinogilva		-					•			
Galerina sp. 1		mushroom	litter/ground	S				+		
Galerina sp. 2		mushroom	litter/ground	S					+	
Galerina sp. 3		mushroom	litter/ground	S						+
Ganoderma sp.		bracket	dead/living trees & roots	S/P						+
Geastrum sp.		earthstar	litter/ground	S			+			
Geoglossum sp.		club	litter/ground	S					+	
Grifola sp.		bracket	dead wood	S				+	+	
<i>Gymnomyces</i> sp.		truffle	underground	М				+		
Gymnopilus allantopus	Golden Wood Fungus	mushroom	dead wood	S		J-15	+		+	
Gymnopilus junonius	i ungus	mushroom	dead wood	S	Y			+		
<i>Gymnopilus</i> sp. 1		mushroom	dead wood	S				+		
<i>Gymnopilus</i> sp. 1 <i>Gymnopilus</i> sp. 2		gilled fungus	deud wood	2			+	Г		
Gymnopilus sp. 3		mushroom	dead wood	S					+	
Gyroporus sp.		mushroom	litter/ground	М				+		
	Miniature	tubular	dead wood	S		R-1		+	+	

Scientific Name	Common Name	Form	Habitat	Life Mode	F map	Page No.	2006	2007	2008 Donovan	2008 Leeuwin
candidus	Chimney Pots									
Hydnum repandum/ Hydnum cf. repandum		mushroom	litter/ground	М				+	+	+
Hygrocybe sp. 1		mushroom	litter/ground	S				+		
Hygrocybe sp. 2		mushroom	litter/ground	S					+	
Hygrocybe sp. 3		mushroom	litter/ground	S						+
Hymenochaete sp. 1		resupinate	dead wood	S					+	
Hymenochaete sp. 2		resupinate	dead wood	S						+
Hyphodontia sp.		resupinate	dead wood	S						+
Hypholoma australe		mushroom	dead wood litter/ground	S					+	+
Hypoxylon sp.		clubs	dead wood							+
Hysterangium sp.		truffle	underground under litter	М						+
Inocybe sp. 1		mushroom	litter/ground	М				+		
Inocybe sp. 2		gilled fungus					+			
Inocybe sp. 3		mushroom	litter/ground	М					+	
Inocybe sp. 4		mushroom	litter/ground	М						+
Laccaria lateritia	Brick Red Laccaria	mushroom	litter/ground	М		J-17	+	+		
Laccaria masonii		mushroom	litter/ground	М					+	
<i>Laccaria</i> sp.		mushroom	litter/ground	М				+		+
Lactarius eucalypti		mushroom	litter/ground	М				+	+	+
<i>Leptonia</i> sp.	Green Goblin	mushroom	litter/ground	S				+	+	
Lichenomphalia chromacea		mushroom	moss bed	S/P				+		
Lichenomphalia sp.		mushroom	litter/ground	S						+
Lichenomphalia umbellifera		mushroom	moss bed	S/P				+		
Lycogala epidendrum	Slime Mold	slime	dead wood							+
Marasmius crinisequi	Horse Hair Fungus	mushroom	litter/ground	S						+
Marasmius sp.		mushroom	litter/ground	S					+	
Melanophyllum hacmatospormum		mushroom					+			
haematospermum Mycena adscendens	Minute	mushroom		S						+
Mycena cf.	frosty cap	mushroom	dead wood	S	Y				+	1
austrororida	Bleeding									
Mycena kuurkacea	mycena	mushroom	litter/ground	S				+		
Mycena sp. 1		mushroom	litter/ground	S				+		
Mycena sp. 2		mushroom	litter/ground	S					+	
<i>Mycena</i> sp. "frosty cap"		mushroom	dead wood	S						+
<i>Mycena</i> sp. 1 Leeuwin		mushroom	dead wood	S						+
<i>Mycena</i> sp. 2 Leeuwin		mushroom	litter/ground	S						+
Omphalotus nidiformis	Ghost Fungus	mushroom	dead wood	S/P	Y	J-21		+		+
Panaeolus sphinctrinus		mushroom	dung	S				+		
Peziza sp.		cup	litter/ground	S	İ		İ	+		

Scientific Name	Common Name	Form	Habitat	Life Mode	F map	Page No.	2006	2007	2008 Donovan	2008 Leeuwin
Phallus hadriani		phalloid	litter/ground							+
Phellinus sp. 1		bracket	dead wood	S				+		
Phellinus sp. 2		bracket	dead wood	S					+	
Phellodon niger / Phellodon aff. niger		toothed fungus	litter/ground	М			+	+		
Pholiota communis	Common Pholiota	mushroom	litter/ground	S		J-26			+	+
Pholiota multicingulata		mushroom	dead wood	S			+		+	
Pisolithus sp.	Dog Poo Fungus	earthball	litter/ground	М		L-3	+	+		
Pleurotellus sp.		shell	dead wood	S				+		
Pleurotus australis		Gilled fungus	dead wood	S			+			
Plicaria sp.		cup	litter/ground	S					+	
Pogisperma sp.		truffle	underground under litter	М				+		
Polyporus sp.		bracket	dead wood	S						+
Poria sp.		resupinate	dead wood	S				+	+	
Poronia erici	Dung Buttons	button	dung	S	Y	D-1	+		+	
Psathyrella pygmaea/ Psathyrella echinata		mushroom	dead wood	S			+		+	
Psathyrella sp. 1		mushroom	litter/ground	S				+		
Psathyrella sp. 2		mushroom	litter/ground	S					+	
Pycnoporus coccineus	Scarlet Bracket Fungus	bracket	dead wood	S		N-8	+	+	+	+
Quambalaria sp.	T ungus	spots	dead/living trees & roots						+	
Ramaria capitata var. ochraceosalmonicolor		coral	litter/ground	М				+		
Ramaria cristata		coral	litter/ground	М					+	
Ramaria lorithamnus		coral	litter/ground	М				+		
<i>Ramaria</i> sp.		coral	litter/ground	М				+		
Ramariopsis amethystina		coral	litter/ground						+	
Resupinatus cinerascens		shell	dead wood	S					+	
Resupinatus sp.		shell	dead wood	S				+		
Rhodocybe sp.		mushroom	litter/ground	S				+		
Rickenella fibula	Orange Mosscap	mushroom	litter/ground	S		J-27		+		+
<i>Rickenella</i> sp.		mushroom	litter/ground	S						+
Russula aff. cyanoxantha		mushroom	litter/ground	М				+		
Russula clelandii		mushroom	litter/ground	М				+		
Russula delica group		mushroom	litter/ground	М				+		
Russula neerimea group		mushroom	litter/ground	М				+	+	
Russula nigricans group		mushroom	litter/ground	М				+		
Russula persanguinea		mushroom	litter/ground	М				+		+
Russula purpureoflava		mushroom	litter/ground	М				+	+	
Russula sp. 1		mushroom	litter/ground	М				+		
Russula sp. 2		mushroom	litter/ground	М					+	
Scleroderma cepa		puffball	litter/ground	М				+	+	

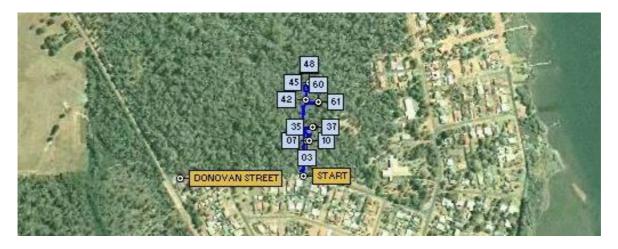
Scientific Name	Common Name	Form	Habitat	Life Mode	F map	Page No.	2006	2007	2008 Donovan	2008 Leeuwin
Scleroderma sp.		puffball	litter/ground	М		L-4	+		+	+
Stereum hirsutum	Hairy Curtain Fungus	bracket	dead wood	S	Y		+	+	+	
Suillus luteus		mushroom	litter/ground	М				+		
Trechispora cf. farinacea		resupinate	litter	S					+	
Trechispora sp.		resupinate	dead wood	S						+
Tremella mesenterica group	Yellow Brain Fungus	jelly fungus	dead wood	s	Y	Q-2				+
Tremella sp.		jelly fungus	dead wood	S			+			
Tricholoma sp.		mushroom	litter/ground	S				+		
Tricholomopsis rutilans		gilled fungus					+			
Tubaria rufofulva		mushroom	litter/ground	S					+	+
Tubaria serrulata		mushroom	litter/ground	S					+	+
<i>Tubaria</i> sp.		mushroom	litter/ground	S				+		+
Tubifera ferruginosa	Strawberry Slime Mould	slime mould	dead wood	s					+	
Undetermined Agaric 1		mushroom	litter/ground	?					+	
Undetermined Agaric 2		mushroom	litter/ground	?						+
Undetermined Agaric 3		mushroom	litter/ground	?				+		
Undetermined Ascomycete 1		cup	litter/ground	S				+		
Undetermined Ascomycete 2		cup	litter/ground	S					+	
Undetermined Ascomycete 3		cup	litter/ground	S						+
Undetermined Bracket Fungus 1		bracket	dead wood	S					+	
Undetermined Bracket Fungus 2		bracket	dead wood	S					+	
Undetermined Bracket Fungus 3		bracket	dead wood	S				+		
Undetermined Discomycete 1		cup	dead wood	S				+		
Undetermined Discomycete 2		cup	dead wood	S					+	
Undetermined Jelly Fungus 1		jelly	dead wood	S					+	
Undetermined Jelly Fungus 2		jelly	dead wood	S						+
Undetermined Myxomycete 1	Slime Mould	slime mould	dead wood	S					+	
Undetermined Resupinate 1		resupinate	dead wood	М				+		
Undetermined Resupinate 2		resupinate	dead wood	М					+	
Undetermined Resupinate 3		resupinate	dead wood	М					+	
Undetermined Resupinate 4		resupinate	dead wood	М					+	
Undetermined Resupinate 5		resupinate	dead wood	М						+

Bougher, Hart, de Bueger, & Glossop (2008). Fungi of West Bay Bushland, Augusta – 2008 report

Scientific Name	Common Name	Form	Habitat	Life Mode	F map	Page No.	2006	2007	2008 Donovan	2008 Leeuwin
Undetermined Truffle 1		truffle	litter/ground	М				+		
Xylaria hypoxylon	Candle Snuff	other	litter/ground	S		D-2		+		
Zelleromyces sp. 1		truffle	underground	М				+		
Zelleromyces sp. 2		truffle	underground	М					+	

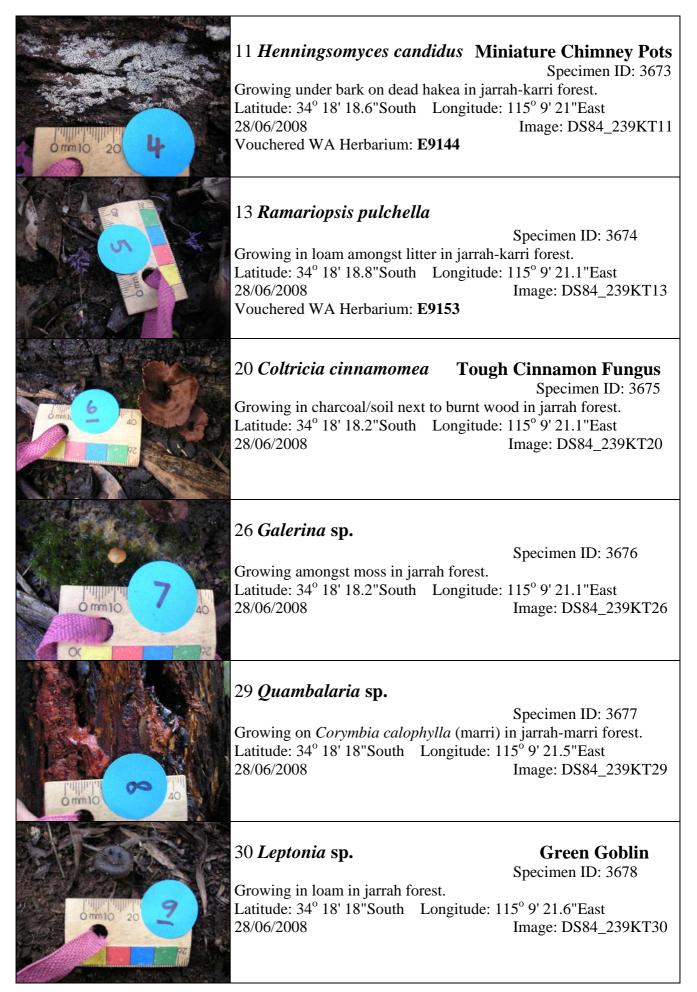
Georeferenced Track and Photos

Kevn Griffiths and Kirsten Tullis's group, Donovan Street Bushland, 28 June 2008.

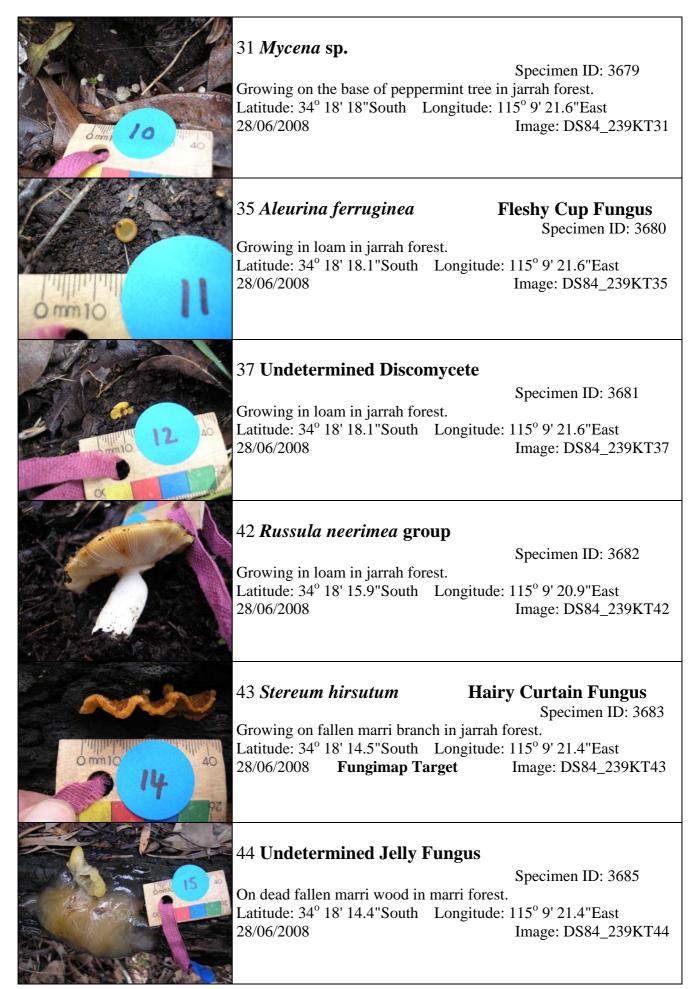


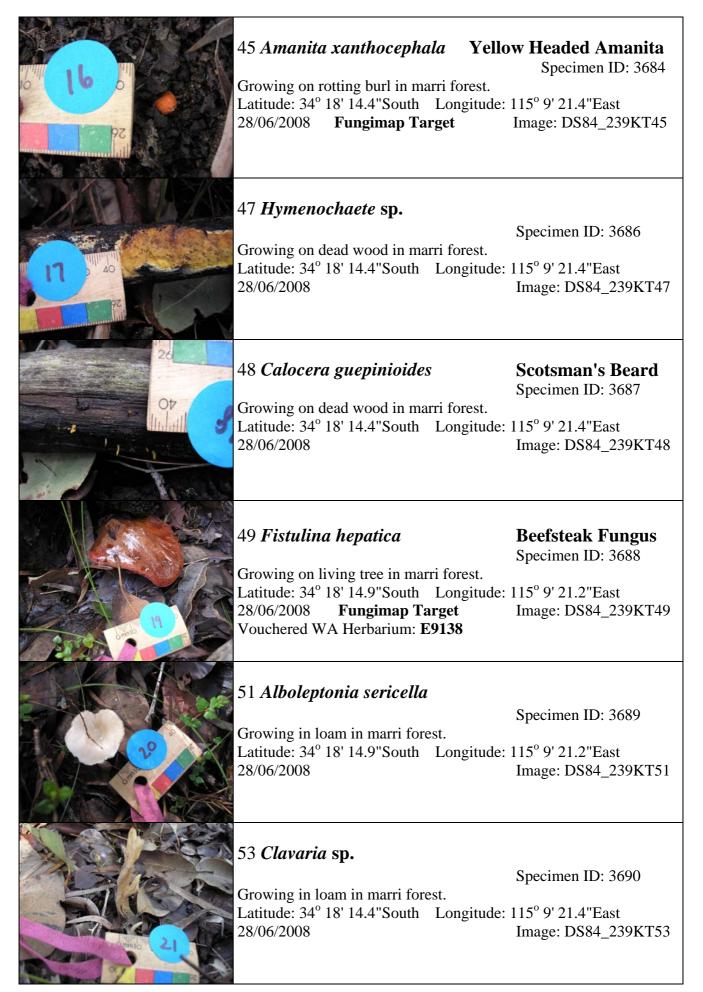
The numbers on the coloured dots in the fungi photos correspond to the collecting number and usually **do not** match the photo number. It is the **photo number** preceding the fungus name that correlates with the site on the map above.

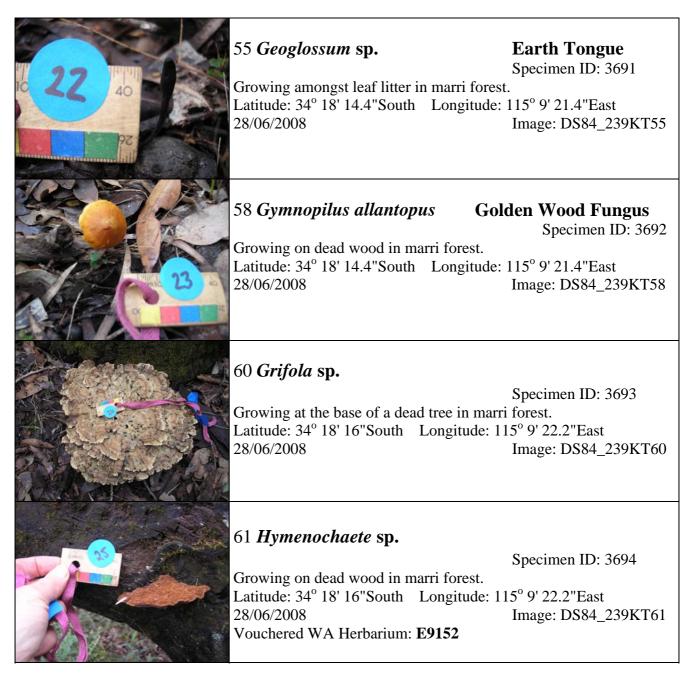
8	van St Date: 28/06/2008 eaders Kirsten Tullis and Kevn Griffiths Photographer: Kirsten Tullis
	03 Amanita umbrinella Specimen ID: 3670 Growing in loamy Eucalyptus marginata-Eucalyptus diversicolor (jarrah-karri) forest. Latitude: 34° 18' 19"South Longitude: 115° 9' 20.9"East 28/06/2008 Image: DS84_239KT03
	07 <i>Descomyces albellus</i> Specimen ID: 3671 Growing in loam in jarrah-karri forest. Latitude: 34° 18' 19.2"South Longitude: 115° 9' 21.2"East 28/06/2008 Image: DS84_239KT07 Vouchered WA Herbarium: E9143
	10 <i>Galerina</i> sp. Specimen ID: 3672 On wood amongst moss in jarrah-karri forest. Latitude: 34° 18' 19.2"South Longitude: 115° 9' 21.2"East 28/06/2008 Image: DS84_239KT10



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Georeferenced Track and Photos

Roz Hart, Julie Fielder and Derek Mead-Hunter's group, Donovan Street Bushland, 28 June 2008.



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.

1	Date: 28/06/2008 Roz Hart, Julie Fielder and Derek Mead-Hunter pher: Roz Hart
	04 Scleroderma sp. Specimen ID: 3695 Growing in gravel on the edge of road next to Eucalyptus marginata-Corymbia calophylla (jarrah-marri) forest. Latitude: 34° 18' 4.7"South Longitude: 115° 9' 30"East 28/06/2008 Image: DS84_240RH04 05 Cortinarius sp. Specimen ID: 3696 Growing in loam next to jarrah-marri forest. Latitude: 34° 18' 7"South Longitude: 115° 9' 29.1"East 28/06/2008 Image: DS84_240RH05
	06 <i>Entoloma</i> sp. Specimen ID: 3697 Growing amongst moss next to jarrah-marri forest. Latitude: 34° 18' 7"South Longitude: 115° 9' 29"East 28/06/2008 Image: DS84_240RH06 Vouchered WA Herbarium: E9146

09 <i>Laccaria masonii</i> Growing amongst leaf litter in jarrah-ma Latitude: 34° 18' 7.2"South Longitude: 28/06/2008 Vouchered WA Herbarium: E9155	
11 <i>Inocybe</i> sp. Growing amongst leaf litter in jarrah-ma Latitude: 34° 18' 7.2"South Longitude: 28/06/2008	
13 Undetermined Agaric Growing on kangaroo dung in jarrah-mar Latitude: 34° 18' 7.2"South Longitude: 28/06/2008	
15 <i>Phellinus</i> sp. Growing on live melaleuca in jarrah-mar Latitude: 34° 18' 7.1"South Longitude: 28/06/2008	
16 <i>Hygrocybe</i> sp. Amongst litter in jarrah-marri forest near Latitude: 34° 18' 7.6"South Longitude: 28/06/2008 Vouchered WA Herbarium: E9145	
Specin Amongst litter in marri forest near granit Latitude: 34° 18' 7.6"South Longitude:	



T1"411" 260 00	28 <i>Entoloma</i> sp. Specimen ID: 3710 Growing in gravel at the edge of granite in jarrah-marri forest. Latitude: 34° 18' 4.9"South Longitude: 115° 9' 27.1"East 28/06/2008 Image: DS84_240RH28
	32 <i>Poria</i> sp. Specimen ID: 3711 Growing on the underside of dead wood. Latitude: 34° 18' 4.9"South Longitude: 115° 9' 27.1"East 28/06/2008 Image: DS84_240RH32
	34 Gymnopilus allantopusGolden Wood Fungus Specimen ID: 3712Growing on dead wood in jarrah forest. Latitude: 34° 18' 4.4"South Longitude: 115° 9' 26.5"East 28/06/2008Image: DS84_240RH34
	36 <i>Resupinatus cinerascens</i> Specimen ID: 3713 Growing amongst leaf litter on jarrah bark. Latitude: 34° 18' 4.4"South Longitude: 115° 9' 26.5"East 28/06/2008 Image: DS84_240RH36 Vouchered WA Herbarium: E9139
	40 <i>Cortinarius</i> sp. Specimen ID: 3714 Growing amongst leaf litter in jarrah forest. Latitude: 34° 18' 4.4"South Longitude: 115° 9' 26.4"East 28/06/2008 Image: DS84_240RH40
200 0 00 000000000000000000000000000000	46 <i>Campanella gregaria</i> Specimen ID: 3715 Growing on dead marri in jarrah-marri forest. Latitude: 34° 18' 4.2"South Longitude: 115° 9' 26"East 28/06/2008 Image: DS84_240RH46 Vouchered WA Herbarium: E9151



Georeferenced Track and Photos

Joe Froudist's group, Donovan Street Bushland, 28 June 2008.



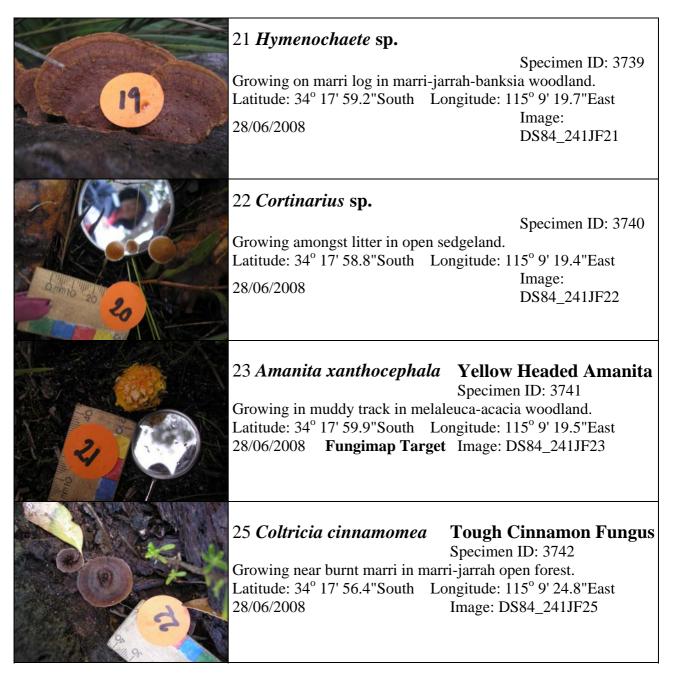
The numbers on the coloured dots in the fungi photos correspond to the collecting number and usually **do not** match the photo number. It is the **photo number** preceding the fungus name that correlates with the site on the map above.

Event: Augusta - Donovan St Group Number: 241 Leader Jo Photograp	
	03 <i>Russula</i> sp. Specimen ID: 3721 Growing in rich sandy loam at the base of paperbark in paperbark-banksia woodland. Latitude: 34° 17' 59.9"South Longitude: 115° 9' 18.6"East Image: 28/06/2008 DS84_241JF03
	04 <i>Cortinarius</i> sp. Specimen ID: 3722 Growing on rotting bark at the base of paperbark in paperbark- banksia woodland. Latitude: 34° 17' 59.9"South Longitude: 115° 9' 18.6"East Image: 28/06/2008 DS84_241JF04

05 <i>Lactarius eucalypti</i> Specimen ID: 3723 Growing in litter under bark in paperbark-banksia woodland. Latitude: 34° 17' 59.9"South Longitude: 115° 9' 18.6"East Image: 28/06/2008 Image: DS84_241JF05
06 Amanita sp. Specimen ID: 3724 Growing in sand on the edge of animal track in banksia-paperbark woodland. Latitude: 34° 17' 59.9"South Longitude: 115° 9' 18.4"East Image: 28/06/2008 DS84_241JF06
07 <i>Psathyrella pygmaea</i> Specimen ID: 3725 Growing on dead banksia in paperbark-banksia woodland. Latitude: 34° 17' 59.9"South Longitude: 115° 9' 18.7"East Image: 28/06/2008 DS84_241JF07
08 <i>Laccaria</i> sp. Specimen ID: 3726 Growing in loamy-sand of a muddy track near jarrah-marri woodland. Latitude: 34° 17' 59.9"South Longitude: 115° 9' 18.7"East Image: 28/06/2008 DS84_241JF08
09 Gymnopilus allantopusGolden Wood Fungus Specimen ID: 3728Growing on dead banksia in banksia woodland. Latitude: 34° 17' 59.9"South Longitude: 115° 9' 18.7"East 28/06/2008Image: DS84_241JF09

BREAT NO 28	10 Psathyrella sp.	
	Growing in loamy-sand of a muddy track new woodland.	-
	Latitude: 34° 17' 59.9"South Longitude: 1	15° 9' 18.7"East Image:
	28/06/2008	DS84_241JF10
	11 Campanella gregaria	
6 mm 10 20 30 A0	Growing on the inside of rotting bark in merwoodland. Latitude: 34° 17' 59.9"South Longitude: 1 28/06/2008	
All a constant and a second	12 Mycena cf. austrororida	
0000	Specimen Growing on the trunk of living, but burnt Xa in banksia woodland. Latitude: 34° 17' 59.8"South Longitude: 1 28/06/2008 Image: DS	anthorrhoea sp.(balga)
	13 Entoloma sp.	
Contraction of the second seco	Growing on dead marri trunk in banksia wo Latitude: 34° 17' 59.6"South Longitude: 1 28/06/2008	
	14 <i>Mycena</i> sp.	
dmib 20 30 40	Growing in sandy-loam amongst litter in sec incana shrubland. Latitude: 34° 17' 59.6"South Longitude: 1	-
	28/06/2008	Image:
	Vouchered WA Herbarium: E9137	DS84_241JF14

armo 20 30 do 13 do	 15 Anthracophyllum archeri Growing on dead wood in Melaleuca incat Latitude: 34° 17' 59.8"South Longitude: 28/06/2008 Fungimap Target 	
	Specir Growing on dead wood amongst litter in <i>N</i> woodland. Latitude: 34° 17' 59.6"South Longitude:	
		 115° 9' 19.5"East Image: DS84_241JF17 iry Curtain Fungus cimen ID: 3736 arrah-banksia 115° 9' 19.5"East
	19 <i>Marasmius</i> sp. Growing on a twig amongst litter in marri- woodland. Latitude: 34° 17' 59.2"South Longitude: 28/06/2008 Vouchered WA Herbarium: E9149	Specimen ID: 3737 jarrah-banksia
	20 <i>Pholiota communis</i> Growing amongst litter under sedge in met woodland. Latitude: 34° 17' 59.2"South Longitude: 28/06/2008 Vouchered WA Herbarium: E9142	C



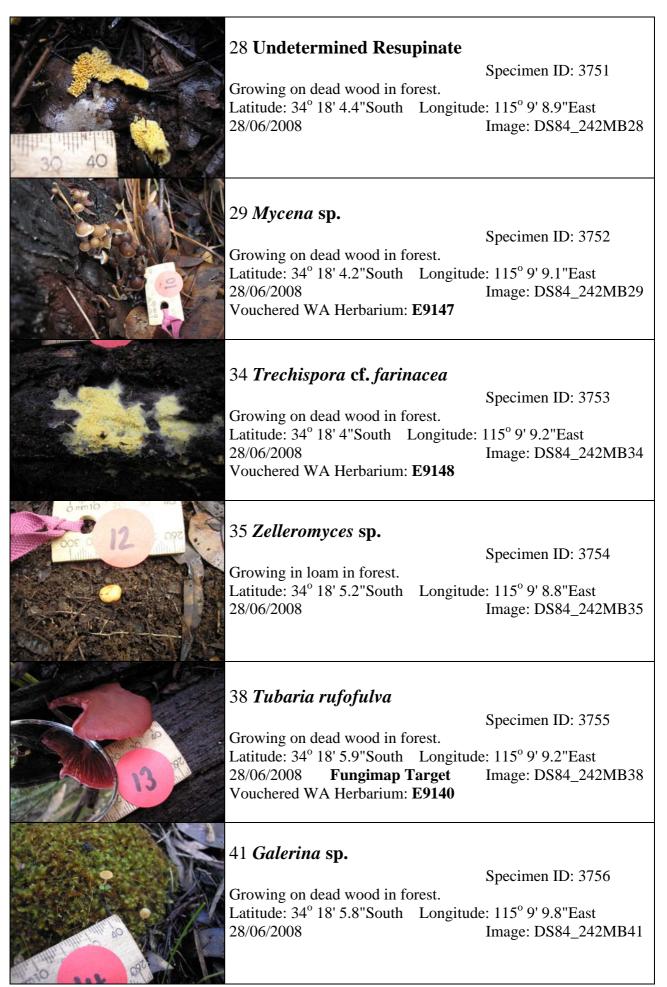
Louise Little and Mark Brundrett's group, Donovan Street Bushland, 28 June 2008.

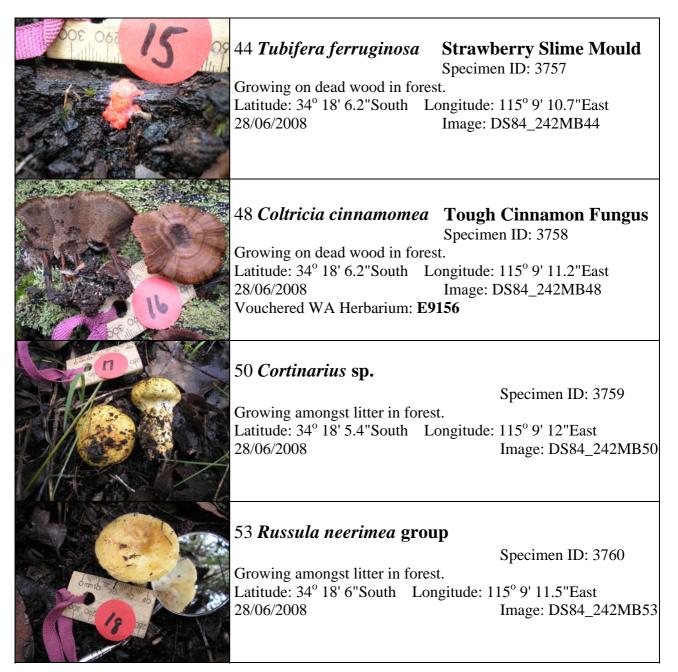


Event: Augusta - Donovan St Date: 28/06/2008			
Group Number: 242 Leaders M Photograp	Iark Brundrett and Louise Little oher: Mark Brundrett		
	05 <i>Pholiota multicingulata</i> Growing in sand in forest. Latitude: 34° 18' 3.9"South Longitude: 28/06/2008	Specimen ID: 3743 115° 9' 6.6"East Image: DS84_242MB05	
	08 Undetermined Resupinate Growing on dead wood in forest. Latitude: 34° 18' 4.8"South Longitude: 28/06/2008	Specimen ID: 3744 115° 9' 7"East Image: DS84_242MB08	



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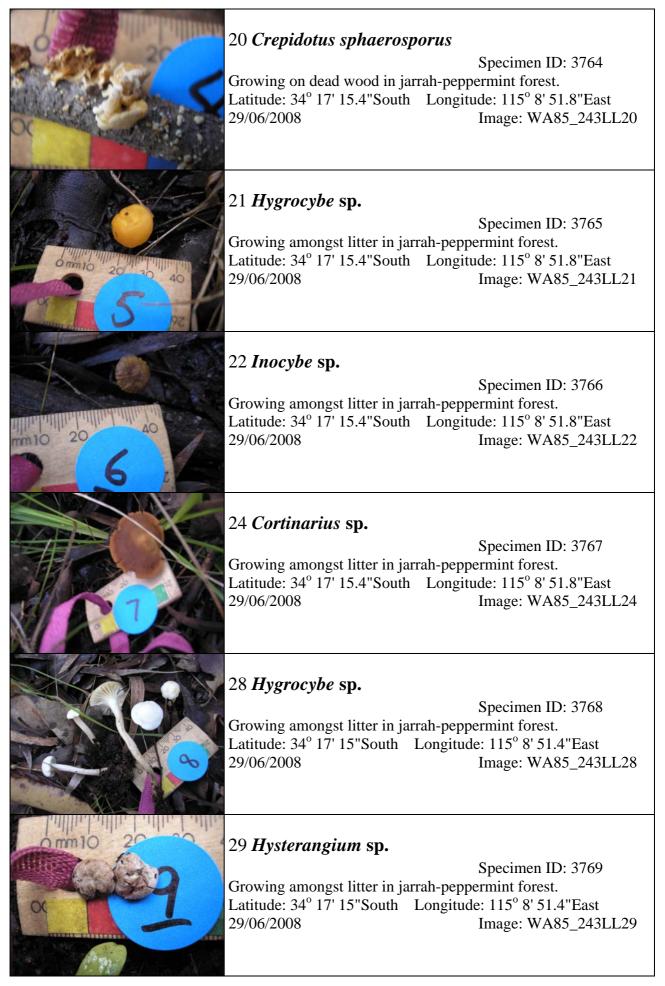
Kirsten Tullis and Louise Little's group, Leeuwin Naturaliste National Park, 29 June 2008.

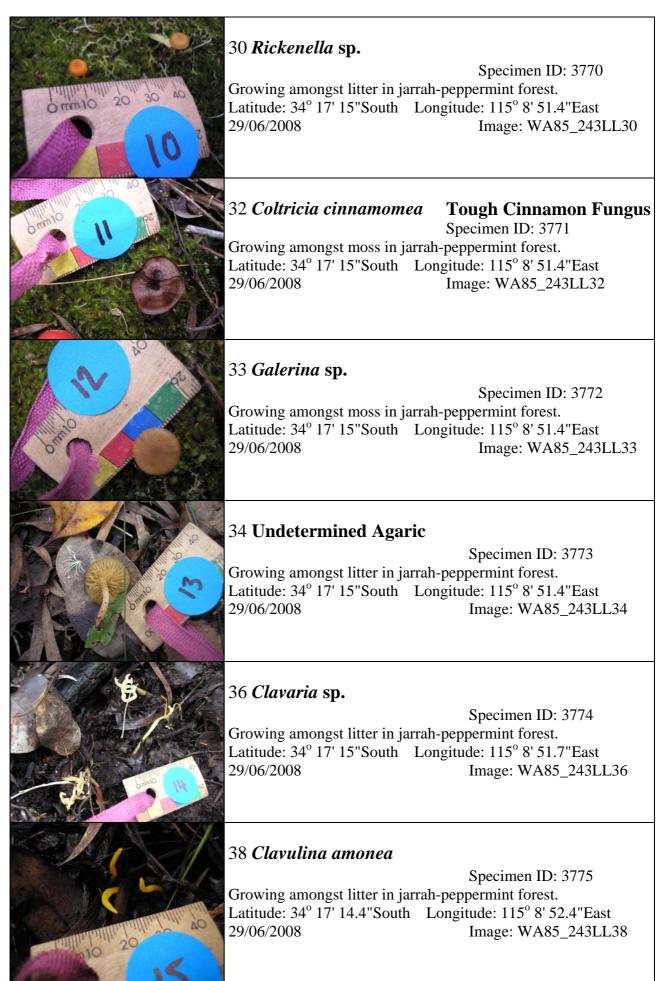


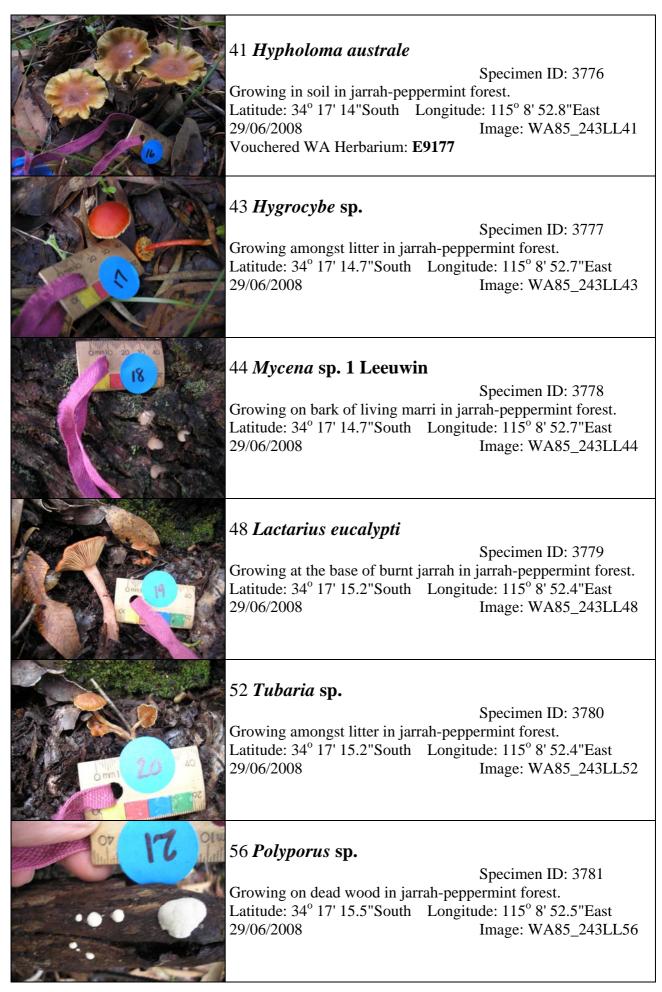
The numbers on the coloured dots in the fungi photos correspond to the collecting number and usually **do not** match the photo number. It is the **photo number** preceding the fungus name that correlates with the site on the map above.

Event: Augusta - West Bay Date: 29/06/2008		
Group Number: 243 Leaders Kirsten Tullis and Louise Little		
Photograp	pher: Louise Little	
	12 <i>Hymenochaete</i> sp. Growing on dead wood amongst litter <i>Agonis</i> sp. (jarrah-peppermint) forest. Latitude: 34° 17' 15.9"South Longitu 29/06/2008	
	16 Hydnum repandum Growing amongst litter in jarrah-pepp Latitude: 34° 17' 15.7"South Longitu 29/06/2008	
	18 Hydnum repandum Growing amongst litter in jarrah-pepp Latitude: 34° 17' 15.4"South Longitu 29/06/2008	

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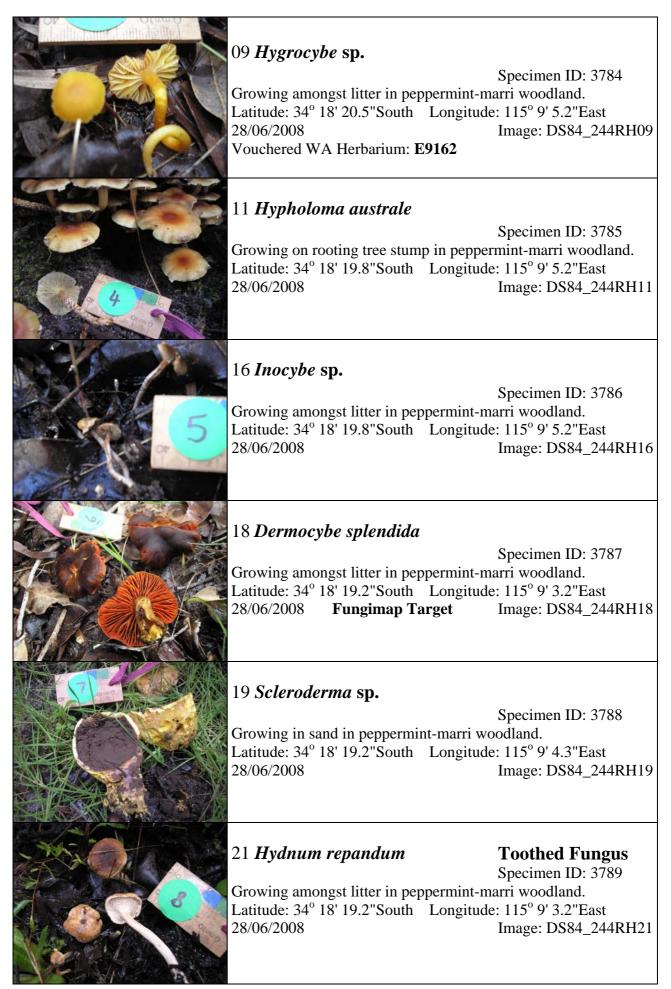


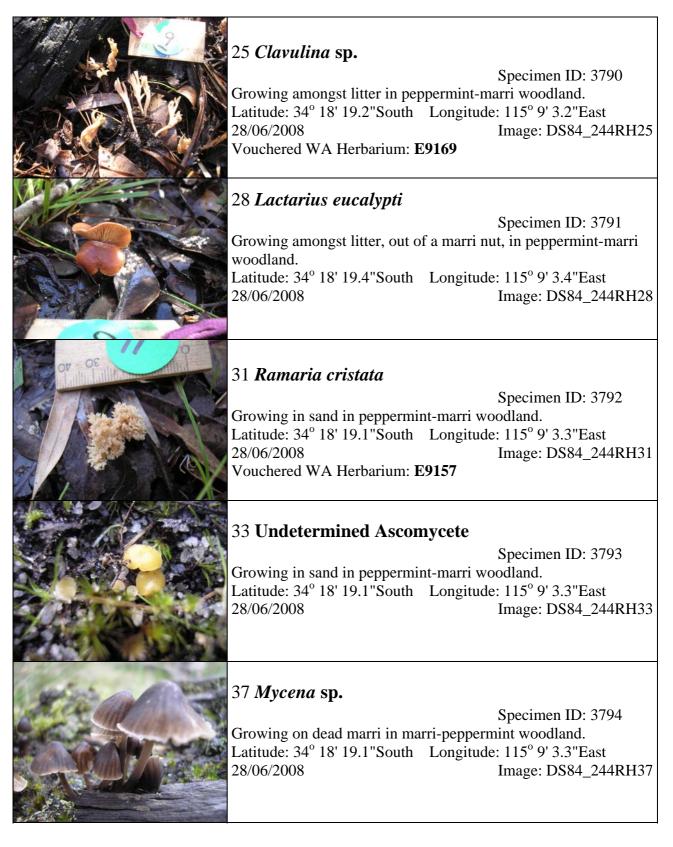


Roz Hart's group, Donovan Street Bushland, 28 June 2008.



correlates with the site on the m	ap above.	
Event: Augusta - Donovan St Group Number: 244 Leader R		
-	apher: Roz Hart	
2 ² Oluw O	02 Undetermined Resur	oinate
OF All All All All All All All All All Al		Specimen ID: 3782
	Growing on dead rooting woo (peppermint-marri) woodland	od Agonis sp./Corymbia calophylla I.
	Latitude: 34° 18' 21.4"South	Longitude: 115° 9' 5.3"East
	28/06/2008	Image: DS84_244RH02
Colouro Colouro	05 Poronia erici	Dung Buttons
A Second Second	Growing on kangaroo dung ju	Specimen ID: 3783 n peppermint-marri woodland.
	Latitude: 34° 18' 21.4"South	
		arget Image: DS84_244RH05

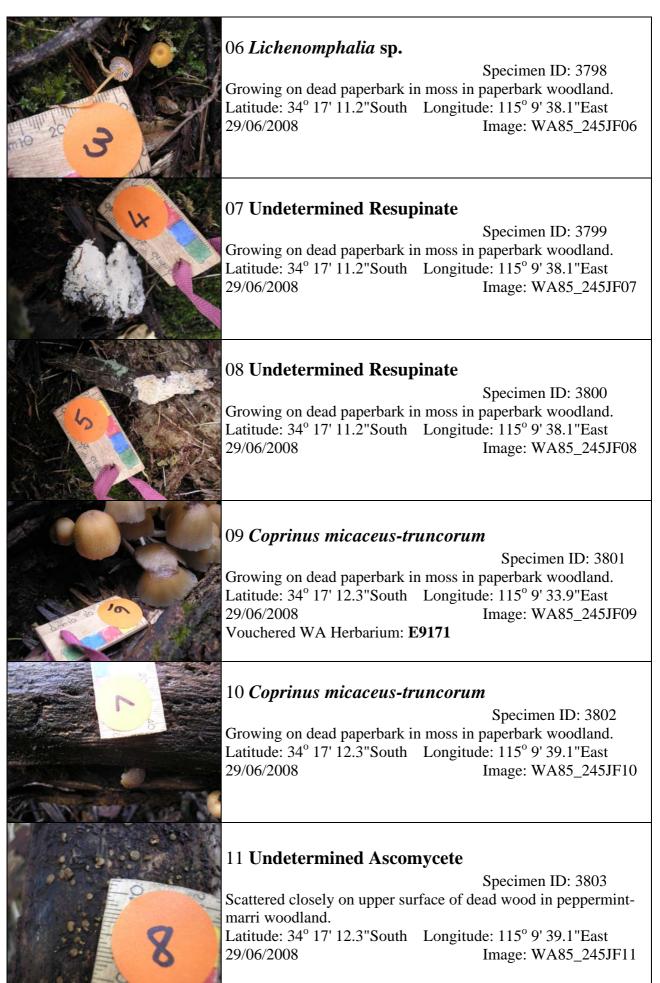


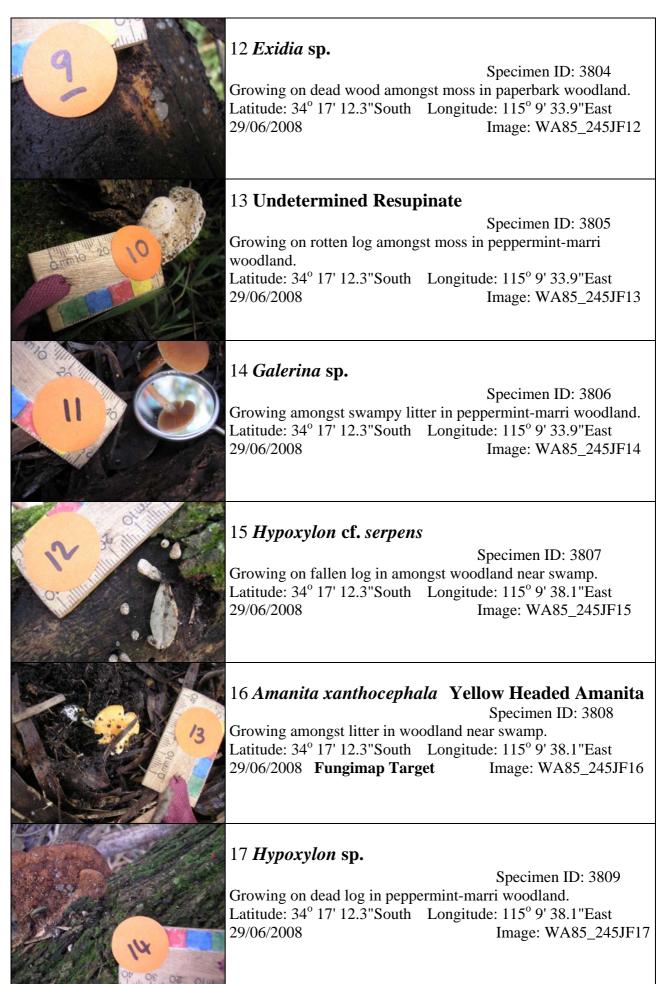


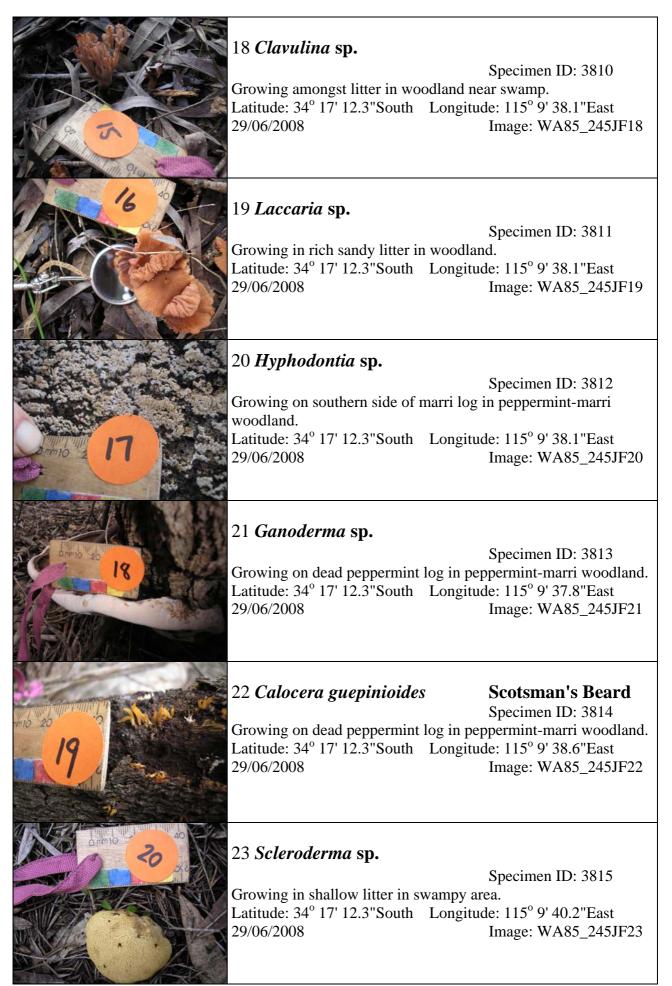
Joe Froudist's group, Leeuwin Naturaliste National Park, 29 June 2008.

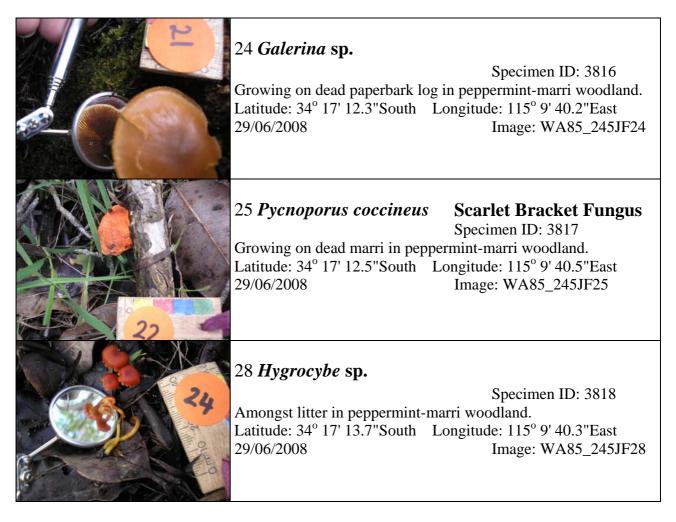


Event: Augusta - West Bay Da Group Number: 245 Leader Jo Photograp		
	04 <i>Descolea maculata</i> Growing on dead paperbark amon woodland. Latitude: 34° 17' 11.2"South Lor 29/06/2008 Vouchered WA Herbarium: E918	ngitude: 115° 9' 38.1"East Image: WA85_245JF04
	05 Undetermined Agaric Growing on dead paperbark amon woodland. Latitude: 34° 17' 11.2"South Lor 29/06/2008	





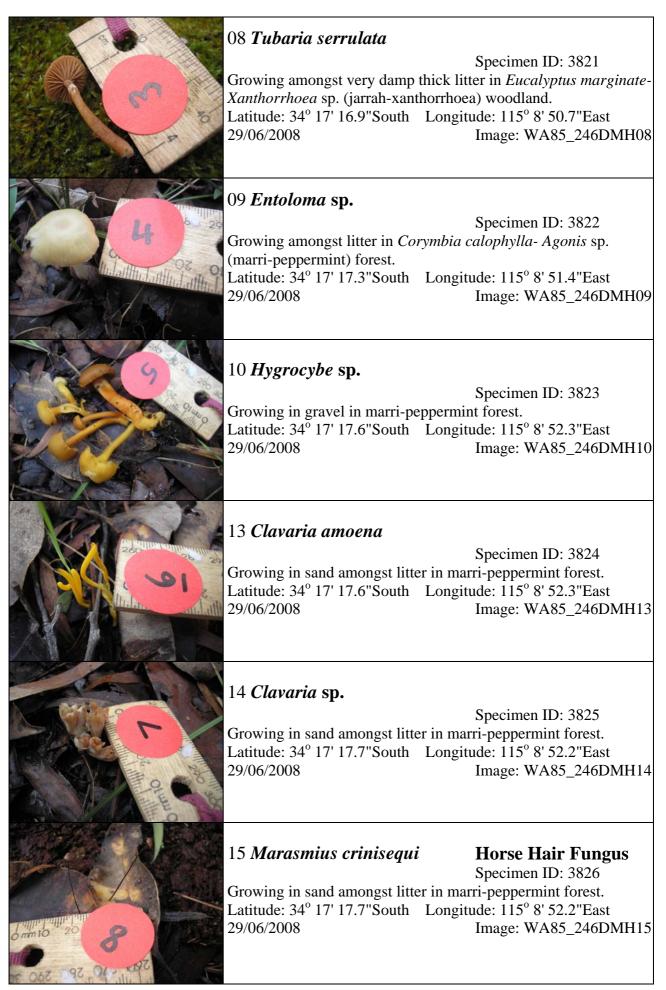


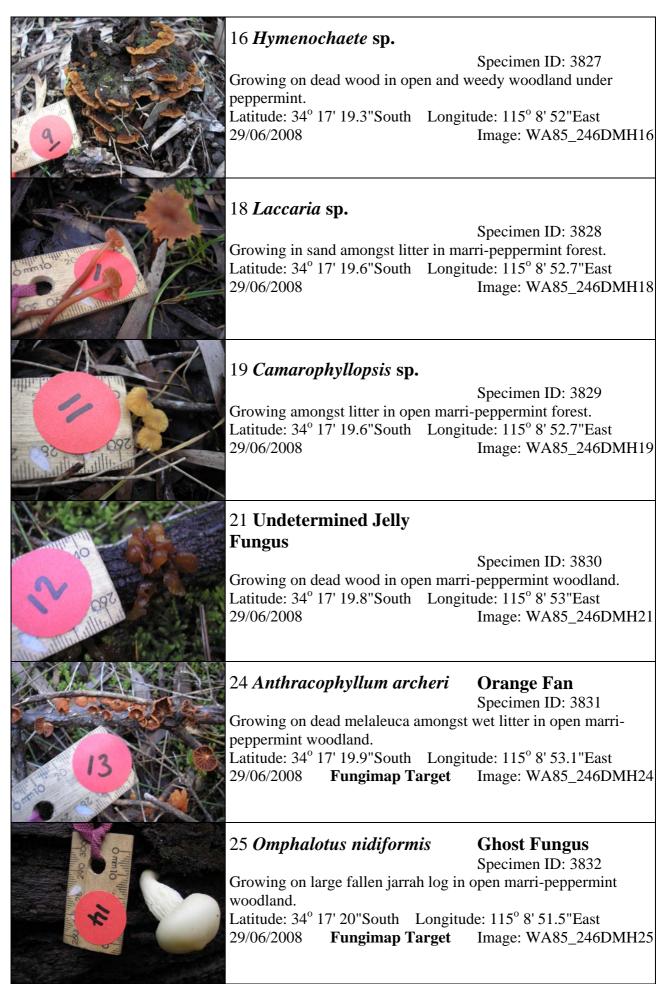


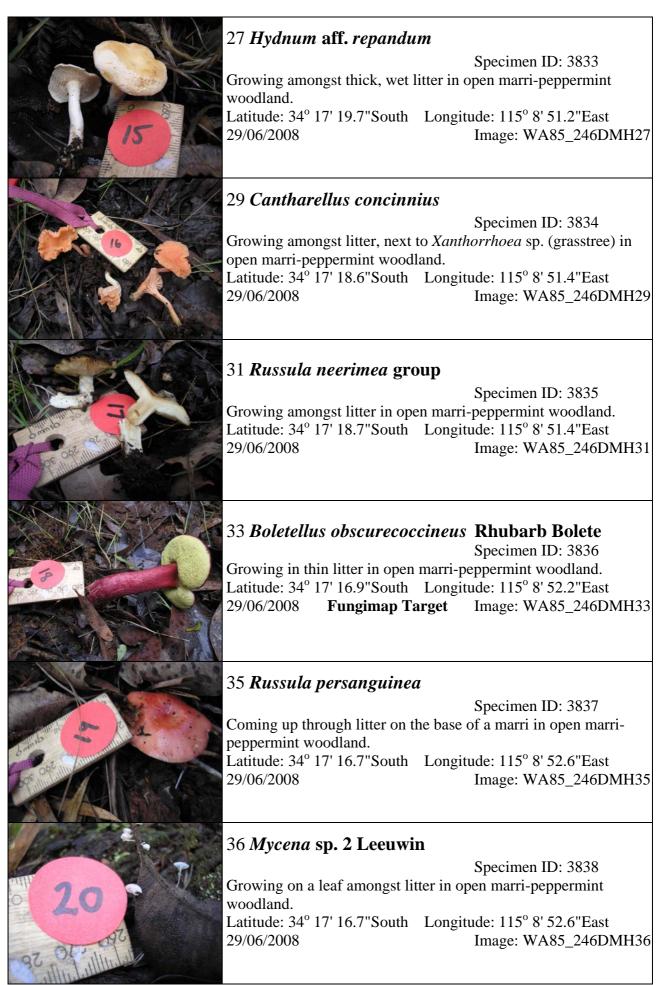
Mark Brundrett and Julie Fielder's group, Leeuwin Naturaliste National Park, 29 June 2008.

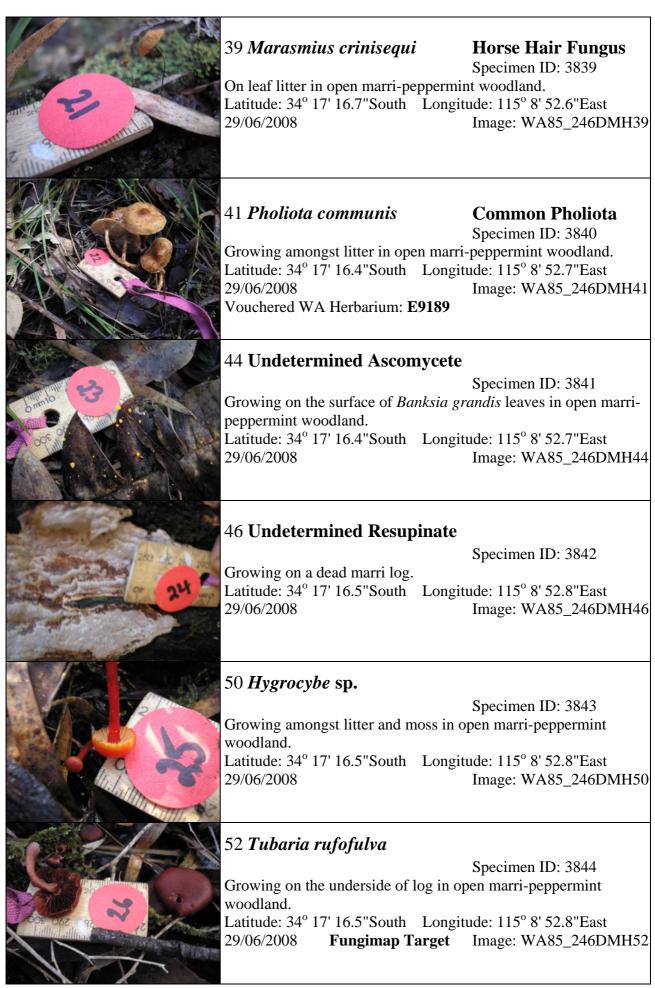


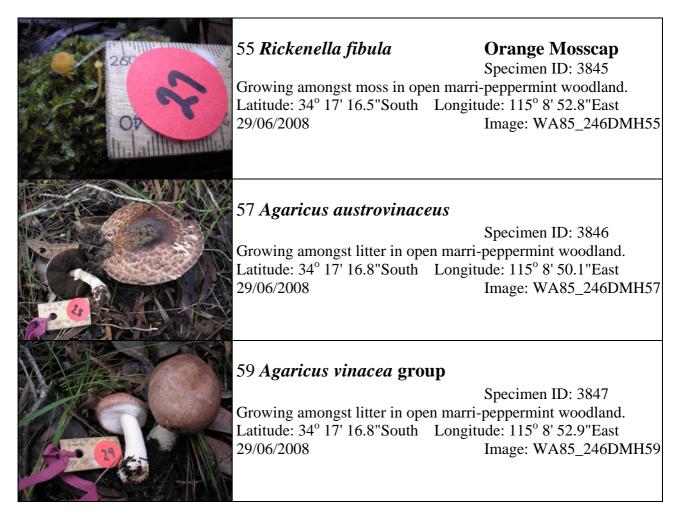
Event: Augusta - West Bay Date: 29/06/2008		
Group Number: 246 Leaders Mark Brundrett and Julie Fielder		
Photographer: Derek Mead-Hunter		
Тиши тищи тищи тищи тищи отто 20,30 40	04 <i>Phallus hadriani</i> Specimen ID: 3819 Growing in gravel on the edge of a track. Latitude: 34° 17' 20.8"South Longitude: 115° 8' 50.4"East 29/06/2008 Image: WA85_246DMH04	
	07 Coltricia cinnamomea Tough Cinnamon Fungus Specimen ID: 3820 Growing in gravel on track. Latitude: 34° 17' 20.8"South Longitude: 115° 8' 50.4"East 29/06/2008 Image: WA85_246DMH07	









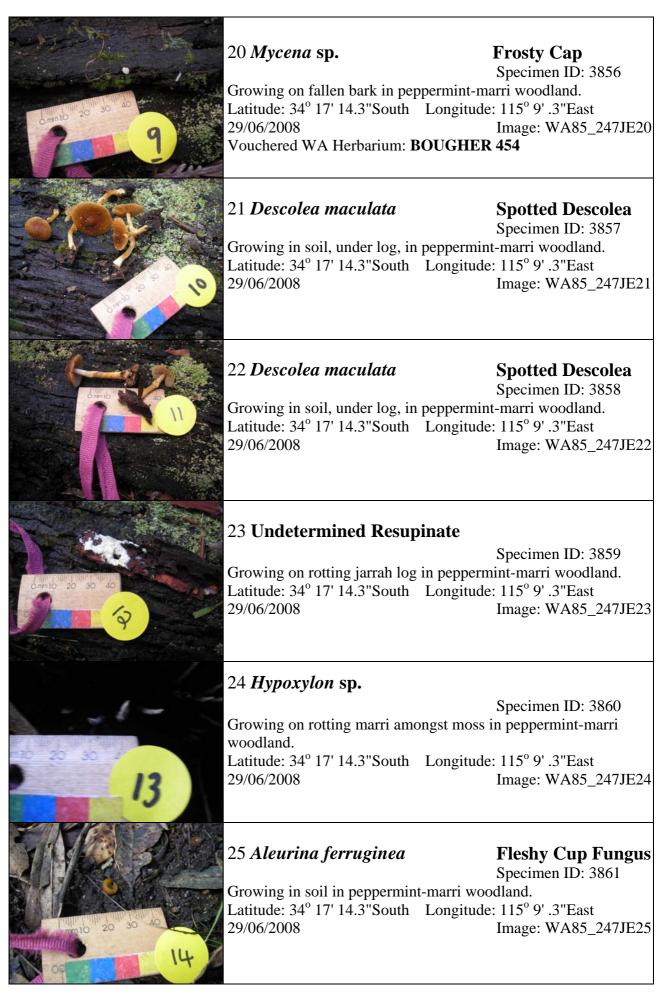


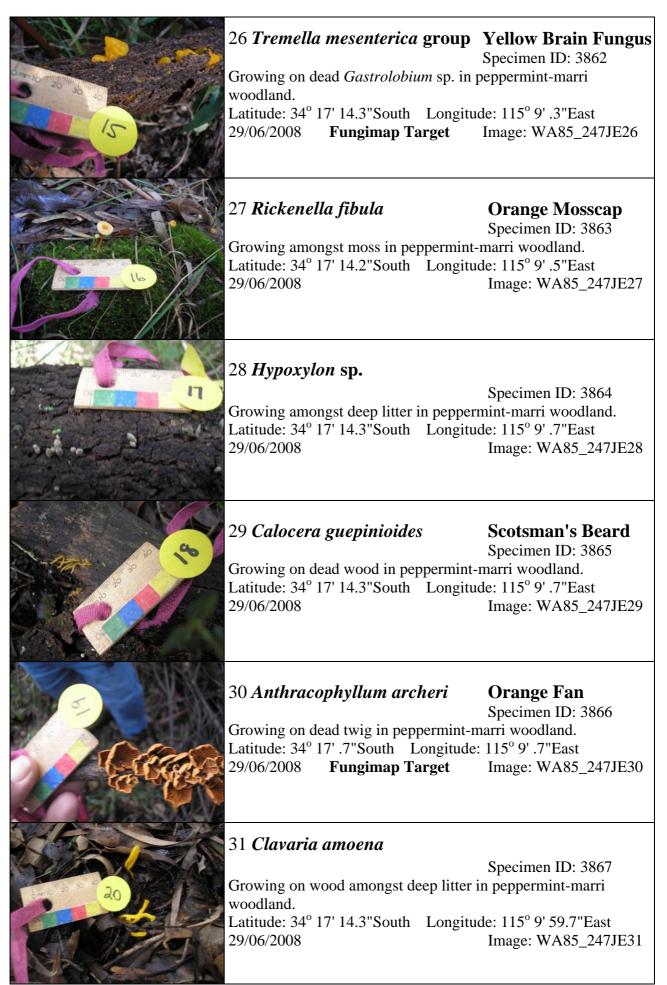
Phylis Robertson's group, Leeuwin Naturaliste National Park, 29 June 2008.



Event: Augusta - West Bay Da	ate: 29/06/2008	
Group Number: 247 Leader Ph	5	
Photogra	pher: Phylis Robertson	
TEDM	08 <i>Exidia</i> sp.	
	-	Specimen ID: 3848
and the second	Growing on dead peppermint	branch in peppermint-marri
Contraction of the second second second second second second second second second second second second second s	woodland.	
0 mm10 20 30 40	Latitude: 34° 17' 13.6"South	0
Cimilo 20 00	29/06/2008	Image: WA85_247JE08
1.0		
A PER		
	11 Mycena adscendens	
I A CONTRACTOR		Specimen ID: 3849
	Growing on peppermint bark	in peppermint-marri woodland.
	Latitude: 34° 17' 13.1"South	Longitude: 115° 9' 1.1"East
A LANGE AND A LAND AND A LAND AND A LAND AND A LAND AND A LAND AND A LAND AND A LAND AND A LAND AND A LAND AND A	29/06/2008	Image: WA85_247JE11
2410-2411P	Vouchered WA Herbarium: I	e _
and the second of the second s		

	12 Undetermined Myxomycete Growing on peppermint bark in peppermi Latitude: 34° 17' 13.5"South Longitude 29/06/2008	
20 20 20	14 <i>Lycogala epidendrum</i> Growing on dead peppermint branch in p woodland. Latitude: 34° 17' 13.5"South Longitude 29/06/2008 Fungimap Target	
	15 <i>Clitocybe</i> sp. Growing on dead wood covered in moss i woodland. Latitude: 34° 17' 13.7"South Longitude 29/06/2008	
	 17 <i>Laccaria</i> sp. Growing on dead, moss-covered grasstree woodland. Latitude: 34° 17' 13.8"South Longitude 29/06/2008 	
	18 <i>Hymenochaete</i> sp. Growing on dead standing tree in pepperr Latitude: 34° 17' 13.8"South Longitude 29/06/2008	
	19 Russula persanguinea Growing in soil, under log, in peppermint Latitude: 34° 17' 14.3"South Longitude 29/06/2008	





Bougher, Hart, de Bueger, & Glossop (2008). Fungi of West Bay Bushland, Augusta - 2008 report